

IUC Programme
Institutional University Cooperation

# Final Evaluation of the CTU-IUC partner programme Can Tho University (CTU), Vietnam

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### Disclaimer

This report represents the views of the CTU Evaluation Commission, and does not necessary reflect the opinion of VLIR-UOS. The Evaluation Commission bears the sole responsibility for the report in terms of its content.

## Acronyms and abbreviations

ADC	Automio Deference Contro Lluivoreity of Chout	LEA	Torright Francisco de Aradonia
ARC Asean	Artemia Reference Centre, University of Ghent  Association of South-East Asian Nations	LFA LogFrame	Logical Framework Analysis  Logical Framework
BA	Bachelor of Arts	LRC	Learning Resource Center
BiRDI	Biotechnology Research and Development Institute	LUC	Limburg University Centre (Limburgs Universitair Centrum)
CIT	College of Information Technology (before)	M&E	Monitoring and Evaluation
CICT	College of Information and Communication Technology	MBA	Master of Business Administration
CAF	College of Aquaculture and Fisheries	MD	Mekong Delta
CD -	Compact Disk	MDI	Mekong Delta Development Research Institute (MDI)
CAAB	College of Agriculture and Applied Biology	MHO	Dutch programme on international university co-operation
CICT	College of Information and Communication Technology	MoET	Ministry of Education and Training
CENR	College of Environment and Natural Resources	MoSTE	Ministry of Science, Technology and Environment
CoET	College of Engineering Technology	MOV	Means of Verification (LogFrame)
CoS	College of Sciences	MPI	Ministry of Planning and Investment
CPRGS	Comprehensive Poverty Reduction and Growth Strategy	M.Sc.	Master of Sciences
CTU	Can Tho University	MTE	Mid-Term Evaluation
DE	Distant Education	N.A.	Not Applicable
DGIC	Directorate General for International Co-operation	N.I.	No Information available
DAP	Department of Administration and Planning	NUFFIC	Dutch counterpart of the VLIR
DIR	Department of International Relations	OD	Organisational Development
DR	Development Relevance	OVI	Objectively Verifiable Indicator
DRA	Department of Research Affairs	PC	Personal Computer
DVD	Digital Versatile Di sc	PCM	Programme/Project Cycle Management
EC	European Commission	PCO	Programme Co-ordination Office
EE	Environmental Engineering	PCR	Polymerase Chain Reaction
El	Own Initiative Project (Eigen Initiatief Project)	PME	Performance Monitoring and Evaluation
ELISA	Enzyme-linked Immunosorbent Assay	PMES	Performance Monitoring and Evaluation System
EU	European Union	Ph.D.	Doctor of Philosophy
EUR	Euro	RET	Research, Extension and Training
FW0	Research Foundation Flanders	UGent	University of Ghent
GIS	Geographic Information System	SAP	Synthesis of Activity Programme
нсмс	Ho Chi Minh City	SEBA	School of Economics and Business Administration
IRRI	International Rice Research Institute	SoE	School of Education
IS	Institutional Strengthening	STIC	Science and Technology Information Centre
UCOS	University Centre for Development Co-operation (Universitair Centrum voor Ontwikkelingssamenwerking)	UA	University of Antwerp
INAC	Information and Network Administration Centre	UDC	University Development Co-operation
ICT	Information and Communication Technology	USD	United States Dollar
INCO	European Union academic co-operation programme	VLIR-UOS	Flemish Interuniversity Council (Vlaamse Interuniversitaire Raad)
IUC	Institutional University Co-operation	VND	Vietnamese Dong
KPI	Key Performance Indicator	WAN	Wide Area Network
KRA	Key Result Area	WWW	World Wide Web
KU Leuven	University of Louvain (Katholieke Universiteit Leuven)		
LabMET	Laboratory of Microbial Ecology and Technology (University of Ghent)		
LAN	Local Area Network		
Enit	DOM: LOUI CONUIR		

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DISCLAIMER

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## **Executive Summary**

## The VLIR-IUC Programme and the CTU-IUC Final Evaluation

The VLIR-IUC Programme: The Flemish Interuniversity Council – University Development Cooperation (VLIR-UOS) programme for Institutional University Cooperation (IUC) emanates from the Specific Agreement signed by the Belgian State Secretary for Development Cooperation and the VLIR-UOS on 16 May 1997. This IUC programme is an inter-university cooperation programme of the Flemish universities, focused on the institutional needs and priorities of partner universities in the South. The IUC programme is in principle demand-oriented, and seeks to promote local ownership through the full involvement of the partner both in the design and implementation of the programme. The programme relates to only a few carefully selected partner universities in the South, hoping that synergy, added value and greater institutional impact can be achieved through the different IUC projects located in the same partner university. Support is directed towards the institutional development of the partner university, the improvement of quality of local undergraduate and postgraduate education, and the encouragement of south-south academic and research linkages.

The CTU-IUC Final Evaluation: The VLIR-UOS Programme Cycle Management based procedures of the IUC programme provide for the conduct of a final evaluation by an independent evaluation commission at the end of the ten year cooperation cycle. In accordance with the Terms of Reference (copy under Annex 1), these evaluations are expected to generate conclusions that will allow to identify strengths and weakness of the each specific IUC collaboration and to formulate recommendations to the stakeholders in terms of the follow-up plans and proposals that have been elaborated by the Northern and Southern project leaders and to identify possible venues for future collaboration in order to ensure programme and cooperation sustainability.

The present is the final report by the Evaluation Commission of the VLIR IUC partner-ship programme with Can Tho University (CTU) in Vietnam covering the 1998-2007 ten year programme period and the bridging year 2008. The evaluation took place in November-December 2008, including briefing discussion with the Flemish Key Stakeholders in November and an evaluation mission to CTU in the Mekong Delta region from 2 to 9 December. The two member Evaluation Commission consisted of an international co-operation expert / team leader and a country expert. The programme of meetings and activities of the Evaluation Commission is included under Annex 2 to this report.

The Evaluation Methodology and Process: The evaluation has been carried out in accordance with the VLIR-UOS methodological requirements based on Programme Cycle Management (PCM) and results/performance management, monitoring and evaluation

principles formally laid down in the *Terms of Reference*. Some minor modifications in the evaluation framework were applied in order to enhance overall coherence, consistency and analytical strength and secondly to avoid possible duplications and overlaps. In line herewith, the evaluation has a strong results focus (outputs, outcomes and impact) while also the other dimensions of integrated performance management are attended to in a balanced manner. The evaluation has been a truly participatory process anchored in the self-assessment reports prepared by the programme leader and the respective project leaders. A special focus is on sustainability and follow-up action planning. In order to enable full evaluation coverage of the ten year programme period, to ensure consistency and making possible trend analyses, the final evaluation process and reporting is strongly aligned with the Mid-Term Review conducted at the end of the first five year programme cycle in 2002.

To accomplish its assignment the Evaluation Commission made use of a combination of methodological tools and processes including: study of the comprehensive set of background documents and other materials provided by the VLIR-UOS Secretariat; briefing discussions with the Flemish stakeholders; study of the self-assessment reports jointly prepared by the South and North stakeholders; especially designed structured interview questionnaire (see page 236) and dito post-IUC planning toolbox questionnaire (see page 242); in-depth interviews at Can Tho University with CTU general management, IUC programme team, individual projects teams and other programme stakeholders; visits to CTU facilities; evaluation debriefing cum Joint Steering Committee Meeting discussions; further feedback provided by key stakeholders, amongst others.

## Main Contents of the Final Evaluation Report

The Introduction: In the introductory chapter some general background information is provided on the evaluation exercise, notably on the VLIR Institutional University Co-operation programme in general, on the evaluation tasks as included in the Terms of Reference, on the evaluation methodology applied by the Evaluation Commission and on the mission programme. This first chapter also contains further contextual information of the IUC programme with Can Tho University pertaining to socio-economic developments in Vietnam with special focus on the education, and particularly higher education, policies, strategies and programmes. The report then zeros in on Can Tho University itself, its vision, mission, goals, structure and academic services, to finally provide a summary overview of the VLIR-IUC programme with CTU, its genesis, objectives, components and evolutions.

The Evaluation Findings: The presentation of the evaluation findings consists of six main parts in accordance with the provisions of the Terms of Reference. An in-depth analysis is made of programme progress, focusing on both strengths and challenges / issues needing attention. The assessments are based on structured factual analysis of programme and individual projects progress and results on key performance indicators presented in summary overview tables. After the analysis of the overall implementation status of the programme, detailed analyses are made for each of the seven programme Key Result Areas (KRAs), namely: (i) research; (ii) teaching; (iii) extension and outreach; (iv) management; (v) human resources development; (vi) infrastructure management, and; (vii) mobilisation of additional resources and opportunities. While the

analysis of the KRAs in first instance relates to the achievements / accomplishments in terms of executed activities and their direct outputs (with both quantitative and qualitative analyses), the evaluation of higher level programme performance is presented on the universally applied set of higher level development performance assessment criteria consisting of: (i) quality; (ii) effectiveness; (iii) efficiency; (iv) impact; (v) development relevance, and; (vi) sustainability. While the analysis relates to the individual projects / sub-programmes of the CTU-IUC programme, strengths and challenges are presented in such way as to transcend the level of the individual interventions and thus enhancing their relevance for the CTU-IUC programme as a whole, and even beyond for the IUC programme in general whenever possible.

In a second main chapter, the findings of the overall added value of the IUC programme vis-à-vis other donor supported programmes are presented. The brief introduction to the other main programmes and projects is preceded by a summary presentation of the evaluation scores of the CTU-IUC programme, both for the Key Result Areas and for the higher level performance criteria. Moreover, these scores and their analysis is presented in historic perspective by comparing the scores at the end of the second five year programme consolidation cycle with the scores by the end of the first five year capacity strengthening phase of the programme based on the Mid-Term Evaluation, and as such enabling to assess performance trends.

The overall assessment of IUC programme management constitutes the third main chapter under the findings reporting. The analysis pertains to both overall programme management and coordination and the management of the individual projects / subprogrammes there under. Specific management aspects assessed include: development of systems (e.g. planning and monitoring); actual implementation management; financial management; public relations and visibility and; synergy, organisational development and networking. The management assessment is complemented by an analysis of the quality of the co-operation between the different parties involved, within CTU, amongst the Flemish Stakeholders and between the North (Flemish) and South (CTU) stakeholders. It also contains sections on students involvement and participation, on South-South co-operation, and on expanded possibilities for international co-operation and networking and for strengthened links with broader society.

The concluding chapter of the findings section of the report is on the post-IUC follow-up plan of the programme. This analysis of the post-IUC era is rooted in the examination of the follow-up plans in the self-assessment reports of the North and South partners, including of the SWOT analysis contained therein. The analysis is especially related to the VLIR post-IUC cooperation toolbox, for which a special questionnaire was developed, and forms the basis for the recommendations contained in the concluding chapter concerned.

The Conclusions and Recommendations: The summary conclusions and recommendations are presented in the final chapter which consists of four main parts as introduced hereafter.

The Annexes: The compilation of 9 sets of annexes forms integral part of the report. These annexes include amongst others: the terms of reference, the evaluation mission programme, the interview questionnaires; excerpts from Vietnamese policy docu-

ments; excerpts from self-assessment reports and selective feedback received from key stakeholders of special relevance and importance as good/best practices and/or as lessons learned; financial management analysis tables; programme and highlights from the VLIR-IUC CTU closing programme and international events, and: excerpts form the evaluation debriefing presentation on the occasion of the CTU-IUC Joint Steering Committee Meeting.

# General Assessment of the CTU-IUC Programme Overall Implementation Status and Results Achievement

As reflected in the mid-term evaluation report of June 2002 at the end of the first five-year cycle of the CTU IUC programme, a *solid basis has been laid* for ensuring the results and effects aspired for by the end of the programme period in terms of institutional strengthening of Can Tho University and its potential contribution to and impact on sustainable socio-economic development of the Mekong Delta region. With the IUC programme now having come to an end in 2008, these overall objectives have been basically achieved to the satisfaction of all stakeholders concerned.

Phase 2 of the IUC programme actually constituted a consolidation of what was achieved in the first phase, with making more optimal use of the enhanced infrastructure and equipment and in first instance of the strengthened human resources capacity for the successful achievement of the programme's objectives related to teaching and research performance, both qualitatively and quantitatively. Some of the supported Colleges/Schools and Institutes/Centres have successfully achieved the status of Centre of Excellence, and are recognized as such not only in the Mekong Delta region, but also at the national level and beyond. Major challenge will be to maintain this level of excellence (both quantitatively and qualitatively) as the competition for qualified human resources from both the booming private, commercial sector as well as from private academic institutions will become more fierce in the years to come, especially because of the demands posed by a booming economy. Programme sustainability therefore is more than a buzz word in this context, but on the contrary has become an increasingly more crucial requirement and concern needed and still needing to be given priority attention.

The programme also continued to successfully reach out to the wider Mekong Delta, as such attesting to its development relevance in addition to the academic relevance aspired for. This continued to support Can Tho University in its mission as catalyst of regional development in the Mekong Delta. The CTU-IUC programme proves a success story as it combines successes in both the academic and regional socio-economic development fields. Most projects under the CTU-IUC programme have a strong regional development finality with contribution to regional development objectives explicitly incorporated in management plans, teaching programmes, research protocols, and the like. CTU has a long and recognized tradition of regional development centre and the VLIR supported IUC programme has further strengthened CTU in effectively realizing its commitments in this regard. This is proven by the multitude of outreach and extension activities, which in many if not most projects are integral part of the project design and implementation strategy. The development relevance of the programme and projects

is furthermore evidenced by the many requests the supported CTU units receive from both the public and private sector for specific advisory, productive and other sources. Many spin-offs have resulted from the initial programme investments. Impact concerns of the programme and its individual projects and initiatives at the level of the households of the Mekong Region are explicitly integrated in project documents and research protocols, in the broader perspective of contributions to poverty alleviation and upliftment of the socio-economic welfare and wellbeing of the Mekong Delta population. Extension programmes effectively reach out to the ultimate target beneficiaries, even if efficiency and effectiveness concerns in this may still need to be given more systematic attention.

Furthermore, the status of Centre of Excellence actually achieved by different supported units firmly encouraged them to further proactively strengthen their networks, not only within the Region, but also nationally and internationally. This provides major opportunities in terms of further structuring and strengthening of both South-South (S-S) and North-South-South (N-S-S) collaborations. It invites both the Flemish and CTU partners to further strengthen their network ties in a general win-win situation, beneficial for both sides. Both parties can become academic network hubs for each other, thus effectively materializing international network multiplier effects. The ViFINET network established in the aquaculture sector is an example in case.

It is felt that one of the major challenge for VLIR with regard to the post-IUC phase in general is to explore the optimum conditions and to devise appropriate programme modalities and tools to promote and effectively support such network expansions. As such not only IUC programme accomplishments at the level of the IUC partner universities themselves individually are sustained, but programme impact goes beyond their boundaries by covering the initiated institutional networks as well. In this way institutional multiplier effects are generated and/or further strengthened if not maximized, and as such also IUC programmes' cost-efficiency and cost-effectiveness are strongly boasted, to the benefit of both the South and North stakeholders.

## Summary Conclusions and Recommendations

The summary conclusions and recommendations are presented in the final chapter of the report, which consists of four main parts. The general conclusions and recommendations section contains the conclusions and recommendations which were presented and discussed during the evaluation debriefing session cum Joint Steering Committee Meeting (JSCM) at the end of the evaluation mission. In a second part, detailed sets of more specific operational conclusions and recommendations are presented. In order to ensure their practicality, these conclusions and recommendations are listed for each of the IUC programme Key Result Areas specifically, each time with special attention for the higher performance criteria. Also for programme management and co-ordination, specific conclusions and recommendations are formulated. The third chapter of conclusions and recommendations pertains to the CTU follow-up plan for the post-IUC era.

In the concluding chapter, summary conclusions and recommendations are formulated for the VLIR-IUC programme in general. These for example pertain to: the confirmation of the IUC programme design validity; good/best practices and lessons learned;

management and organisational development as intrinsic IUC component; the updating of an expanded outreach and extension KRA; networking as new KRA; the IUC third collaboration cycle; networking as central feature of this third cycle; the combination of physical and especially e-networking; alternative networking scenarios, and; suggestions for two special VLIR-UOS think tanks / working groups.









## Introduction

This introduction chapter contains some *general background information* on the current final evaluation exercise at the end of the ten year cycle of VLIR Institutional University Co-operation (IUC) programme with selective partner universities in the South. Thereafter some contextual information is provided on the specific IUC programme with Can Tho University (CTU) within the broader framework of socioeconomic developments in Vietnam, and in the Mekong Delta region in particular, and in the context of the Vietnamese policies and plans on higher education. At the end of the chapter a summary overview is provided of the structure of the evaluation report.

## Background Information on the Evaluation Exercise

#### The VLIR Institutional University Co-operation<sup>1</sup>

#### VLIR-UOS and the Start of the IUC Programme

The Flemish Interuniversity Council (VLIR) was founded in 1976 by Decree as a public institution, following an initiative of the Flemish Rectors. VLIR consists of representatives from six Flemish universities: the University of Ghent (UGent), the Catholic University of Leuven (KU Leuven), the Vrije Universiteit Brussel (Vrije Universiteit Brussel), the University of Antwerp (UA), the Limburg University Centre (LUC) and the Catholic University of Brussels (KU Brussel).

VLIR aims to promote consultation and co-operation, on the one hand among the Flemish universities themselves, and on the other between the Flemish universities and the authorities. VLIR is first and foremost a forum for consultation between universities and their respective administrations. VLIR also advises the relevant government authorities on university education and research policy. In addition, VLIR provides services to the Flemish universities. It encourages Flemish Universities to strengthen their visibility, initiatives and programmes internationally. In this framework, it encourages cooperation between Flemish Universities and universities in developing countries.

The UDC Vision: The vision of University Development Co-operation (UDC) related to institutional strengthening of selective partner universities as academic catalysts of local and regional development is laid down in the UDC mission statement's listing of priority fields of co-operation: "The object of the co-operation in general, and of the research in particular, is to meet local needs and requirements, and it is set within the context of the international community's efforts with respect to sustainable development, combating poverty, food security, the development of education, basic health care, essential infrastructure, conflict prevention and respect for human dignity and human rights. By building capacities, the co-operation wishes to contribute to enlarging the accessibil-

<sup>2</sup> This brief introductory presentation on the VLIR-IUC programme is based on documents made available by the VLIR-UOS Secretariat to the Evaluation Commission, and furthermore is derived from information available on the VLIR-UOS website (http://www.vliruos.be).

ity and improving the quality of local education and research. It is oriented towards a maximum opening up of knowledge, expansion of research facilities, and development and support of the management instruments and means."

In the *VLIR mission statement* on University Development Co-operation, approved by the Bureau of the VLIR on 20 September 2000, the following main objectives are defined:

- \* To contribute to the sustainable, people-oriented development of the countries of the South, through mutual enrichment of knowledge and by a continuous questioning between the two partners of one another and oneself. It aims at the development of expertise in both North and South on topics related to developing countries.
- \* To support universities and research institutions in the South and the North so that they can better fulfil their three assignments (knowledge generation through research, dissemination of knowledge i.a. via instruction, and critical reflection on society) as a function of this objective.
- \* To strengthen the capacity of local institutions, i.a. via training and education of executives.
- \* To maintain and above all to enlarge the social basis for international solidarity and co-operation.

The IUC Legal Basis: The VLIR-UOS programme for Institutional University Cooperation (IUC) emanates from the Specific Agreement signed by the Belgian State Secretary for Development Cooperation and the VLIR-UOS on 16 May 1997. This agreement foresees a system of programme funding whereby, based on five-year Global Programmes, the Belgian government provides each year funding for the implementation of an annual programme submitted by the VLIR-UOS.

IUC Basic Principles: The IUC programme is an inter-university cooperation programme of the Flemish universities, focused on the institutional needs and priorities of partner universities in the South. The IUC programme is in principle demand-oriented, and seeks to promote local ownership through the full involvement of the partner both in the design and implementation of the programme. The programme relates to only a few carefully selected partner universities in the South, hoping that synergy, added value and greater institutional impact can be achieved through the different IUC projects located in the same partner university. The support is geared towards:

- \* the institutional development of the partner university;
- \* the improvement of the quality of local education;
- the development of local postgraduate education in the South;
- \* the encouragement of south-south linkages.

Each partnership is broad in orientation, and is based on the following principles:

- \* Different components (projects) make up the partnership;
- \* All projects aim at a maximum of institutional impact;
- \* The activities which are organised in the context of the partnership can involve all constituent parts of the university;
- \* Apart from direct support to the improvement of education and research the partnership can also contain projects which are aimed at improving the organisation, the administration and the management of the university as a whole;

- \* The identification of the fields of cooperation within the partner programme is in principle based on the partner university's demands; these demands obviously can only be met in so far that the required expertise can be provided by the Flemish universities (demand driven approach);
- \* Each partner programme consists of a coherent set of interventions geared towards the development of the teaching and research capacity of the partner university, as well as its institutional management.

Main principles and core requirements forming the basis of the IUC programme include the following: (1) Long-term co-operation; (2) Focus on the institutional needs and priorities of the partner universities in the South; (3) Ownership; (4) Concentration, and; (5) Donor co-ordination.

*PCM*: In 2003, VLIR-UOS has introduced the Programme/Project Cycle Management (PCM) methodology in VLIR-UOS funded activities. This approach has called for a much more focused and results-oriented approach framed by the formulation of a logical framework matrix spanning a 5-year period and including measurable indicators. VLIR is committed to provide the necessary resources (financial and human) to strengthen PCM capacities of all partners involved, both in the North and in the South.

Updating of IUC Policies and Strategies: On 10 to 13 March 2008, VLIR-UOS held an international IUC Policy Workshop in Brussels. The workshop focused on strategic issues of international cooperation models. Specific policy issues included amongst others: North-South joint degrees; balancing education, research and services to society; South-South cooperation and the role of the North; Cooperation with NGO and industry; New models of cooperation; Networking; Funding opportunities, etc.

The Coverage: The IUC programme relates to only a few carefully selected partner universities in the South, hoping that synergy, added value and greater institutional impact can be achieved through the different IUC sub-programmes / projects located in the same partner university. Up till now, 18 partner universities have been selected as IUC partner university, making up for 17 partner programmes (one partner programme has the set-up of a network), of which 3 have been phased out before 2008 and four more in the current year 2008:

#### Africa:

- \* Tanzania: Sokoine University of Agriculture (SUA) (phased out)
- \* Zambia: University of Zambia (UNZA) (phased out)
- \* Kenya: University of Nairobi (UoN) (phasing out in 2008)
- \* Kenya: Moi University (MU-K)
- \* Zimbabwe: University of Zimbabwe (UNZI) (phasing out in 2008)
- \* South-Africa: University of the Western Cape (UWC)
- \* Ethiopia: Mekelle University (MU)
- \* Ethiopia : Jimma University (JU)
- \* Mozambique: University Eduardo Mondlane (UEM)

#### Latin America:

- \* Bolivia : Universidad Mayor de San Simón (UMSS) (phased out)
- \* Ecuador : Escuela Superior Politécnica Del Litoral (ESPOL)
- \* Ecuador: Universidad de Cuenca (UCuenca)
- \* Cuba: Universidad Central "Marta Abreu" de las Villas (UCLV)
- \* Suriname : Anton de Kom Universiteit van Suriname (ADEKUS)

#### Asia:

- \* Vietnam: Can Tho University (CTU) (phasing out in 2008 current final evaluation)
- \* Vietnam: Hanoi University of Technology (HUT) (phasing out in 2008)
- \* the Philippines: the network of the Saint Louis University (SLU) and Benguet State University (BSU).

The annual budget per partner university is € 745.000. As part of the phase-out process, the fixed annual budget decreases to 85%, 75% and 50% of a full budget for the activity programmes of year 8, 9 and 10 respectively. While the partner programme represents a 5 year framework actual funding is based on the approval of annual activity programmes with no possibility to roll over possible balances to the following budget year.

#### IUC Timeframe and Evaluations

In principle the cooperation with a partner university covers a period of maximum ten years: two time blocks of five years each. For each time block of five years a partner programme is to be drafted. Objectives have to be defined within a timeframe of five years.

Every three to five years the IUC co-operation with a partner is evaluated. Each year at least three partner universities are evaluated. On condition of a positive outcome of the mid-term evaluation exercise, a partner university can continue its co-operation for another five years. In case of a negative outcome, the co-operation can be stopped, either immediately or after the first block of five years.

Each evaluation is followed the succeeding year by a control of the follow-up effectively given to the evaluation findings, conclusions and recommendations. Each evaluation can be followed by changes to the co-operation programme, both in terms of content and of budget. Each evaluation can be followed by changes to the cooperation programme, both in terms of content and of budget. In terms of the Phase I and Phase II partner programme emphasis, the following can be observed:

- \* Phase I is meant to focus on capacity building
- \* Phase II is meant to focus on consolidation, application and phase-out

The Mid-Term Evaluation of the Can Tho University IUC programme took place in June 2002.<sup>3</sup> As will be illustrated in the summary findings of the final evaluation hereafter, its observations, conclusions and recommendations served in good stead for the strategic (re-)orientations for the second five year CTU-IUC programme cycle covering the period 2003–2007.

<sup>3</sup> The comprehensive evaluation report by the Evaluation Commission was published by VLIR UOS later in that year 2002. The summary conclusions and recommendations of the report are captured under Chapter 2 (pages 115 to 128).

#### IUC Support Opportunities and Facilities

Following the period of 10 years of VLIR IUC programme collaboration, limited funding is still available with VLIR-UOS during a phase out process. Of special importance is the possibility of IUC partner universities to submit proposals under the so called "IUC Research Initiative Programme – RIP". Through this tool, support is provided on a competitive basis for quality research proposals developed by members of former IUC project teams.

Below are some support facilities funded by VLIR-UOS for the benefit of all ongoing and phasing out IUC partner universities. More information on the VLIR-UOS post-IUC toolbox is provided in the Annexes<sup>4</sup> to this report for ready reference.

- (i) Competitive funds: Apart from an annual budget, the partner programmes may respond to calls by VLIR to submit proposals for the ICT Fund and the North South South Cooperation Programme (NSSCP). Proposals are appraised on a competitive basis. Under the ICT Fund second hand PC's are availed to the partner universities free of charge within a certain conceptual framework. Under the NSSCF, two or more IUC partner universities may join hands in developing a proposal that includes the involvement of a Flemish academic and builds upon the achievements of the partner programmes within the framework of SS collaboration.
- (ii) International Network for the Availability of Scientific Publications (INASP): VLIR is funding INASP in order to develop a curriculum for training on bandwidth management. Under this initiative, the IUC partner universities benefit from training at various levels in order to optimise available bandwidth.
- (iii) Cross cutting initiatives: Cross cutting initiatives include workshops, training activities, study visits and similar activities on matters of common interest in which participants of IUC partner universities can participate.

#### The Terms of Reference of the Evaluation

The present final evaluation of the IUC Partnership with Can Tho University has been conducted in accordance with the Terms of Reference (ToR) issued by VLIR on 17 June 2008. These ToR served as basis not only for the CTU evaluation but also for three other evaluations commissioned by VLIR in the present calendar year 2008. A copy of these standard Terms of Reference are attached under Annex 1 to this report.

The Terms of Reference have been developed along the lines of the mid-term evaluations conducted in the years 2001 and 2002, which have led VLIR to the design of a specific evaluation methodology. An important update is the more explicit use of evaluation tools related to the Logical Framework / PCM methodology introduced across the board all IUC programmes in 2003. These include the use of objective verifiable indicators and performance scores, results oriented monitoring and evaluation, programme approach (rather than sets of unconnected "island" projects), more pronounced focus on partnership and ownership dimension, networking and institutional strengthening, etc.

While this is the final evaluation of the VLIR-IUC partnership programme with Can Tho University, this in no way signifies the end of the cooperation between CTU and its Flemish Partners under the IUC programme. On the contrary, the evaluation seeks to investigate and make recommendations to ensure the durability and even to

<sup>4</sup> Annex 4.2 "VLIR post-IUC toolbox of possible modalities of cooperation assistance: Some summary VLIR UOS documents and guidelines"

further strengthen the partnership to the mutual benefit of both parties. Only that the modalities of the partnership change, as the IUC programme has led to a more mature and balanced relationship between the partners. Continued cooperation is more on an ad hoc basis, focusing on academic high value added initiatives for both parties in a competitive setting.

This forward looking angle of the evaluation is prominent in the objectives of the evaluation as stated in the ToR. Not less than 3 of the 4 objectives relate to post – IUC cooperation and concrete modalities thereof (ex-post toolbox related). Item 4.1 of the Terms of Reference indeed stipulate that "The final evaluation is meant to generate conclusions that will allow:

- \* the identification of strengths and weaknesses of each specific IUC collaboration with the three institutions in particular, and of the IUC programme in general;
- \* VLIR-UOS to identify departments and/or research groups that have received sub-stantial support from the IUC programme in Phase II and thus can present proposals for the "IUC Research Initiative Projects"
- \* the formulation of recommendations to all stakeholders in terms of the follow up plan that has been elaborated by the Northern and Southern project leaders
- \* to identify and comment upon possible venues for the future of the involved projects in view of establishing sustainability

Basis of the evaluation exercise is the *self-assessment process* by both the North and South stakeholders. The self-assessment process ensures that the final evaluation is not looked at by the parties concerned as an external control / policing mechanism, but in a positive perspective as a management tool to learn from past experiences and to document good / best practices in order to even further improve cooperation and general (networking) performance in the future. VLIR stresses in this regard that these self-assessments are (learning) processes, in which as many stakeholders as possible, both in the North and in the South, are to be involved.

For the self-assessments, a *standard format* has been developed by VLIR-UOS, which consists of a combination of a number of open questions and tables for reporting on Key Results Areas (KRAs) and overall quality and higher level performance<sup>5</sup> making use of sets of Key Performance Indicators. These self-assessment reports are developed at the level of the individual projects (9 in total). In addition a self-assessment format has been made available for the collective self-assessment by the stakeholders (Southern and Northern), thus at the overall programme level. VLIR-UOS Secretariat has also been working on a further structuring of the financial reporting, with special templates covering the different aspects of financial management (budgeting, expenditures reporting, funding tracking, etc.) both at CTU and by the Flemish Partners.

The final evaluation self-assessment reporting template at individual projects (sub-programmes) level has the following broad structure:

- \* Phase II Self-Assessment
- 1. Project structure, with sub-sections: 1.1. Team composition, and; 1.2. Project summary;
- 2. Attainment of phase ii project objectives, with sub-sections: 2.1. The logical framework, with special sections on achievements on objectives' key indicators and on assumptions; 2.2. The phase 2 Key Result Areas (KRAs); 2.3. Other

<sup>5</sup> Basically on the OECD Development Assistance Committee (DAC) evaluation criteria of overall quality, efficiency, effectiveness, impact, development relevance and sustainability

strategic and process related results/effects/factors; 2.4. Qualitative appreciation; 2.5. Self-scoring KRAs; 2.7. Self-scoring cooperation dynamics; 2.8. Definition of capacity building recipients, and; 2.9. Effects in the North

- \* Self-Assessment over the 10-year project period
  - 3. Combined Phase I and Phase II results, with sub-sections: 3.1. Value for money; 3.2. Critical success factors or hindering elements
  - 4. Sharing minds, changing lives, with sub-sections: 4.1. Academic objectives, and; 4.2. Development objectives
  - 5. Stories, testimonials, anecdotes
- Sustainability and overall outlook
- \* Follow-up plan

Because of the special end-of-programme evaluation requirements and as a reflection of the genuine concern to sustain the collaboration, two special sections has been incorporated in the self-assessment reports explicitly focusing on sustainability issues and follow-up planning. This follow-up plan template covers dimensions as: Communication at the level of the project teams and between the teams; mobility and/or exchanges; interests, opportunities and activities, and; a summary SWOT analysis of future cooperation and collaboration.

The information provided in these self-assessment reports at the same time is a crucial basis for the external evaluation work by the *Evaluation Commission*. Each Evaluation Commission is composed of two independent consultants: one international co-operation expert and a country expert.

Focus of the final evaluation thus is on the programme as a whole and of its constituent projects / sub-programmes in terms of progress in implementation made so far (focus on inputs, processes, activities and direct outputs) and in terms of achievements on higher level performance indicators related to the IUC programme purpose and goal. Also managerial and co-operation aspects both at overall programme and constituent projects / sub-programmes levels are focal evaluation areas.

In summary, the present final evaluation of the VLIR Institutional University Co-operation programme with Can Tho University *envisages six main areas of assessment*, which in accordance with the Terms of Reference can be defined as follows:

- Programme progress and results, covering both programme overall implementation status and the 7 programme Key Result Areas (research, teaching, extension and outreach, management, human resources development, infrastructure development and mobilization of additional resources / opportunities);
- \* High level programme performance, covering the constituent projects (quality, effectiveness, efficiency, impact, development relevance and sustainability) and the programme as a whole (efficiency, impact, development relevance and sustainability) in the light of the overall goal of the IUC Programme, being institutional capacity-building of the local university, as situated in the context of the needs of the local society;
- \* The overall value added of the IUC programme vis-à-vis the other donor supported programmes and projects;
- \* Programme management, covering both overall assessment and specific management aspects

- \* The cooperation between the different parties involved
- \* The follow-up plan of the programme.

On the basis of the outcome of the above assessment, summary recommendations are to be formulated as to the follow-up of the programme. During the different briefing discussions with key Flemish stakeholders, the desirability of formulating general and generic recommendations which transcend the individual level of the present individual IUC programme evaluation was stressed by these stakeholders.

## The Evaluation Methodology Applied by the Evaluation Commission

#### The VLIR Evaluation Methodology as Basis

The Evaluation Commission executed its work in accordance with the methodological requirements formally laid down in the *Terms of Reference*. Some minor modifications in the evaluation framework were applied in order to enhance overall coherence, consistency and analytical strength and secondly to avoid possible duplications and overlaps.

In the five year period since the IUC mid-term reviews of around 2002, VLIR-UOS Se-cretariat has been further strengthening its results-based monitoring and evaluation tools, procedures and systems. This methodological strengthening process includes the more systematic use of Project/Programme Cycle Management (PCM) and therein of Logical Frameworks as results planning and M&E tools. Monitoring and evaluation has been given a more objective basis by the use of key indicators, measurable or at least objectively verifiable, while also a balance is strived for between quantitative and qualitative OIVs.

The Evaluation Commission appreciates the clear and analytical evaluation framework developed under the auspices of the VLIR-UOS Secretariat. This pertains especially to the comprehensiveness of the analysis: not only processes and direct outputs are to be assessed but even more importantly, in accordance with the principles of PCM and LFA (Logical Framework Analysis), the higher level results in terms of programme outcomes (effects) and impact.

#### Results Focus (Outputs, Outcomes and Impact) and Performance Evaluation

In line with the so-called " 3 E's " of performance management, monitoring and evaluation, for a truly comprehensive performance analysis of the programme the Evaluation Commission would have preferred to also have the "economy" dimension (focusing on financial, human and other inputs) included in the evaluation framework, in addition to the efficiency and effectiveness dimensions referred to above. Moreover, programme efficiency obviously can only be assessed in a meaningful way if the necessary data on and analysis of inputs are available. Despite different follow-ups, the Evaluation Commission was not able to get a full and more detailed picture of the programme inputs and therefore it had to confine its analysis to the level made possible by the data provided.

This evaluation focus on higher level results has led to a special focus on *development relevance* of the IUC projects and activities, thus balancing both the academic and devel-

opment objectives of the programme and its component projects / sub-programmes. In the same venue, the evaluation give special attention to sustainable *institutional and operational networking* dimensions (South-South, North-South-South, and this at different networking levels: local and regional (e.g. Mekong Delta), national (Vietnam), regional (South-East Asia) and international (incl. intercontinental, f.e. in the context of the aquaculture project with Ecuador (Latin America), with Kenya and Mozambique (Africa), with Iran (Middle-East), amongst others).

#### Evaluation as Participatory Exercise

For the Evaluation Commission, programme evaluations in first instance are management and learning instruments: learning from past experiences to improve design, planning and programming and implementation in the future. Only secondary to this are the external control / accountability functions of evaluation. This base philosophy automatically results in a positive, supportive outlook of evaluations ('the glass is half full rather than half empty"). This already is evident in the terminology: for example in the strengths / weaknesses analyses, it is preferred to refer to weaknesses as challenges or issues needing attention, since this not only pinpoints perceived shortcomings but at the same time already gives concrete indications if not directions on how to make corrections or to ameliorate the situation. This puts the evaluator in a co-thinking, partner role with the programme managers and co-ordinators, be it of course in a fully independent manner to ensure critical objectivity of the investigative evaluation exercise.<sup>6</sup>

This management functional perspective of evaluation requires evaluation to be a truly participatory exercise, involving all main stakeholders. Such participation strengthens *ownership* of the exercise so that the findings, conclusions and recommendations of the evaluation are easier internalised and adopted, thus ensuring effective follow-up and thus improved sustainability and lasting impact. The prior self-assessments by both the North and South stakeholders are an important instrument in this connection.

It goes without saying that the comprehensiveness of a performance evaluation and its participatory character entail important repercussions with regard to the *necessary time provisions*. And this often proves to be a major constraint, also in the case of the current CTU final evaluation. These time constraints were further compounded by the many parallel activities in connection with the international closing of the programme and the ongoing international conference. Streamlining and standardization of the exercise therefore is required, which was actively addressed by VLIR-UOS Secretariat based on lessons learned from the IUC mid-term reviews. Like for the MTR, also for this final evaluation the Evaluation Commission to that effect for example prepared a format template for reporting on the VLIR-UOS determined evaluation issues, in line with the evaluation ToR (for both processes and higher level performance criteria).<sup>7</sup>

#### Special Focus on Sustainability and Follow-up Action Planning

In line with the intrinsic requirements of a final evaluation, the Evaluation Commission gave particular attention to sustainability issues, in terms of human resources, of institutional and of financial sustainability. This special evaluation concern has been given special emphasis not only in the evaluation Terms of Reference, but also during the different evaluation interview with key stakeholders, both North and South. It however was to be noted that the programme follow-up dimension was not much elaborated in the self-assessment reports, despite explicit provisions for it.

<sup>6</sup> This positive connotation of evaluation has been shared by the Evaluation Commission with the CTU stakeholders in the evaluation briefing session at the onset of the evaluation visit to Can Tho, right away on day 1 of evaluation meetings (Tuesday, 02 December 2008, PM)

<sup>7</sup> The questionnaire concerned is attached as Annex 3 to this report. Two variations, with content wise the same evaluation topics: one for the briefing discussions with the North stakeholders and one for the evaluation interviews with the South stakeholders.

This, and the emphasis in the evaluation TORs on ex-post planning and concrete initiatives, led the Evaluation Commission to design a special, complementary ex-post strategic prioritization, planning and concrete programming questionnaires based on the VLIR-UOS IUC ex-post toolbox to be completed by the respective projects. This questionnaire template<sup>8</sup> was sent to the Programme Co-ordination Office (PCO) for distribution to and retrieval from the respective projects.

#### Evaluation Tools and Processes

To accomplish its assignment, the Evaluation Commission made use of a *combination* of methodological tools and processes including:

- \* Study of the comprehensive set of background documents provided by the VLIR Secretariat both on the VLIR, UDC and IUC in general and on the CTU-IUC programme in particular. These include the programme document and work plans, the annual reports (progress and, partially, financial), etc.
- \* The different discussions the Team Leader of the Evaluation Commission had with Flemish stakeholders of the respective individual projects / sub-programmes and with Flemish CTU-IUC general programme management, as well as with management and officers of the VLIR UOS Secretariat on the occasion of the different evaluation briefing sessions9
- \* Study of the self-assessment reports made jointly by the South and North stakeholders, both at the level of the overall programme and of its nine (or ten if E.2.1 and E.2.2 are counted separately) constituent projects / sub-programmes. The overall programme self-assessment was received at the very end of the evaluation mission as part of the closing event documents set distributed to all participants in the event. The projects' individual self-assessment reports became available as the briefing interviews with key Flemish stakeholders took place, which had prompted the evaluation team leader to develop a special questionnaire / briefing structure template with the aim of still keeping the briefing discussions structured and focused in the absence of formal, printed documents;
- \* Analysis of the returned standard questionnaires (see page 236) designed and introduced by the Evaluation Commission to retrieve base information from the stakeholders at the projects / sub-programmes level in a standardized manner in order: to safe time, to facilitate consolidation of information at overall programme level, to enhance participation of the stakeholders, and to increase validity of reported information. However, the Evaluation Commission was only able to get hold of the few completed questionnaires which were directly returned to it (either in printed or in electronic format. Distribution, follow-up and retrieval was to be facilitated by the CTU-IUC Programme Co-ordination Office (PCO), as agreed;
- \* The same pertains to the IUC ex-post toolbox questionnaire mentioned earlier. Only questionnaires directly returned to the Evaluation Commission by the stakeholders concerned were received back;
- \* Study of supplementary documents provided by the contacted / inter-viewed stakeholders in the course of the evaluation process;
- \* Multi-media presentations prepared by selective programme entities (individual projects / sub-programmes) for the closing event and final evaluation. Copies of presentations were received both in printed and digital formats;
- \* The different discussions the Evaluation Commission had with CTU executives (both present day and of the earlier days of the IUC programme), and with

<sup>8</sup> The post-IUC priorities, planning and activities questionnaire is included under Annex 4.1 to this report.

<sup>9</sup> See Annex 2.2 (page 232) for the list of persons met.

- the representatives and stakeholders of the respective individual projects / sub-programmes and support units;
- \* Documents produced for / in connection with the simultaneously ongoing CTU-IUC closing event and international conferences, e.g. Pan-gasius symposium and, particularly, the ViFINET international conference, especially in connection with the development outreach, institutional networking and spin-offs performance of the project concerned;
- \* The ocular inspection visits of CTU facilities upgraded and of equipment purchased through the VLIR-IUC programme (laboratories, ICT facilities and equipment, , libraries, greenhouses, ...).
- \* The discussions with the Flemish stakeholders and other international invitees visiting CTU on the occasion of the closing of the VLIR-IUC programme;
- \* The evaluation debriefing presentation and feedback from the participants, and the discussions on the occasion of the subsequent Joint Steering Committee Meeting (JSCM) on the last day of the evaluation visit to CTU;
- \* Additional tools developed by the Evaluation Commission for this specific final evaluation of CTU-IUC programme: (i) The proposed interview structure and list of topics<sup>10</sup> suggested for the meetings / interviews with IUC Key Stakeholders (both CTU and VLIR) focusing on (I) strengths, (2) challenges, (3) lessons learned / recommendations;
- \* Additional tools developed by the Evaluation Commission for this specific final evaluation of CTU-IUC programme: (ii) The summary questionnaire<sup>11</sup> for involved CTU institutional partner entities on Post-IUC (I) Strategic directions and priorities, (2) Concrete plans and recommendations as follow-up, and; (3) Concrete proposals under preparation / prepared for submission to VLIR, by VLIR post-IUC toolbox category (e.g. RIPs, VLIR Resarch Fund, Close the Gap (CSG), North-South-South (NSS), South Initiatives (SI's) and Own Initiatives (OIs)

#### Evaluation Facilitating Factors

A number of conditions, elements and factors have been contributing in a positive to very positive manner to the conduct of the evaluation / review by the Evaluation Commission. Amongst these conducive, facilitating factors should be mentioned:

- \* The clear and comprehensive VLIR-IUC programme final evaluation framework.
- \* The substantive preparatory work for the evaluation by the stakeholders, including the preparation of the self-assessment reports (individual and collective) and the preparation of multi-media presentations and other supportive materials (even be it with substantive difference in overall quality and completeness of the produced documents and materials).
- \* The organisation, overall co-ordination and logistics support of the evaluation mission under the responsibility of the CTU-IUC Pro-gramme Co-ordination Office (PCO).
- \* The accessibility, availability and commitment of the stakeholders. The CTU stakeholders continued being available even after office / academic hours, in the evening and over the weekend, and despite being engaged in different activities for the closing event and/or ongoing international conferences.
- \* The dynamic and energetic atmosphere at Can Tho University, the accessibility of the different stakeholders (both staff and management)

<sup>11</sup> See Annex 3 (page 236)

\* The excellent co-operation and atmosphere of trust and cordiality between the CTU and Flemish partners.

#### Evaluation Constraints

Despite the overall conducive environment and atmosphere, a number of constraints were to be faced by the Evaluation Commission which to a certain extend hampered the evaluation work. These constraints are basically of a methodological nature, but also include some organisational and situational factors. Constraints are listed here in first instance for their relevance as learning tool for future evaluations.

- \* The discrepancy between the comprehensive evaluation tasks (very broad ToR) and the limited time available, resulting in a hectic evaluation mission programme and substantive *time constraints* (e.g. for the preparation of the evaluation debriefing presentation for all stakeholders and JSCM, to be done before the end of the mission still).
- \* Different evaluation related activities taking place at the same time and *interfering with each other*. For example, while the Evaluation Commission visited Can Tho University, also two international conferences were going on, of which one organised by one IUC partner team even (R1.1 aquaculture / artemia). And then there were the festivities, closing ceremonies related to the end of the 10 year IUC partnership, with many partners from Flanders and elsewhere in the world coming over. The debriefing session on the last day of the Evaluation Mission for example took take place right after the closing ceremonies reception and lunch.
- \* The presence in situ of the North Stakeholders was very beneficial in terms of direct contacts with the Evaluation Commission and also for efficiency and time saving purposes. But at the same time the mere presence of the Flemish stakeholders already had an influence on the interactions between the CTU stakeholders and the Commission, thus affecting the truly independent and unbiased character of the evaluation aspired for.
- \* The evaluation exercise has been mainly based on reports of and interviews with the direct stakeholders. Due to time constraints, no participatory observations of programme activities could be included in the programme neither empirical exposures to programme effects and impact on the larger society beyond the CTU campus<sup>12</sup>.
- Lack of baseline benchmark data: As mentioned earlier, in comparison to the midterm evaluation, the VLIR-IUC programme has achieved major methodological and procedural improvement. This for example pertains to the introduction of LogFrames and other results-oriented programme / project cycle management tools. Nevertheless, the retrofitting of the LogFrames was not an easy exercise and has also not been accomplished as aspired for. Impact indicators are included in the project designs, but no effective measurements or data collection strategies are provided for. The lack of baseline benchmark data is generally recognized as a main inhibiting factor for effective results based / performance management, measurement and monitoring. The collection and processing of baseline data in principle should be done up-front before the actual start of programme/project activities or at the latest during the initial inception phase of the programme/ project. But the reality is that for example project leaders are appointed / allocated to the programme quite late in the process, often after the initial inception period has been completed already.

<sup>12</sup> Abstraction made of one field visit with the whole group of Flemish stakeholders and a large selection of core CTU staff involved in the IUC programme. For different reasons, amongst other related to time constraints and to the appropriateness / relevancy of the field visit for evaluation purposes, the Evaluation Commission ultimately decided not to participate in this visit. Moreover, that same day in the morning two meetings with CTU or former CTU executives took place (a former rector and a vice rector)

- \* In the same context, at the start of the CTU-IUC programme no baseline surveys, needs assessments or other baseline benchmark data collections have taken place. Obviously, this lack of a reliable picture of the start situation of the programme negatively impacts on the accuracy, if not on the feasibility of progress and impact analyses. There have been attempts to compensate retro-actively for this lack of reliable chronological benchmarking information, but this has not been a thoroughly successful exercise.
- \* Objectives have not been clearly articulated at the start of the programme and substantive changes have been applied over time, not necessarily with the consent of all parties concerned.
- \* Lack of target setting on objectives: Evaluation in essence is a comparative exercise between actual accomplishments and what has been planned. This presupposes the existence of clearly defined objectives, with for each target setting preferably not only for the final situation aimed at, but also with interim targets to enable monitoring, interim and mid-term evaluations. The first phase CTU-IUC programme however has not been identified and formulated in accordance with the principles of Programme / Project Cycle Management (PCM), hence without hierarchically ordered sets of objectives and target setting for each. As indicated earlier, substantive efforts have been done tot retroactively correct, but this cannot be considered a success across the board.
- The evaluation framework provides for extensive use of *indicators* to objectively assess performance of the programme and of its constituent projects / sub-programmes. But within the CTU-IUC programme itself and its components, no systematic use has been made of objectively verifiable indicators for planning, management and monitoring & evaluation purposes. This leads to the difficult situation of assessing an old type programme with meanwhile adopted new tools. Moreover, needless to say that the non-systematic use of performance indicators jeopardizes objective performance assessments, let alone performance measurements. It is widely recognized that programme monitoring and follow-up based on key performance indicators still leaves much room for improvement. The indicators in the LogFrame and their target setting during the work planning exercises both (strategic at the start and operational on an annual basis) form an excellent basis for performance management, monitoring and reviews/evaluations. But unfortunately, all too often LogFrames are seen as externally imposed pre-condition to get a programme/project approved and not as a pro-active strategic and operational performance planning and management tool.
- \* Limited CTU statistics and strategic data: In addition to the rather limited availability of CTU statistics and strategic data, there is also the element of rather limited disaggregation of the overall totals, so that it proved rather difficult to assess the specific VLIR programme contribution to CTU institutional development (e.g. % of new PhD's originating from / facilitated by the VLIR programme).
- \* In the first five year phase of the CTU-IUC programme, the *internal composition* of the CTU-IUC programme in terms of constituent projects / sub-programmes has changed over time (abandonment of three projects, two new projects, ...) which already by itself is a complicating factor for evaluations. This situation was further aggravated by the *different timeframes* of the umbrella programme and the constituent projects / sub-programmes started at a later stage. A differentiated evaluation tool therefore is required. In the second five year phase, much more stability came to the IUC programme.

- \* At the time of the mid-term evaluation, the different versions of the self-assessment reports in circulation caused major problems. This has been solved to a large extent for the final evaluation. But for this evaluation, the problem in many instances shifted to the other side of the spectrum: limited or partial information only in the self-assessment reports; late availability of the reports (sometimes only during or even after the interview, so that no (more) in-depth study was possible ahead of the interview), inconsistencies in the reporting or methodological short-comings (e.g. in the financial reports with regard to the registration of budgets and of expenditures).
- \* Overlaps in the evaluation framework, asking for the same information under a different heading, in a different context (e.g. with regard to management aspects, or same info for both projects and parent programme).
- \* Occasional internal inconsistencies in the reporting, e.g. with regard to objectives and reported accomplishments, or in consolidations.
- \* The provided financial data were not always complete and accurate, particularly those related to expenditures and fund transfers, sometimes compounded by methodological inadequacies (e.g. equating budget and expenditures figures).
- \* Difficult *accessibility* to policy and other strategic documents (e.g. on the national policy for higher education, etc) or non-existence of such documents (e.g. on CTU mid-term or long-term strategic plans after the first five year period).
- \* Language issue: Major improvements are noted with regard to the mastering of the English language in comparison to the time of the Mid-Term Evaluation. Most documents were available in English while also the evaluation interviews at CTU were conducted in English without interpreter. Still, further improvements in the mastering of the English language remains a top priority, as testified by both CTU and Flemish key stakeholders.
- \* *Time constraints:* Due to time constraints, the Evaluation Commission could not meet with external stakeholders for interviews during the evaluation period.

#### The Mission Programme

The briefing discussions with the Flemish key stakeholders took place over three day at the end of October – early November 2008. The schedule is attached under Annex 2.1 to this report. These briefings included the director and key officers of VLIR-UOS Secretariat, the VLIR-CTU IUC programme leader and different IUC project leaders from UGent, KU Leuven and Vrije Universiteit Brussel. The meetings took place at the VLIR-UOS Secretariat, with the exception of the interviews of KU Leuven professors which were held at the KU Leuven Geo Institute in Heverlee – Louvain.

The Final Evaluation mission visit by the Evaluation Commission to Can Tho University (CTU) in Can Tho City, Mekong Delta, Vietnam, covered the period from 02 to 09 December 2008.

Suggestions for the evaluation programme were provided by the Evaluation Commission for consideration by VLIR-UOS and CTU ahead of the actual evaluation mission. A copy of this document, containing also practical suggestions for the different meetings and visits, is included under Annex 2.3 to this report. This draft document served as basis for the elaboration of the first draft programme by the IUC Programme Coordination Office (PCO) and was finalised based on the feedback received on the occasion of the briefing session with all main CTU stakeholders on the first day of the visit to CTU.

The Evaluation Commission already in its first communications with PCO indicated that in view of the limited time available for the evaluation mission, priorities needed to be set and selections made in the list of proposed meetings and visits. This draft programme indeed proved very ambitious as it included meetings with all main CTU stakeholders, including: CTU general management (incl. Rector, Department of International Relations, Department of Administration and Planning, Department of Academic Affairs, and Department of Research Affairs ); IUC programme management and secretariat; project leaders and staff of the 9 (10 in case E2 is considered as consisting of 2 projects) constituent projects / sub-programmes, meeting with staff who had benefited from HRD opportunities in Flanders (including graduates, alumni). It furthermore included visits to facilities (computer rooms, laboratories, greenhouses, libraries, Learning Resource Center), meetings with regional authorities, participation in / attendance of international conferences / workshop, attendance of closing events of the IUC programme, field visits and discussions with programme beneficiaries at grassroots level (ultimately not pushing through in view of scheduled meetings with prior rector and vice-rector), attendance of social functions (particularly events in relation to the end of the VLIR-CTU IUC programme, preparation of debriefing presentation, debriefing presentation and discussions, attendance of the Joint Steering Committee Meeting (JSCM), travel overland to and from Can Tho City from Ho Chi Minh City.

A detailed programme of Evaluation Mission activities is attached as *Annex 2.2* to this report.

The prepared programme of activities was stuck to as much as possible. This left the Evaluation Commission continuing its internal discussions in the evenings and also during the Weekend. Meetings with key stakeholders also continued over the weekend, as can be gleaned from the programme of activities included under Annex 2.2.

#### Structure of the Evaluation Report

The structure of the evaluation report is basically in line with the evaluation content requirements as laid down in the VLIR-UOS Terms of Reference concerned of the present VLIR commissioned assignment.<sup>13</sup> Accordingly, three main parts of the final evaluation report can be differentiated:

- \* A general introduction to the evaluation consisting of: (i) a brief summary of the VLIR IUC programme and the role of the current evaluation therein, and; (ii) some contextual information on the broader socio-economic and education situation (including higher education policies) in Vietnam and the Mekong Delta Region relevant to the CTU-IUC programme;
- \* The main section on the *evaluation findings*, consisting of the following main chapters:
  - The evaluation of the programme and the constituent projects / sub-programmes, in turn consisting of three parts:
    - Progress evaluation (inputs, activities and direct results on the Key Result Areas)
    - Programme higher level performance / quality evaluation (DAC evaluation criteria)
    - The added value of the CTU-IUC programme vis-à-vis other programmes

- The evaluation of programme management (overall assessment and of specific management aspects) and of the co-operation and co-ordination between all parties concerned.
- The follow-up plan of the programme and post-IUC toolbox initiatives
- \* A concluding section of summary conclusions and recommendations.

The programme progress and direct results are compiled in summary tables for each key result area. The tables present these summary results by project / sub-programme (vertical axis) for a number of key performance indicators identified in the ToR (horizontal axis). These results are then discussed for the whole programme, with concrete illustrations referring to the different individual projects / sub-programmes concerned. These findings are classified in respectively strengths and challenges / issues needing attention categories, serving as basis for discussion. The scores on a 1-5 scale for each of the projects / sub-programmes for each of these key results indicators is compiled in a summary scoring sheet.

A similar summary scoring sheet is prepared for the *performance assessment on the series* of higher level programme performance criteria. These criteria are then discussed in a general way with concrete references to the constituent projects / sub-programmes.

Being a final evaluation exercise, the report especially focuses on sustainability and impact issues particularly from the perspective of continued cooperation between CTU and its Flemish Partners in the framework of the VLIR IUC ex-post toolbox modalities and other funding sources as for example the Research Foundation Flanders (FWO) and the International Foundation for Science (IFS) amongst others, with whom VLIR-UOS closely coordinates for IUC follow-up initiatives and projects. Networking and spin-offs are given special attention in this context of IUC ex-post processes and activities.

The summary list of *conclusions and recommendations* is presented in the third and final main sector of the report. They have been worked out from the perspective of their usefulness for the ex-post phase of the VLIR-IUC programme with Can Tho University, but also in perspective of their functionality for the Institutional University Co-operation programme on the whole.

The compilation of 9 sets of annexes contains practical and methodological background information on the evaluation, financial and other base data on the CTU-IUC programme, excerpts from policy documents, copies of the standardized tools / questionnaires developed by the Evaluation Commission to facilitate the evaluation, IUC closing events summary information, selected excerpts of the Evaluation Commission's debriefing presentation in PowerPoint, etc.

#### Contextual Information

In this Chapter some basic contextual information on the VLIR-IUC programme with Can Tho University is provided, more particularly: (I) A summary overview of socio-economic developments in Vietnam; (2) Some basics on education and higher education in Vietnam; (3) Some base figures and facts on Can Tho University, and; (4) A broad outline of the VLIR Institutional University Co-operation (IUC) programme with Can Tho University.

#### Social-Economic Developments in Vietnam

#### Social-Political and Demographic Characteristics

Vietnam, which currently ranks 101 out of 162 countries in terms of the Human Development Index (HDI), has been going through a transition from a centrally planned to a socialist-oriented market economy for three decades. It has a population estimated at just over 84 million and is divided into 8 regions, 63 provinces, 560 districts and 10,320 communes. The annual population growth rate is officially estimated at 1.31% per year<sup>14</sup>. Due to the finite supply of arable land and the scarcity of non-agricultural employment opportunities in rural areas, rural-urban migration is on the rise. While the urban population currently represents some 23-25% of the total population, it is expected that this share will rise to 40% by 2015.

#### Macro-Economy and Poverty Incidence

Since launching key reforms through its "doi moi" or "renovation" in 1986, the country has made remarkable progress across a broad range of socio-economic development indicators; GDP has more than doubled, with inflation coming down to low single digit figures; life expectancy increased to 68 years; primary school enrolment increased from 91% in 1993–1944 to nearly 95% in 1998–1999, and mortality rates among children under age 5 have declined to 42 per 1,000 live births.

Land reforms, agricultural deregulation, and price liberalisation that followed "doi moi" have turned Vietnam from a country experiencing extreme food insecurity into one of the world's largest exporters of rice, coffee and other agricultural commodities. The country's poverty rate declined from 58% in 1993 to 37.4% of the population in 1998 and further down to 16% by 2007. Poverty mainly declined because of the economic growth since the early 1990s (8-9% per year) and Vietnam's strong agricultural performance since the late 1980s with the value of agricultural exports growing at over 13% per year from 1990 to 1998. Per capita GDP is some US\$ 835 at present compared with US\$ 289 in 1999. At the same time, it has been observed that the poverty incidence varies significantly between regions, with the Northern Uplands, Central Highlands and North Central regions, i.e. areas with a large ethnic minority population, having the highest incidence and severity of poverty. The Gini coefficient has risen significantly from 35.6 in 1995 to over 40 in recent years. 95% of the poor live in Vietnam's rural areas where average per capita income equals only 50% of that in urban areas. While Vietnam's 53 ethnic minorities represent 14% of the country's population they account for 29% of the poor. Poverty rates among the minorities are some three times higher than among the majority Kinh households.

#### Socio-Economic Development Policies

In response to these developments, the Government of Vietnam has developed several generic and targeted poverty reduction programmes since the mid 1990s. Currently, the most relevant generic programmes are the "Socio-Economic Development Strategy 2001–2010" (SEDS), and the "Comprehensive Poverty Reduction and Growth Strategy" (CPRGS) of May 2002<sup>15</sup>.

The general objective of the "Socio-Economic Development Strategy (SEDS) 2001-2010" is to "(reduce) the number of poor households, eliminate falling back to poverty, in order to implement the objective of "Prosperous population, powerful country, fair, democratic and civilized society"; to help the majority of the poor reach the basic social services; basically implement the objectives of helping the communes with especially difficult circumstances; expand opportunities for the poor to enjoy special support policies and social welfare"<sup>16</sup>.

The "Comprehensive Poverty Reduction and Growth Strategy" of May 2002 was approved by the Prime Minister on 21 May 2002 and is intended to be a more practical action plan for poverty reduction and economic growth within the broader framework of the SEDS 2001–2010 and the 5 year Socio–Economic Development Plan (2001–2005). Its strategic objectives are to develop: (a) an environment for growth; and (b) sectoral policies and measures for the poor (covering the key economic and social sectors, income generation and social safety net programmes (including emergency relief) and policies aimed at narrowing the gap in terms of regional differences, ethnic minorities and gender equality). General policy aims are supplemented by a range of "major policies and measures" for the development of specific economic sectors and a series of (national target) programmes have been implemented such as the Programme on Socio–economic Development in Especially Disadvantaged Communes in Mountainous, Isolated and Remote Areas (also known as "Programme 135"<sup>17</sup>).

#### Science and Technology, and Education Policies

One measure to further develop the economy is enhancing science and technology re-search. In the "Vietnam Science and Technology Development Strategy, 2006 – 2010", (Issued enclosed with Decision No 272/2003/Q\_-TTg, of 31 December 2003 by the Prime Minister), the Government of Vietnam has recognized that Science and Technology (S&T) development together with education and training development are national priorities. The S&T strategy specifies some priority areas for research, in which natural and technology science are particularly relevant to CTU. For national science, the priorities are fields at which Vietnam is strong such as mathematics, physics, chemistry, mechanics, life science, etc.. For technology science, the following priorities have been identified:

- \* Information and Communication Technology (ICT)
- Biology technology
- \* Advanced material technology
- Automation, mechanics and machinery technology
- \* Technology in the energy field
- \* Preserving and processing technology of agricultural products and foods
- Space technology

<sup>15</sup> Some selective excerpts of the CPRGS of particular relevance for the education section are reflected under Annex 5 to this report.

<sup>16</sup> Poverty Alleviation Strategy 2001-2010, Hanoi, May 2001, page 12.

<sup>17</sup> Programme 135 is the largest Government poverty alleviation program designed specifically for mountainous and remote areas where most of Viet Nam's ethnic minorities live. Launched in 1998, Program 135 supports small scale infrastructure development in the poorest communes, including school construction.

In the past, the Ministry of Science and Technology (MOST) was responsible for development of science and technology research policy and management of all national –level research projects. In March 2008, the *Vietnam National Science Foundation* was established under the umbrella of the MOST. The Foundation, which is being set up and envisaged to be operational by the end of the year, is expected to manage part of the research projects according to internationally compatible procedure and regulations.

#### Socio-Economic Characteristics of the Mekong Delta

The Mekong Delta is the region in southwestern Vietnam where the Mekong River approaches and empties into the sea through a network of distributaries. The Mekong Delta region encompasses a large portion of southeastern Vietnam of 4 million ha (11% of the country's area).

Table 1 : Comparison of Vietnam National and Mekong Delta Regional Socio-Economics Statistics (period 2000 - 2007)

Year Indicator / Statistic	2000	2001	2002	2003	2004	2005	2006	(Estim.) 2007
Population (1000) Country Mekong Delta	77635.4 16344.7	78685.8 16519.4	79727.4 16713.7	80902.4 16881.6	82031.7 17076.1	83106.3 17256.0	84136.8 17400.1	85154.9 17524.0
Population density Country (person/ km²) Mekong Delta	234 403	238 407	241 412	244 416	248 421	251 425	254 429	257 432
Income/person/ month (US\$) Country Mekong Delta			20.94 21.82		28.47 27.71		37.41 36.94	
Poverty rate (%) Country Mekong Delta			28.9 23.4		19.5 19.5		16.0 10.3	
Unemployment rate in urban areas (%) Country Mekong Delta	6.42 6.15	6.28 6.08	6.01 5.50	5.78 5.26	5.60 5.03	5.31 4.87	4.82 4.52	4.64 4.03
Working time in rural areas (%) Country Mekong Delta	74.16 73.18	74.26 73.38	75.42 76.53	77.65 78.27	79.10 78.37	80.65 80	81.79 81.7	
Number of telephone per 1000 people Country Mekong Delta	42.3 25.6	54.8 33.5	69.8 40.3	90.7 56.5	125.5 74.8	190.7 91.4	338.9 86.9	609.0 119.0
Number of high schools/1000 people Country Mekong Delta						0.78 0.62	0.80 0.63	0.81 0.64
Number of school teacher/1000 people Country Mekong Delta						9.4 8.1	9.4 8.2	9.4 8.2

There are 13 provinces in the region, i.e., Long An, Dong Thap, An giang, Tieng Giang, Ben Tre, Vinh Long, Tra Vinh, Hau Giang, Kien Giang, Soc Trang, Bac Lieu, and Ca Mau. Mekong Delta has been regarded as the area with the best natural climate for agriculture, aquaculture, and marine culture. In the last decade, Mekong Delta has been the most important region nationwide for rice, fruit, aquaculture production, and marine culture.

With many rivers and a large interface with the sea, the Mekong Delta suffers from several difficulties in socio-economic development. Firstly, yearly floods and high tides that damage infrastructure, agricultural and aquacultural production, as well as people' houses. Secondly, infrastructure, especially transportation and telecommunication, has been lagging behind the whole country. As a result, agricultural and aquacultural products are not easily transported to outside areas, reducing their values. Finally, environmental issues in the flooding areas are a major concern.

The population (2007) of the Mekong Delta is 17.5 million, with 51% of them are in the working ages. Despite of its potentials, Mekong Delta still has a high poverty rate of 10% (2007), and monthly income per person is slightly lower than the average of the country. The relatively low living standard is further illustrated by for example the very low number of telephones / 1,000 people (only 199 compared to 609 as the country average). On education, Mekong Delta has been regarded as the "lower point" of the country. Its number of high schools and number of school teachers per 1,000 people are both lower than the average of the country (See Table 1, page 27 on the previous page). In the long run, human resources development remains one of the highest priorities. For immediate and short terms, the region is in need of scientific research and new technologies that can help the population in such areas as post-harvested crops, new ways of agriculture and aquaculture production and processing, etc.

#### Education in Vietnam

#### Structure of the Education System

Children enter primary education at age six. Primary education consists of a five-year programme, from grade 1 through grade 5. For the training of pre-primary and primary/basic schoolteachers, 2-year courses are conducted at Teacher Training Colleges. For the General Education Level II, officially known as lower secondary education, a 4-year programme from grade 6 to grade 9 is in place. The curriculum is standardized, with almost no optional or elective courses. At the conclusion of lower secondary education (LSE), students take a national examination that is prepared and administered by the Ministry of Education and Training (MoET). Those who pass the examination are awarded the Diploma of Completion of LSE. Completion of LSE is the general entrance requirement for vocational, technical, and academic upper secondary education, in addition to required entrance examinations. LSE teachers are trained (3 years) in Junior Teacher Training Colleges in the provinces.

The upper secondary school, consisting of general education grades 10 through 12, is a three-year programme. All schools use a standard curriculum and textbooks designed by MoET. Admission to upper secondary school requires successful completion of lower secondary education and an admission examination. At the completion of upper secondary school, students take a national examination. Those who pass receive a diploma.

Upper secondary school teachers are trained in Teacher Training Colleges, in universities with education faculties, or in colleges or universities in the regular undergraduate programme. For admission, students must complete upper secondary school and pass the entrance examination. Most programmes last for four years, although some foreign language and technical programmes last for five years.

#### Education Policy

The Ministry of Education and Training (MoET) has overall policy responsibility for the education sector. Broadly speaking, the Ministry manages higher institutions, Provinces manage upper-secondary schools; and Districts and Communes manage lower -secondary, primary and pre-primary facilities.

			() 经经济	連転とは						SEASING.		
Year Categories	1995- 1996	1996- 1997	1997- 1998	1998- 1999	1999- 2000	2000- 2001	2001- 2002	2002- 2003	2003- 2004	2004- 2005		
Schools												
Primary	11701	12145	12764	13259	13517	13859	13903	14163	14346	14518		
Lower Secondary	5902	6340	6258	7164	7417	7741	8096	8396	8745	9041		
Upper Secondary	644	703	894	962	1101	1258	1396	1532	1664	2224		
Classes (000)												
Kindergarten	66,9	74,1	79,8	82,6	84,5	87,1	87,3	87,4	88,7	93,2		
Primary	310,3	317,9	323,4	327,3	322,4	320,1	314,5	308,8	299,4	288,9		
Lower Secondary	104,3	117,2	124,9	133,4	139,5	144,4	153,7	161,3	165,7	170,9		
Upper Secondary	21,8	24,6	28,6	33,9	39,3	45,1	50,2	52,1	55,8	59,7		
Pupil (000)												
Kindergarten	1931,6	2092,7	2257,7	2248,2	2199,5	2212,0	2171,8	2143,9	2172,9	2332,8		
Primary	10228,8	10352,7	10383,6	10223,9	10033,5	9741,1	9315,3	8815,7	8346,0	7773,5		
Lower Secondary	4312,7	4839,7	5204,6	5514,3	5694,8	5863,6	6259,1	6429,7	6569,8	6670,7		
Upper Secondary	1019,5	1155,6	1382,0	1652,9	1957,0	2171,4	2301,2	2454,2	2589,6	2802,1		

Table 2: National Education Statistics 1995-2005

In practice this pattern varies around the country. Service provision has become increasingly decentralized through removal of controls from the centre and increased revenue raising powers and related incentives at the local level. State budget management in education is increasingly decentralized providing greater autonomy to local government as well as educational and training institutions. Local authorities are responsible for budget allocations to finance local educational and training activities performed at basic educational sub-sectors and locally-managed training institutions.

Vietnam has accomplished notable progress in the field of education as is evident from the trend table on the previous page for the period 1995-1996 to 2004-2005.

As far as education and training are concerned, the Comprehensive Poverty Reduction and Growth Strategy (CPRGS) aims to "(renovate) and create fundamental and compre-

hensive changes in the development of education and training and science and technology; improve the quality of human resources with appropriate structures; achieve universalisation of lower secondary education; rapidly apply advanced modern technologies; gradually develop the knowledge-based economy; reduce environmental pollution and improve the efficiency of environmental protection" (page 37) and "continue raising the quality of education and maintain the target of universalizing primary and lower secondary education; reduce and eliminate school fees and other contributions for children from poor families and poor areas. Ensure that the quantity and quality of schools, classrooms and teachers are adequate, and gradually consolidate the general and vocational training schools" (page 9).

Vietnam's Education Development Strategic Plan for the Period 2001 – 2010 sets very high objectives for enrolment rates of pre-primary, primary and secondary education levels, as well as objectives for reduced rates of illiteracy. Specifically, the Government has set an objective that by the year 2010 the percentage of children of the school age group actually in school will be 99%.

The National Education for All (EFA) Action Plan 2003-2015 (approved on 2 July 2003) provides a strategic framework for long-term education development and brings together the overarching national education goals and targets under the Socio-Economic Development Strategy (SEDS) 2001-2010, the Comprehensive Poverty Reduction and Growth Strategy (CPRGS), the Education Development Strategic Plan for 2001-2010 and the Vietnam Millennium Development Goals. By "setting the objectives and targets to be reached during the plan period 2003-2015...identifying the action programmes that must be implemented in order to reach the objectives an targets; and by assessing the resource requirements, by identifying resource gaps and by exploring ways to overcome them", the EFA Action Plan aims at "consolidating the education progress achieved and guiding education reforms and development programmes for the EFA components of the education sector in order to enable them to strongly and effectively support the attainment" of the national development goals of "maintaining high economic growth through continued transition to a market economy, applying an equitable, socially inclusive and sustainable pattern of growth, putting in place a modern public administration and governance system and strengthening the integration of the country within the world economy and the international community"18.

#### Structure of Higher Education in Vietnam

Between 1999 and 2007, the number of universities/colleges increased more than twofold (from 153 to 322). By 2007, there were 139 universities, of which 30 (27.5%) were 'non-public' (see table 2, page 29). For reasons of compatibility with the international community's definition of "university", the so called colleges are excluded from the statistics. It is noted, however, the many of these colleges are envisioned to be upgraded into universities in the coming years (as some already done in the last years).

**<sup>18</sup>** EFA Action Plan 2003-2015, page i, xxv and 24. The CPRGS in this respect states: "Renovate the management of education in the direction of raising the effectiveness of state management; strongly decentralize with a view to promoting initiative and responsibility at the local level, at the grassroots education level; prevent and curb negative behaviour" (page 101).

Table 3: Number of public and non-public universities, 1999-2007 (excluding colleges)

Year Type of HEI	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07
Primary	69	74	77	81	87	93	104	139
Lower Secondary	52	57	60	64	68	71	79	109
Upper Secondary	17	17	17	17	19	22	25	30

In the 1999 – 2007, the number of students increased by 62.9% (see table 3, page 31). This rate was similar for public and non-public universities. Full-time students accounted for 57% in 2007. Non-public students accounted for about 13% in 1999-2000. This figure slightly dropped to 11 and 12% during 2000 – 2005, but came back to 13% in 2007. It is expected that the share of non-public students will gradually increase in the coming years.

Table 4: University student enrolment 1999-2007

Year Type of HEI	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07
All Students	719842	731505	763256	805123	898767	1046291	1016276	1173147
Public	624423	642041	680663	713955	787113	933352	949511	1015977
Non-Public	95419	89464	82593	91168	111654	112939	138302	157170
Full time training	376401	403568	411721	437903	470167	501358	546927	677409
In service training	205906	223837	251600	259396	285726	311659	410753	495738
Other training	137535	104100	99935	107824	142874	233274	58596	
Graduated student	90791	117353	121804	113763	110110	134508	143017	161411

Policy initiatives in Higher Education in Viet Nam since 2004

Since late 2004, a series of policy initiatives have been taken with respect to h

Since late 2004, a series of policy initiatives have been taken with respect to higher education. Chronologically these include the following:

- \* MoET decision No 38/2004/QD-BGD&DT of 2 December 2004 concerning the adoption of the 'Provisional Higher Education Quality Accreditation Regulation'. The decision concerns higher education quality issues and implies universities, academies and other types of higher education institutions. It identifies self-assessment and external review as key elements in the quality assurance process.
- \* Government Resolution 14/2005/NQ-CP of 2 November 2005 on 'Substantial and Comprehensive Renewal of Vietnam's Tertiary Education in the 2006-2020 period'. Resolution 14 aims to 'substantially and comprehensively renew tertiary education and make substantial changes in education quality, efficiency and scale, thus satisfying the requirements of national industrialization and modernization, international economic integration and people's learning demands. The Resolution refers inter alia to the importance of linking higher education with overall socio-economic development, autonomy of university management and

- the role of higher education institutions in the renewal of the higher education provision.
- \* The Higher Education Reform Agenda 2006-2020 (HERA 2020) approved by the Government in July 2005. The Agenda, amongst others refers to the importance of networking of higher education institutions, expansion of higher education and the advancement of scientific and technological research, including contract research.
- \* MoET Regulation on Regular (full-time) training programmes of universities and colleges (promulgated together with decision No 25/2006/QD-BGD-DT of 26 June 2006). The Regulation refers to curricula, teaching loads and credit system.
- \* The Education Law of 14 June 2006 replacing the Education Law of 2 December 1998. The Law regulates amongst others the credit system to be used in higher education, emphasises the importance of QA and distinguishes different types of institutions and various levels of higher education. The Law furthermore stipulates that higher education institutions have a responsibility for the design of their own programmes, based on the core programmes set by MoET.
- \* MoET Regulation on Master-level Education (promulgated together with decision No 45/2008/QBDGT of 5 August 2008, which sets amongst others the requirements for Master level education in terms of human resources, teaching infrastructure, etc.
- \* Recent campaigns on higher education based on society's needs and 'Say no against irregularities in education', that promote amongst others closer relations with the "world of work" and the proposed merger between two national examinations: the graduate exam for upper secondary education and the university level entrance examinations.

#### Education Quality

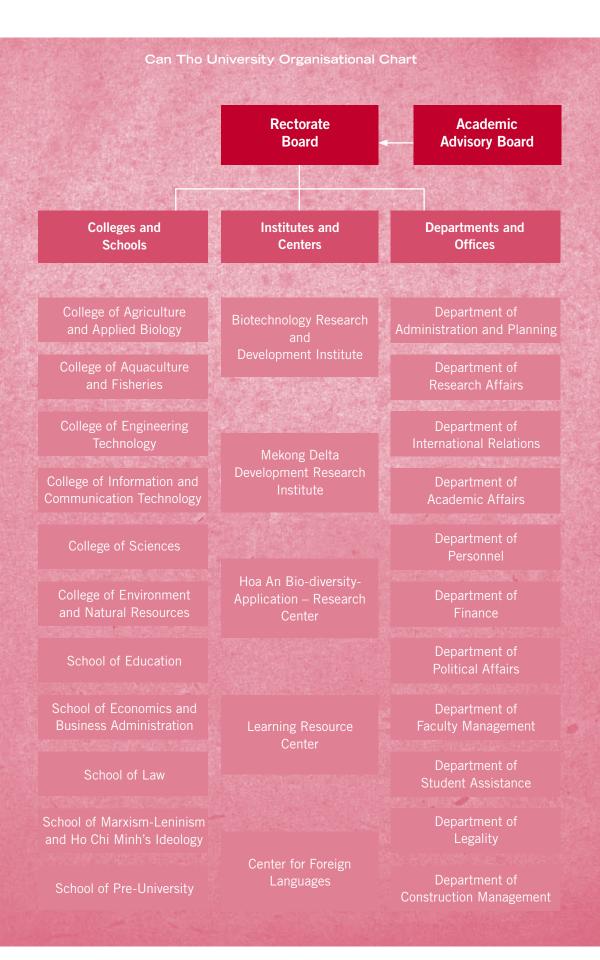
There are only few data available on educational quality. The school day and school year in Vietnam are much shorter than the world average, which is owing to a limited infrastructure, an inadequate distribution of teachers and chores for the students at home. Low quality of primary and secondary education have an impact on the quality of tertiary education as well.

A university education modernisation project has been conceptualized. The aim is that by 2010 most universities will meet accepted regional standards, while by 2020 the whole university system must successfully reach these regional standards, with a selection complying with world wide, international standards.

The Vietnamese government pursues an active policy and programme of human resources development and quality improvement of its academic staff. Wages of teaching staff at all levels (including higher education) are low. To add to their income, many provide supplementary education on an informal basis or take on another job.

#### Can Tho University

Can Tho University (CTU) was founded in 1966. CTU is one of the major universities of Vietnam and is the most important education institute of human resources for the Mekong Delta Region.



#### Location

Can Tho University is located in the city of Can Tho, the capital of the Mekong Delta region and of Can Tho Province and is the fifth largest city in Vietnam. Can Tho province is located in the centre of 12 other Delta provinces. Can Tho City is about 170 km from Ho Chi Minh City, on the banks of Hau River (Mekong River). The provincial population is approximately 1.95 million with both rural and urban population growing rapidly.

#### Organisation

Can Tho University consists of three campuses and occupies a total land area of 87 ha. Presently CTU has eleven educational units, 5 research institutes and centers, plus a variety of support and other specialized departments. The CTU organisational chart is presented on the next page.

In contrast to most of the more than other 130 universities existing in Vietnam, CTU offers a comprehensive programme. It reportedly offers 77 undergraduate education programmes (4 – 6 years) with an undergraduate student population of 35.000, and graduate students totalling 1,800. Almost all of them are from the Mekong Delta, mostly from the rural areas. The University offers 28 Master and 8 Doctoral programmes. Every year CTU receives students on internship programmes from the US, Belgium, Japan and other countries, or under agreements between their universities and CTU. Table 4 presents basic statistics on students and teaching staff at CTU.

Table 5: Number of students and teaching staff at CTU (1998 - 2007)

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Students at Satellite Univs	11,900	12,200	14,664	14,295	14,522	14,934	14,257	12,060	13,605	9,363
Students at CTU	11,950	13,800	15,149	16,526	17,828	16,827	16,405	17,942	19,514	22,353
% students at CTU	50.1%	53.1%	50.8%	53.6%	55.1%	53.0%	53.5%	59.8%	58.9%	70.5%
# of students graduated	1,459	1,683	2,164	2,354	2,440	2,744	3,213	2,951	3,619	3,443
Teaching staff	684	713	795	824	835	751	814	828	890	912
- With MSc or Ph.D.	248	316	373	394	413	384	494	523	540	546
% staff with MSc or Ph.D	36.3%	44.3%	46.9%	47.8%	49.5%	51.1%	60.7%	63.2%	60.7%	59.9%
- Female	229	235	276	296	297	261	214	298	337	346
% Female teaching staff	33.5%	33.0%	34.7%	35.9%	35.6%	34.8%	26.3%	36.0%	37.9%	37.9%

CTU's main missions are training, conducting scientific research, and transferring tech-nology to serve the regional and national socio-economic development. In addition to its training responsibilities, CTU has actively taken part in scientific research projects, applying the advances in scientific and technological knowledge to solving problems related to science, technology, economics, culture and society in the region.

From achievements in its scientific research and international cooperation projects, the university has developed a variety of products and technological production processes that benefit people's lives and promote export, thus helping the university gain prestige in national and international markets. As regional university, Can Tho University is a major catalyst of regional development of the Mekong Delta Region.

Over the last ten years, the total number of students increased from 22,830 to 31,720 students. The percentage of students in Satellite universities has decreased from 50% to about 30%. The number of teaching staff also increased sharply (about 30%), while staff with MSc. and Ph.D. increased to more than double, to account for nearly 60% in 2007. There is also a trend towards a better balance between male and female teachers. The students/teacher ratio increased from 34 in 1998 to 42 in 2003, and then improved again to reach 34 students/teacher in 2007.

#### CTU Strategic Plans

Following the appointment of Prof. Dr Le Quang Minh as fourth rector of CTU in May 2002, a new 5 year programme was drafted in August 2002, amongst others focusing on the following priorities:

- 1. Education
- \* Development of international programmes
- \* Increase of the number of MSc and PhD programmes
- \* Application of student centred teaching methods
- \* Application of 4 distant education subjects (aquaculture, agriculture, economics and IT)
- \* Availability of 60% of lecture notes on CD
- 2. Research and application
- \* Increased attention for the research component of CTU activities
- \* Development as leading institute in biotechnology, agriculture and aquaculture
- \* Increased attention to the development of extension units and social, economical and environmental aspects
- 3. Community service
- \* Both to the public and private sectors
- \* Further development of distant education
- \* Increased attention for outreach and extension dimensions of applied research

Priority Areas	Leading Unit
1. Biotechnology application	College of Agriculture and Applied Biology
2. Social and cultural education	School of Education
3. IT applications	Colleges of Information and Communication Technology
4. Environmental and biodiversity	College of Environment and Natural Resources
5. Engineering and Technology	College of Technology
6. Economics and marketing	College of Economics and Business Administration
7. Post harvest technology	College of Agriculture and Applied Biology

Following the appointment of Prof. Dr Nguyen Anh Tuan as fifth rector of CTU in 2007, the University has consulted a number of central and local government authorities as well as industries in the Mekong Delta region to formulate a new strategic plan. While the written document of the plan was not yet available at the time of evaluation (Dec. 2-9th, 2008), seven research priorities have been identified and communicated, as confirmed by the Vice-Rector for Research Affairs during the evaluation interview:

As furthermore indicated by the Vice-Rector, aquaculture remains a crosscutting priority area cutting across not less than three of the above seven priority areas, notably: (1) Biotechnology applications; (2) Economics and Marketing, and (3) Post-harvest technology.

The Vietnamese Government, through MOST, has established to that effect a fund for bilateral research cooperation, supporting mutually beneficial researches, providing ample opportunities for joint ventures (exchanges of staff, HRD, joint researches, etc.) For CTU, the (further) strengthening of four bilateral cooperation programmes are particularly pursued, notably of Belgium, the Netherlands, Germany and Italy. MOST has agreed to CTU as coordinator of the research fund for the Mekong Delta region. It for example nominated CTU as the depository for all published research which obviously is a major incentive for further establishing CTU as the nerve centre of the regional network (and beyond).

#### International Co-operation

CTU has a long tradition of co-operation with the international donor community and with foreign universities. For the last 10 years the two major collaboration programmes were the IUC programme with VLIR and an institutional collaboration programme with Dutch Universities (MHO) covering the period from 1995 to 2004. While MHO programme addressed various components (e.g. improvement of the management of CTU, introduction of new pedagogical techniques, curriculum development, and infrastructure and equipment), the upgrading of the infrastructure was appreciated by CTU staff and management as the most important contribution of the programme. With the VLIR IUC programme most strongly appreciated by the CTU stakeholders for its concentration on the university's software, and notably the HRD of staff, this resulted in a nice complementarity with the MHO programme.

With the coming to an end of the VLIR-IUC programme with CTU, no comprehensive international collaboration and support programme is in place anymore to CTU. The largest support programme would be the Government's "Training and Research Innovation Grant – TRIG" with as major component the upgrading and HRD of academic staff. Also should be mentioned in this context the acknowledgements of CTU as the academic coordinator of Mekong 1000, a comprehensive international HR programme sponsored by Mekong Delta local and regional government aimed at upgrading the academic level of the regional administration. Mekong 1000 is for CTU a major tool to further establish itself as an international networking hub.

### The VLIR-IUC Programme with Can Tho University

#### Background

Initial contacts and collaboration between Flemish Universities and CTU started in the 80s, when Vietnam was still isolated from a major part of the world. In the 90s several VLIR projects of the format "Own Initiatives" were successfully implemented with CTU, limited to faculties of two Flemish Universities (UGent and KU Leuven).

Considering the positive results of the "Own Initiative" projects, it seemed logical that CTU was chosen for the new form of collaboration through IUC. For the Flemish Universities, the co-ordination was assured by Prof. Sorgeloos and supporting staff of the UGent. For CTU, co-ordination was assured by Prof. Tran Thuong Tuan, rector of CTU from 1998 until 2002. Five Flemish universities are involved: UGent, KU Leuven, Vrije Universiteit Brussel, UA and LUC<sup>19</sup>.

In March 1998, an agreement was signed between CTU and the VLIR for a Institutional University Co-operation (IUC) programme for a first period of 5 years (1998-2002). Depending on obtained results a second and final IUC programme could be signed for another period of 5 years (2003-2007). This mid-term evaluation was conducted in May-June 2002 and resulted in positive recommendations for the second five year phase.

#### Content of the Programme

The identification and formulation process of the programme was basically demand driven and initiated by CTU, taken into account the strategies it had set out for itself and its experiences with Flemish Universities. Initial project documents were few and neither the overall programme nor the individual components were established using a logical framework.<sup>20</sup> In addition, for some projects initially requested by CTU no appropriate partner was found among faculties of Flemish universities. Consequently such projects were replaced by new components.

Overall CTU IUC programme objective of Phase 1 (1998–2002) was the strengthening of teaching and research capacity of staff members of Can Tho University, with special emphasis on human resource development and upgrading of laboratory facilities. Phase 2 (2003–2007) is the consolidation phase concentrating on further strengthening of staff and on specific research development. The effective contribution to the development strategy and development dynamics of the Mekong Delta region was also given more prominent attention in this phase.

The programme can be divided in 2 main components, namely education (Coded "A" in phase 1 and coded "E" in phase 2) and research (Coded "B" in phase 1 and coded "R" in phase 2), each with its own projects, sub-programmes (respectively 2(or3) and 7 in absolute numbers). The list of CTU IUC constituent projects / sub-programmes, with indication of the respective local and Flemish team leaders is presented in the below two tables. The first table relates to IUC Phase 1 (01/04/1998 to 31/03/2003), and the second to IUC Phase 2 (01/04/2003 to 31/03/2008).

<sup>19</sup> On an ad hoc basis

<sup>20</sup> In order to enhance the quality of the Flemish university development co-operation, the VLIR introduced some management tools based on the Project Cycle Management (PCM) methodology in 1999. Some staff of CTU, particularly the Secretaries of the respective projects / sub-programmes, attended a highly appreciated training on PCM. Unfortunately, no structured follow-up exercises to this initiative have taken place. Since 2002, the PCM methodology is mandatory for all IUC programmes and projects.

Table 6 : CTU IUC Programme Phase 1 (01/04/98 - 31/03/03)

Project / Sub-Programme	Local Promoter-Spokesperson	Flemish Promoter-Spokesperson	Area of Expected Results (KRAs): 1. HRD
			Teaching     Research     Infrastructure     Outreach     Management
A1 - Distance Education by Using Computer Networks	Prof. Tran Thuong Tuan Prof. Le Quang Minh	Prof. Geert De Soete, UGent Prof. Patrick Sorgeloos, UGent Prof. Ludo Cuyvers, UA	All areas
A2 - Undergraduate Curriculum Development for Environmental Engineering and Postharvest Technology	Prof. Le Quang Minh	Prof. J. De Baerdemaeker, KU Leuven	1+2+3+4
<b>B1</b> - Artisanal pond production of Artemia: Study of soil and nutrient interactions, demonstration systems to farmers.	Drs. Nguyen Van Hoa	Prof. Roel Merckx, KU Leuven Prof. Patrick Sorgeloos, UGent	1+3+5+6
<b>B2</b> - The selection and Propagation of Valuable Fruit Tree Varieties	Dr. Nguyen Bao Ve	Prof. Pierre Debergh, UGent	1+3+5+6
<b>B3</b> - Studies on tropical plant-microbe interactions and development of molecular techniques for detecting pathogen in valuable trees	Prof. Tran Phuoc Duong	Prof. Marcelle Holsters, UGent	1+2+3+5+6
<b>B4</b> - Microbial management in aquacul- ture – Mud crab larvicul- ture as a first test case	Drs. Truong Trong Nghia	Prof. Willy Verstraete, LabMET, UGent  Prof. Eva Top, LabMET, UGent  Prof. Patrick Sorgeloos, ARC, UGent	1+3+4+5+6
<b>B5</b> - Fruit preservation and processing	Dr. Nguyen Van Muoi	Prof. Paul Tobback, KU Leuven Prof. Dr. Huyghebaert, UGent	1+3+4+5+6
<b>B6</b> - Development of an appropriate enzyme technology for food production	Prof. Tran Phuoc Duong	Prof. Edilbert Van Driessche , Vrije Universiteit Brussel	1+2+3+5+6
<b>B7</b> - Management of physical and chemical soil fertility degradation of alluvial soil types for sustainable paddy rice production in the Mekong delta, Vietnam	Dr. Vo Thi Guong	Prof. R. Merckx, KU Leuven Prof. H. Verplancke, UGent	1+3+4+5+6

Source: Mid-Term Evaluation, VLIR-IUC Self Assessment Report, Format 1 "General Information Report"

Table 7 : CTU IUC Programme Phase 2 (01/04/03 - 31/03/08)

SUB-PROGRAMME / PROJECT	FLEMISH PROJECT LEADER	LOCAL PROJECT LEADER	
EDUCATION			
E.1. Distance education	Prof. M. Valcke (UGent)	Prof. Dr. Nguyen Anh Tuan	
		(Prof. Dr. Le Quang Minh)	
E.2.1. Undergraduate curriculum development for environmental engineering	Prof. G. Wyseure (K.U.Leuven)	Dr. Duong Thai Cong (Prof. Dr. Le Quang Minh)	
E.2.2. Mechanical and Post-harvest Food processing Engineering	Prof. J. De Baerdemaecker (K.U.Leuven)	Dr. Duong Thai Cong	
RESEARCH AQUACULTURE		(Prof. Dr. Le Quang Minh)	
R.1.1. Study of aquatic environment in Vinh Chau – Bac Lieu coastlines and sustainable development of aquaculture activities	Prof. P. Sorgeloos (UGent)	Prof. Nguyen Anh Tuan (Dr. Nguyen Van Hoa)	
R.1.2. Microbial management of crustacan larviculture	Prof. W. Verstraete (UGent)	Prof. Dr. Nguyen Anh Tuan (Dr. Truong Trong Nghia)	
RESEARCH FRUIT	THE MAKES LIGHT SECTION OF THE SECTI		
R.2.1. Phytotechnology. The selection, propagation and production of valuable fruit tree varieties in the Mekong Delta	Prof. G. Gheysen (UGent)	Prof. Dr. Nguyen Bao Ve (Prof. Dr. Le Van Hoa)	
R.2.2. Biotechnology studies on Plant-Microbe interaction and their Biodiversity	Prof. M. Holsters (UGent)	Dr. Ha Thanh Toan	
R.2.3. Technology: Fruit preserva- tion and processing	Prof. M. Hendrickx (K.U.Leuven)	Dr. Ly Nguyen Binh (Dr. Nguyen Van Muoi)	
R.2.4. Enzymology: Development of an appropriate enzyme technology for food processing	Prof. E. Van Driessche (Vrije Universiteit Brussel)	Dr. Ha Thanh Toan	
RESEARCH SOIL DYNAMICS AND AQUATIC ENVIRONMENT			
R.3. Soil dynamics in Terrestrial/ Aquatic environments	Prof. R. Merckx (K.U.Leuven)	Prof. Dr. Vo Thi Guong	

Source: Review of 10 Years VLIR-CTU Institutional University Cooperation Programme, VLIR-IUC General Self Assessment Report, December 2008

The overview tables also give an indication of the main areas of expected results (= Key Result Areas or KRAs). In accordance with the recommendations of the Mid-Term Evaluation, the different projects / sub-programmes were thematically clustered in phase 2 in order to strengthen their internal, mutually beneficial collaboration and multi-disciplinary cooperation and to overcome tendencies of "islands formation" within the overall umbrella programme.

Overall the first phase of the CTU programme aimed a supporting the main strategic objectives of Can Tho University, including:

\* human resource development by supporting grants for PhD, MSc and short training courses

- \* upgrading of facilities (ICT, laboratories, ...)
- \* introduction of new techniques (e.g. molecular biology, ...)
- \* developing courseware and new curricula
- \* developing distant education
- strengthening of research capacity in defined areas

The second phase of the programme was the consolidation phase, with stronger emphasis on teaching quality, quality of e-courses, multi-disciplinarity, enhanced development relevance and impact of applied research, networking, outreach and spin-offs, etc.

Under Phase 1 of the IUC programme, the A1 project consisted of a central unit based at the Science & Technology Information Centre (STIC) and 3 components that were selected as pilot centres (the College for Information and Technology (CIT). the School of Economics and Business Administration (SEBA), and the Aquaculture and Fisheries Sciences Institute (AFSI – later CAF). In the second phase (2003 – 2008) one more CTU organisational entities joined the E1 (formerly A1) project, namely the College of Education (CoE)

#### Budget

The total budget of the first five-year (1998-2002) VLIR Institutional University Co-operation (IUC) programme with Can Tho University amounts to 3,715 million Euro, almost equally spread over the subsequent years.<sup>21</sup>

A breakdown of the CTU IUC budget for the ten year programme period 1998-2007 by year and by main budget line is presented in the table on the next page. As can be gleaned from this table, with almost one third of the total budget (32.44%) scholarship costs are the biggest budget component, closely followed by operational costs (30.02%) Investment costs represent 21.86% of the budget. Personnel costs are virtually entirely shouldered by CTU as counterpart (only in three specific years – 2001, 2002 and 2004 a minimal amount appears on the IUC budget). This budget table is without administration costs in respectively Belgium and Vietnam each amounting to about 5 % of the foreseen base budget. In accordance with the phasing out philosophy of the IUC programme, in the last three programme years there is a progressively reduced total funding from VLIR resources.

	<b>IUC</b> Bud	

Annual Programme	Budget (in million BEF)	Budget (in EUR)
1998	28,545,825	707,633
1999	30,484,725	755,697
2000	30,484,725	755,697
2001	30,450,000	754,836
2002	<b>建筑上的公司的公司</b>	745,000
2003		745,000
2004		745,000
2005		635,000
2006		560,000
2007		375,000
Grand Total		6,778,863

Source:Review of 10 Years VLIR-CTU Institutional University Cooperation Programme, VLIR-IUC General Self Assessment Report, December 2008



Expenditures on the approved budget are almost equally shared between the North and South partners, with respectively 51.9% and 48.1% of the total budget over the ten year period. Investment and operational expenditures are strongly decentralised to the South Partners (89.9% and 84.2%), while scholarship expenditures are basically with the North partners (93.4%), at about the same level as international travel costs, residential costs and shipment costs. It should also be noted that there is an outspoken positive empowerment tendency of budget management by the CTU partners in the South. While the portion of the total annual IUC budget managed by the CTU stakeholders amounted to 17.6% only, this gradually increased over time to 67.5% (or more than two thirds) in the final programme year 2007.

Table 9 : Can Tho University IUC Operational Budget (\*) of the 10 Year Period 1998 – 2007: Breakdown by Main Budget Line and by Year (figures in Euro)

Main Budget Line of IUC Programme	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total (EUR)	Total (%)
B. Investement costs	191.140.53	229,824.57	212,784.61	185,279.29	184,872.22	138,581.00	95,786.00	80,443.00	36,800.00	12,900.00	1,368,411.22	21.86%
C. Operational costs	123,392.72	156,741.59	143,360.79	143,537.29	141,050.66	263,958.62	263,882.00	189,830.00	260,883.25	192,718.00	1,879,354.92	30.02%
D. Personnel costs	0.00	0.00	0.00	7,876.32	13,843.00	0.00	6,772.00	0.00	0.00	0.00	28,491.32	0.46%
E. Scholarship costs	235,300.53	228,022.38	266,244.90	223,236.65	249,152.07	221,355.20	227,798.00	213,517.00	123,608.00	42,521.00	2,030,755.73	32.44%
F. International travel costs	34,705.09	34,209.31	65,121.73	31,457.69	36,819.00	56,279.00	30,402.00	51,492.00	30,700.00	27,844.00	399,029.82	6.37%
G. Residential costs	240,327.38	125,026.91	35,121.73	32,635.18	7,225.00	11,466.00	27,702.00	16,518.00	23,138.00	21,017.00	540,177.19	8.63%
H. Shipment costs	0.00	0.00	0.00	0.00	0.00	0.00	4,500.00	0.00	8,769.00	0.00	13,269.00	0.21%
TOTALS (EUR°	824,866;26	773,824.75	722,633.75	624,022.41	632,961.95	691,639.82	656,842.00	551,800.00	483,898.25	297,000.00	6,259,489.19	100.00%
TOTALS (%)	13.18%	12.36%	11.54%	9.97%	10.11%	11.05%	10.49%	8.82%	7.73%	4.74%	100.00%	

(\*) Notes: 1. Source: VLIR-IUC Programme Can Tho University, Final Evaluation Self Assessment Reports,

(1998-2007), compiled by the VLIR-UOS Secretariat and communicated to the Evaluation Commission

2. Operational budget without administrative costs

3. More detailed financial information is presented in Annex 7 to this report.

#### Programme Management

Overall programme management responsibilities are jointly with the Flemish and Local programme coordinators. Day-to-day management is ensured by the Flemish and local programme managers. The University of Ghent is the coordinating Flemish University. The below table shows the names of the main responsible persons and the changes over time in the ten year CTU IUC period 1998 – 2007.

Table 10: CTU IUC Programme Management

Coordinating Flemish university	University of Ghent
Flemish coordinator	Prof. Dr. Patrick Sorgeloos (1/4/1998 – 30/9/2007)
	Prof. Dr. Martin Valcke (1/10/2007 – 31/3/2008)
Flemish programme manager	Ann Peters / Magda Vanhooren / Alex Pieters / Sabine Dekie / Valerie Henrist
Local coordinator	Prof. Dr. Tran Thuong Tuan (1/4/1998 – 31/3/2002)
	Prof. Dr. Le Quang Minh (1/4/2003 – 31/3/2007)
	Prof. Dr. Nguyen Anh Tuan (1/4/2007 – 31/3/2008)
Local programme manager	Dr. Le Van Khoa (1/4/1998 – 31/3/2008)
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## **Evaluation Findings**

The evaluation findings are presented in accordance with the content requirements and format stipulated in the Terms of Reference<sup>22</sup>. A performance evaluation along the three "E's" of performance in a Logical Framework context had been envisioned by the Evaluation Commission, as such equally focusing on the Economy (inputs), Efficiency (activities and direct results) and Effectiveness (effects and impact) of performance. The ToR however do not provide for an assessment of the Economy dimension (the first "E") of the programme's performance.

Evaluation focus in first instance is on the performance of the CTU-IUC programme as a whole. Applying the programme logic, programme concerns and value added have been assessed in a broader perspective than just the sum of its individual, constituent 9 projects / sub-programmes.

In addition, evaluation findings are presented on three crucial, cross-cutting issues: (1) the added value of the IUC programme vis-à-vis other donor supported programmes; (2) on programme management both at the side of Can Tho University and of the Flemish co-ordinating university, and; (3) the co-operation between the different parties involved.

Of special importance in this final evaluation are the assessments related to programme ownership, sustainability and impact, particularly from the perspective of continued collaboration between the parties concerned, including multiplier, networking and spin-off effects in local, regional and international contexts.

## Programme Progress

The assessment of CTU-IUC programme progress and results relates to the direct out-puts of the programme and its constituent sub-programmes and to the processes which have led to the generation, the production of these outputs. As such, the analysis focuses on progress in (planned) activities and processes (process analysis) and their direct results (outputs), and incorporates both quantitative and qualitative aspects.

#### Overall Implementation Status of the Programme

The Constituting Projects / Sub-Programmes

The original CTU-IUC programme configuration of ten constituent projects (sub-programmes) was altered in the process in consultation with the respective Flemish promoters and both programme co-ordinators. The following three original research projects were abandoned / discontinued:

- \* Project B1 "The dynamics of nitrogen and phosphorus in paddy soils and development of nitrogen and phosphorus biofertilizers", reportedly because its objectives were considered not realistic;
- \* Project B4 "Development of animal feeds using local material", reportedly because of personnel reasons since no suit-able counterpart could be identified at the VLIR side and also for reasons of limited motivation of the CTU promoter;
- \* Project B7 "Study of endangered turtles in the Mekong Delta" reportedly also because its objectives were not realistic.

The following two projects / sub-programmes where identified, formulated and started-up in the course of the 1998-2002 first phase of CTU-IUC programme implementation:

- \* Project B4 "Microbial management in aquaculture mud crab larviculture as a first test case", integrated in the CTU-IUC programme in 2001, thus made operational from the fourth programme year onwards only. The B4 project is complementary to the INCO-DC project entitled "Culture and management of Scylla species CAMS", which is sponsored by the European Union
- \* Project B7 "Management of physical and chemical soil fertility degradation of alluvial soil types for sustainable paddy rice production in the Mekong Delta", which became a sub-programme of the CTU-IUC umbrella programme in 2000 and thus was for the first time budgeted on the IUC account in that activity programme year. VLIR already supported the VLIR-E.1 Own Initiatives Project coded VN 00074064 with the B7 implementing Department.

The Mid-term Evaluation recommended a stronger programmatic approach, including stronger inter-linkages and coordination between the different individual projects constituting the VLIR-IUC programme. This resulted in the consolidation phase 2 of the programme in a clustering of the respective individual projects in four subprogrammes, one education programme (E programme, consisting of two projects E.I and E.2 – with E.2 further broken down in two components E.2.I and E.2.2), and three research sub-programmes centered around three sectoral / thematic areas: R.I aquaculture (with 2 projects R.I.I and R.I.2), R.2 fruit (with 4 projects R.2.I to R.2.4) and R.3 Soil dynamics and aquatic environment (consisting of one sole project R.3)

#### Methodological Reservation

The second phase of the CTU IUC programme saw a substantive further elaboration and strengthening of the *programme and projects management tools* with the introduction of the Logical Framework and the more explicit identification of Key Results Areas and the use of Key Performance Indicators to measure achievements on these as well as on the higher programme performance dimensions. Also more explicit use is made of target setting on the indicators as planning tool and to facilitate monitoring and evaluation on these in the subsequent stages of the integrate programme / project cycle. This is a very positive development and a major improvement, particularly also from the perspective of ensuring a stronger results focus and of enhancing overall programme performance.

However, the absence of comparative baseline data at the start of the programme and also in the absence of initial target setting (final and interim) on the results key indicators, still makes it hard, if not impossible, to assess implementation status in an objective manner.

As a result, (sub-)programme completion rates or performance scores cannot be calculated. This observation at the same time is a direct appeal for more concerted planning and target setting at the onset of any similar IUC programme or related initiatives VLIR would envision to embark on.

Overall Implementation Status: General Appreciation

As reflected in the mid-term evaluation report of June 2002 at the end of the first five-year time block of the CTU IUC programme a *solid basis has been laid* for ensuring the results and effects aspired for by the end of the programme period in terms of institutional strengthening of Can Tho University and its potential contribution to and impact on sustainable socio-economic development of the Mekong Delta region. With the IUC programme now having come to an end in 2008, these overall objectives have been basically achieved to the satisfaction of all stakeholders concerned.

Phase 2 of the IUC programme actually constituted a *consolidation* of what was achieved in the first phase, with making more optimal use of the enhanced infrastructure and equipment and in first instance of the strengthened human resources capacity for the successful achievement of the programme's objectives related to teaching and research performance, both qualitatively and quantitatively. As will be illustrated more in detail in the next chapters, some of the supported Colleges and Schools have successfully achieved the status of Centre of Excellence, and are recognized as such not only regionally, but also at the national level and beyond. Major challenge will be to maintain this level of excellence (both quantitatively and qualitatively) as the competition for qualified human resources from both the booming private, commercial sector as well as from private academic institutions will become more fierce in the years to come, especially because of the demands posed by a booming economy. Programme sustainability therefore is more than a buzz word in this context, but on the contrary will become an increasingly more crucial requirement and concern needing to be given priority attention.

The programme also continued to successfully reach out to the wider Mekong Delta and thus attesting to its development relevance in addition to the academic relevance aspired for. This continued to support Can Tho University in its mission as catalyst of regional development in the Mekong Delta. The CTU-IUC programme proves to be a success story as it combines successes in both the academic and regional socio-economic development fields. Most projects under the CTU-IUC programme have a strong regional development finality with contribution to regional development objectives explicitly incorporated in management plans, teaching programmes, research protocols, and the like. CTU has a long and recognized tradition of regional development centre and the VLIR supported IUC programme has further strengthened CTU in effectively realizing its commitments in this regard. This is proven by the multitude of outreach and extension activities, which in many if not most projects are integral part of the project design and implementation strategy. The development relevance of the programme and projects is proven by the many requests the supported CTU units receive from both the public and private sector for specific advisory, productive and other sources. Many spin-offs have resulted from the initial programme investments. Impact concerns of the programme and its individual projects and initiatives at the level of the households of the Mekong Region are explicitly integrated in project documents and research protocols, in the broader perspective of contributions to poverty alleviation and upliftment of the socio-economic welfare and wellbeing of the Mekong Delta population. Extension programmes effectively reach out to the ultimate target beneficiaries, even if efficiency and effectiveness concerns in this may still need to be given more systematic attention.

Furthermore, the status of Centre of Excellence actually achieved by different supported units encouraged them to further proactively strengthen their networks, not only within the Region, but also nationally and internationally. This provides major opportunities in terms of further structuring and strengthening of both South-South (S-S) and North-South-South (N-S-S) collaborations. It invites both the Flemish and CTU partners to further strengthen their network ties in a general win-win situation, beneficial for both sides. Both parties can become network hubs for each other, thus effectively materializing international network multiplier effects. The ViFINET network established in the aquaculture sector is an example in case.<sup>23</sup>

It is felt that one of the *major challenge for VLIR-UOS* with regard to the post-IUC phase in general is to explore the optimum conditions and to devise appropriate programme modalities and tools to promote and effectively support such network expansions. As such not only IUC programme accomplishments at the level of the IUC partner universities themselves individually are sustained, but programme impact goes beyond their boundaries by covering the initiated institutional networks as well. In this way institutional multiplier effects are generated and/or further strengthened, and as such also IUC programmes' cost-efficiency and cost-effectiveness is strongly boasted, to the benefit of both South and North parties.

The above outlined overall CTU – IUC programme achievement is even more laudable in view of the fact that international (development) co-operation obviously is not the "core business" of the participating Flemish universities, faculties and departments, but rather a secondary sideline. At the CTU recipient side, the enthusiast and effective internalisation and creative integration of transferred knowledge and skills into regular teaching and research programmes as well as extension and outreach programmes and projects have been *critical success factors*.

On the other hand, major challenges still remain with regard to the further strengthening and especially the sustainability of programme results, especially at the outcomes and impact levels. This would require further strengthened results management at all levels. It also requires the development of strategic plans and ensuring their effective implementation. It would also argue for continued collaboration between the CTU and Flemish stakeholders on clearly identified, high added value projects.

As far as *client satisfaction* is concerned with overall programme implementation so far, and in particular with the inputs and performance of the North partners, generally very positive comments have been reflected in the self-assessment reports by the different stakeholders. This was confirmed on the occasion of the different discussions the Evaluation Commission had with managerial staff, academic staff, students and other stakeholders at Can Tho University. This general satisfaction not only related to the quantity and quality of inputs, but also to the quality of the co-operation between the Flemish and Vietnamese partners.

<sup>23</sup> Under Annex 6.1 a more detailed account of the broad range of spin-offs, outreach and extension initiatives, and networks established under the R1.1 Artemia aquaculture project is provided by way of example.

# Summary Implementation Assessment of Programme Key Result Areas (KRAs)

In the next chapter, a final assessment (10 year period 1998-2007) is made of the CTU IUC programme on each of the seven programme Key Result Areas (KRAs). Together, these KRAs form the backbone of the programme progress evaluation. In turn, each of the KRAs has been assessed on a number of Key Performance Indicators (KPIs). The below table provides an overview of the KRAs and the number of KPIs determined for each.

CTU-IUC Key Result Areas	Number of KPIs
Human resources development of staff	3
2. Teaching	5
3. Research	6
4. Infrastructure	5
5. Outreach	4
6. Management	2
7. Mobilisation of additional resources	4
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Total Total	29

An eighth KRA "Others" has been added as a rest category for aspects and concerns which cannot be accommodated easily or uniquely in any of the above individual KRAs.

Each of these programme KRAs has been assessed on a *five point evaluation scale* (1-5) scale) for each of the projects / sub-programmes. Overall programme scores on the respective KRAs have been calculated as a simple mathematical average of the individual project / sub-programme scores. Since CTU-IUC is a university institutional strengthening programme, it has been preferred not to calculate, although a simple operation, summary performance assessment scores of the different individual constituent projects / sub-components. The ensuing summary scoring sheet on IUC programme key result areas is presented on the next page.

In the absence of concrete target setting on key performance indicators for most projects / sub-programmes with regard to activities and their direct outputs and concrete, immediate results (one of the challenges for the second programme phase), the objectives as stated in the self-assessment reports have served as main benchmarks, compared to which progress has been assessed. As will be noted from the below programme progress findings, also ex-post potentialities and likelihoods have been taken into consideration as well as comparative elements between the different sub-programmes / projects.

<sup>24</sup> It is realised that a more refined overall score would be obtained by weighting the respective individual scores on the basis of for example the share of the budget of the corresponding project / sub-programme in the overall programme budget.

Table 11 : Summary Scoring Sheet on IUC Programme Key Result Areas, by Project / Sub-Programme at the End of the 10 Year IUC Programme

Project / Sub-Programme	KRA 1 Research	KRA 2 Teaching	KRA 3 Outreach	KRA 4 Management	KRA 5 HRD	KRA 6 Infrastructure	KRA 7 Resources Mobilisat.
E.1 Distance Education	3	3	3	3	4	4	3
E.2 Curriculum development	3	4	3	3	4	4	4
R.1.1 Aquaculture: Artemia	3	N.A.	5	4	4	4	5
R.1.2 Aquaculture: Mud crab larviculture	2	N.A.	3	3	3	4	2
R.2.1 Fruit tree varieties	5	4	4	4	3	4	3
R.2.2 Biotechnology	4	3	4	3	3	4	4
R.2.3 Fruit preservation & processing	5	3	4	3	5	4	4
R.2.4 Enzymology	4	3	4	3	4	4	4
R.3 Soil dynamics	4	3	4	4	3	4	N.I.
Total score CTU Programme / Nº of Sub-Programmes	33/9	23/7	34/9	30/9	33/9	36/9	29/8
Average score CTU Sub- Programmes (1-5 scale)	3.67	3.29	3.78	3.22	3.67	4.00	3.63
Average score CTU Sub- Programmes ( in %) (**)	73 %	66 %	76 %	67 %	73 %	80 %	73 %

Notes: \* N.A.=Not Applicable N.I. = No / Insufficient Information Available

\* Scores are on a five-point evaluation scale, with: 1 = (very)poor

2 = insufficient / low

3 = sufficient

4 = good / high

5 = excellent / very high

In the absence of concrete target setting on key performance indicators for most projects / sub-programmes with regard to activities and their direct outputs and concrete, immediate results (one of the challenges for the second programme phase), the objectives as stated in the self-assessment reports have served as main benchmarks, compared to which progress has been assessed. As will be noted from the below programme progress findings, also ex-post potentialities and likelihoods have been taken into consideration as well as comparative elements between the different sub-programmes / projects.

The Mid-Term Evaluation programme implementation score of 80% for KRA-5 "infrastructure" has been kept, confirming the overall satisfaction of all stakeholders concerned with the infrastructure and equipment upgrading. While at the time of the MTE, the key results area "outreach and extension" (KRA-3) still constituted a major challenge, this KRA in the second five year programme period had grown into a success story with regard to socio-economic extension and relevance for regional development and policy making, but also in terms of commercial spin-offs and particularly also networking (although with marked differences still between the projects individually in this respect). A high 76% composite performance score for this KRA is arrived at

<sup>\*\*</sup> Percentage calculated on the basis of the average score on the 1-5 scale, by a simple multiplication by factor 20. It is understood that this is strictly speaking an overrating since the 0-20% interval has no equivalent in the 1-5 scale in the absence of a 0 value.

based on the individual scores for each project. At the end of the CTU-IUC programme cycle, sustainability issues are of crucial, if not vital importance. A relatively high rating of 73% on average is obtained on this new KRA 7 entitled "Mobilisation of Additional Resources and Opportunities". Like for KRA 3 also for this KRA 7, project R.I.I evidenced excellent performance which was rated accordingly. The fact that virtually all projects score high on this result area should be comforting to the parties concerned as far as potential sustainability is concerned. However, pro-activity, dynamism, strategizing and networking remain keywords to ensure continued success.

At equally high average rating of 73% is Human Resources Development, the backbone of the whole VLIR-CTU IUC programme and the necessary basis for excellence in the three main academic performance areas of teaching, research and services to society. This component is highly appreciated by all CTU stakeholders concerned, management, staff and students as was confirmed also by the testimonials from the scholars and alumni. The prevalence of HRD as main ingredient, if not conditio sine qua non, for growth of academic department / institutes into centres of excellence has been confirmed by the units who can be classified as true success stories indeed. Development of the human software first and foremost, and only thereafter equipment and infra upgrading. The equally high 73% for KRA 1 confirms the significantly increased research outputs in the second, consolidation phase of the CTU-IUC programme, however with marked variations amongst the different projects.

Effective strengthening of the teaching component (KRA 2) has remained a main challenge throughout the programme. Challenges particularly pertain to teaching quality and new teaching methods, while also the e-learning programme is in a process of further improvements. Biggest challenges remain with the management KRA 4, which should not come as a surprise since this crucial performance dimension of the IUC programme has not been systematically addressed despite IUC by its very nature being an institutional strengthening programme and the strong recommendations concerned made on the occasion of the Mid-Term Evaluation.

#### Evaluation of Programme Key Result Areas

The evaluation of the CTU-IUC programme on the seven Key Result Areas is based on information from four main sources: (i) the self-assessment reports of both north and south stakeholders; (ii) the presentations of the respective projects / sub-programmes prepared for the final evaluation / IUC programme closing events, (iii) the discussions with the different stakeholders (at both general programme and individual projects / sub-programmes levels), and; (iv) the information additionally provided by team leaders and/or team members on the standard evaluation questionnaire formats prepared by the Evaluation Commission for that purpose.<sup>25</sup>

The presentations hereafter of the main evaluation findings on the progress accomplished and direct results produced by the programme with regard to these Key Result Areas (KRAs) consists of:

- \* Some general background information as a situational analysis;
- \* A summary matrix presentation of the main accomplishments of the respective projects / sub-programmes along the selection of Key Performance Indicators<sup>26</sup>;
- \* A shortlist of main summary findings (mostly in strengths & challenges / issues needing attention format) on the KRAs by the Evaluation Commission.

**<sup>26</sup>** As identified in the Evaluation Terms of Reference.

Important Evaluation Methodological Notes: The assessments of the Key Result Areas on the occasion of the Mid-Term Evaluation in 2002 have served as basis in order to ensure consistency in assessments as well as to facilitate detection and reporting of trends and special developments. As such the KRA accomplishments tables are cumulatively built-up. In case only Mid-Term Evaluation information is reflected in the KRA tables (e.g. since no information available or provided for the entire 10 year programme cycle) this is indicated in the header of the indicator concerned with a reference " (MTE) " referring to the Mid-Term Evaluation conducted in October 2002.

#### Research

#### Some Base Information on CTU Research Activities27

Since 1997, a progressively increasing research activity at CTU is noticed. In 2002, the university accepted another 13 ministry-level research projects. By that time, thus at the end of the first five year period of the CTU IUC programme, CTU was responsible for 35 ministry-level and 75 university-level projects. During the second five year period this research capacity has been steadily expanding, although no exact quantitative figures where made available to the Evaluation Commission. These strongly enhanced research capacities are mainly due to the extensive HRD upgrading under the IUC programme (both PhD and MSc levels). Not only a substantive capacity strengthening in quantitative terms is noted but also quality wise, as is illustrated by the increasing numbers of internationally peer reviewed "A" publications produced in the course of CTU IUC programme implementation.

In addition to the projects initiated at CTU itself and those funded by the Ministry of Education and Training (MOST), different Departments and Institutes have contracts with provincial authorities and/or the private sector for policy preparation, technology transfer and/or applied research studies. The research activities at CTU are also expected to receive a significant additional boast by the funds scheduled to be made available through the provincial and local outreach structures of the Ministry of Science and Technology (MOST) in the very near future.

#### Assessment on Research Key Performance Indicators

The results of the respective projects / sub-programmes in terms of Key Result Area I (KRA-I) on "Research" have been assessed basically along the following six main indicators:

- \* VLIR induced staff, number by type (full-time or part-time) Mid-Term Evaluation (MTE) info only
- Publications, number by type (books, chapters, articles) and ratings (A / B journals);
- \* Theses, number by type (Ph.D., M.Sc, MBA, B.Sc. BA, ...) and status (completed, ongoing) Mid-Term Evaluation (MTE) information only
- \* Contributions to national or international conferences, number by type;
- Networking with the international community ( number or descriptive);
- Research projects, number by status (completed, ongoing) Mid-Term Evaluation (MTE) information only

The summary table of results of the respective CTU-IUC projects / sub-programmes on these research outputs/results indicators is presented here below:

<sup>27</sup> Source: CTU Mid-term Strategic Plan "Building and Developing Can Tho University to the Year 2005"; Can Tho; 2002

			KRA 1 : Research			
Project / Sub-	Indicator 1.1.	Indicator 1.2.	Indicator 1.3.	Indicator 1.4.	Indicator 1.5.	Indicator 1.6.
Programme	VLIR induced research staff (FT/PT) (MTE only)	No. of Publications (A/B journals)	No. of M.Sc. and Ph.D. theses (MTE)	Contribution to nat'l / internat'l conferences	Networking with international community (MTE only)	Number of research projects (MTE only)
E.1 Distance Education	* 18 ICT – courseware staff funded by the project (no info on FT/ PT status)  * 17 ICT – courseware staff funded by CTU (no info on FT/ PT status)  * VLIR induced research staff: 7 SEBA staff	* 3 Business Admin. course- supportive researches by SEBA published with CAS of the Univ. of Antwerp  * 2 SEBA books published by Statistical Pub- lishing House  * AFS/CAFI staff are co-author in several A1 papers	* 3 M.Sc. theses at CIT * 2 MBA theses at SEBA	* Papers presented at workshops, seminars on six occasions outside of CTU (incl. at Hue University of Education, Nha Thrang, HCMC.	* STIC: support by MHO project (basically hardware and multi-media equipment)  CIT: cooperation with AUPELF-UREF for bilingual training  * AFSI: coop. with ARC and LabMET in Ghent, with University of Wales, with RIFAI / HAKI in Hungary	* 3 Business Administration course support- ed researches by SEBA started up
E.2 Curriculum Development	Staff involved in curriculum development / training & lab. related activities:  * 16 staff funded by the project  * 8 staff funded by CTU  All involved on a part-time basis (no further details available)	*4 papers / articles produced on composite materials.  * 9 articles published (level not known)  * 1 book (Constructed Wetlands) published in autumn 2008	* 4 Ph.D. theses under prepara- tion * 4 M.Sc. theses completed	* 4 papers for International Conference proceedings (full papers)  * 01 paper presented at international workshop  * 2 papers for International Symposium	* Support to other projects' research topics (e.g. Sustainable Resources Management in Coastal M Dw ith FAL, IRRI)  * Execution of a number of national and ministerial level researches	* Four research projects by the Mechanical Engineering Department on composite materials
R.1.1 Artemia production	* 10 full-time staff of which 1 PhD and 1 MSc staff * 12 part-time staff (basically technicians)	* 6 articles in international peer reviewed journals  * 8 articles in national peer reviewed journals	1 PhD thesis (ongoing) 1 MSc thesis (ongoing)	* 2 conference proceedings (full paper)  * 2 conference abstract  * 1 book in national distrubtion  * 7 conference contributions (posters, lectures)  * Organisation of ViFINET international conference (5-8 December 2008) at CTU	Impressive nat-ional and international networking activities:  National (Vi- FINET); South - South (includ- ing consultancy assignment and confer- ences); North- South-South intercontinental exchanges with Latin-America (Ecuador) and Africa (Kenya, Mozambique), etc.	One research project (= the A.1 sub-programme itself)

			KRA 1 : Research			
Project / Sub-	Indicator 1.1.	Indicator 1.2.	Indicator 1.3.	Indicator 1.4.	Indicator 1.5.	Indicator 1.6.
Programme	VLIR induced research staff (FT/PT) (MTE only)	No. of Publications (A/B journals)	No. of M.Sc. and Ph.D. theses (MTE)	Contribution to nat'l / internat'l conferences	Networking with international community (MTE only)	Number of research projects (MTE only)
R.1.2 Mud crab larviculture	* 4 Full-time and 4 part-time staff on IUC budget	* 2 articles in international peer reviewed journals  * 2 articles in national peer reviewed journals (CTU Journal)	* 9 under-graduate theses  * 4 graduate theses	Oral presenta- tion in World Aquaculture Conference in Beijing, April 2002	Especially with the EU support- ed INCO project involving three other countries: the UK, Belgium and the Philippines.	N.I.
R.2.1 Fruit tree varieties	* 12 FT staff on IUC budget of which 9 re- searchers and 3 technicians  * 27 staff not funded by the IUC budget	* 4 articles in international peer reviewed journals  * 37 articles in national peer reviewed journals  * 3 proceedings reports, guideline pamphlets to the farmers	3 PhD theses, of which 2 under sandwich programme in Belgium (ongoing) 5 MSc theses	* Organisation of mini-symposium on activities of sub-programme B.2 at CTU, 24-25 July 2002  * 149 conference proceedings  * 4 conference abstracts  * 20 posters and 8 lectures as conference contributrions (documented in proceedings report)  2 presentations on international conferences	N.I.	Eight research projects (studies on mango, pomelo and other valuable fruit species) initiated and/or finalised
R.2.2 Biotechnology	* 6 full-time staff at BiRDI	* 1 article in international peer reviewed journal  * Two articles documented in the Proceedings of the CTU Annual Science Conference, 2002	2 PhD theses in progress	* 7 conference proceedings, (full paper)  * 1 conference abstract  * 1 poster in international conference	* Collaboration with Dutch MHO Biotechnology project  * Preliminary contacts with CSIRO Tropical Agriculture, Australia  * Preliminary contacts with University Putra Malaysia and with IRRI in Los Banos, the Philippines.  * Research studies financed by Kieng Giang Province, Can Tho Province and Ministry of Science, Tech- nology and Environment	No research completed yet.  Successful acquisition of protein research related projects (at least 3) based on VLIR experiences

			KRA 1 : Research			
Project / Sub- Programme	Indicator 1.1.	Indicator 1.2.	Indicator 1.3.	Indicator 1.4.	Indicator 1.5.	Indicator 1.6.
	VLIR induced research staff (FT/PT) (MTE only)	No. of Publications (A/B journals)	No. of M.Sc. and Ph.D. theses (MTE)	Contribution to nat'l / internat'l conferences	Networking with international community (MTE only)	Number of research projects (MTE only)
R.2.3 Fruit preservation & processing	* 4 staff on IUC budget: local promoter and 3 PhD students (no info on FT / PT status) * 7 staff not on IUC budget	* Impressive publications list in second phase of the IUC programme:  * 37 articles in international peer reviewed journals  * 22 articles in national peer reviewed journals	5 PhD theses in progress (2 on KU Leuven scholarship) 2 MSc theses completed 3 MSc ongoing (1 on B5, 2 on other VLIR programme)	* 17 full papers published in international conference proceedings * 39 poster contributions to conferences * 20 conference abstracts	Bi-Language Programme and Profes- sional Training Centre for Food Technology with Aupel-Uref (French) and the French Consu- late in HCM City	3 types of researches on development of shelf-stable commodities on lab scale 3 studies on scaling-up from lab scale to pilot-plant scale of selected com- modities
R.2.4 Enzymology	* 3 staff on IUC budget (topping up) * 4 staff funded by CTU	* 4 papers in national peer reviewed journals	2 PhD theses in progress 2 MSc theses in progress (1 at Vrije Universiteit Brussel, 1 at CTU)	* 2 full papers in the international workshop of the fruit project R2 * 1 abstract in the International Lectin Meeting	MHO 7 biotech- nology project (Dutch)  KU Leuven & Africa Museum (Belgium)  University Putra Malaysia (Malaysia)  IRRI (Philip- pines)	Results from 2 researches on bromelain 3 research stud- ies ongoing (bio- diversity of black tiger Rhizobium) and species identification of snakehead fish)
R.3 Soil dynamics	* 5 full-time staff on IUC budget; * 11 part-time staff on IUC budget (30 – 50 % of time)	* 4 articles in international peer reviewed journals  * 1 article in national peer reviewed journals	None	* Two posters as contribution to conferences  * Three lectures prepared for conferences	MHO Project (Dutch) JICA (Japan) No further de- tails available.	Start of re- search: Six study locations were characterised in terms of physical and chemical soil properties and new LUTs
Overall CTU Programme	73 %					

Notes: N.A.=Not Applicable

N.I. = No Information Available

#### Main Summary Findings

#### Strengths

\* Strongly enhanced research capacities: Generally strongly enhanced research ca-pacities are noted with regard to all research projects due to extensive HRD upgrading of staff under the IUC programme (both PhD and MSc levels). Capacities have been upgraded to such extent that some entities supported by the VLIR IUC programme have developed into Centres of Excellence, recognized as such not only nationally but also internationally. However, there are marked differences still in research capacities and excellence between the different entities supported by the VLIR programme.

- \* The upgrading of Human Resources / HRD under the IUC programme was unanimously pointed at as the major factor having contributed to this enhanced research capacity. Obviously, also the upgrading of the laboratory facilities has significantly contributed to the generally enhanced research capacity. The prevalence of Human Resources Development as the single most important factor and conditio sine qua non for research capacity building is amply illustrated in the special contribution of one of the team leaders to the final evaluation. Excerpts of this strategic contribution under project R.2.3 are reflected under Annex 6.3 to this report.
- \* Importance of research in the VLIR-CTU IUC programme: With not less than 7 out of the 9 constituent projects / sub-programmes, research is a very important and most crucial component of the CTU overall programme. Generally, these researches continued to be enthusiastically executed in a dynamic manner. In the second phase of the 10 year programme, the projects' effectiveness and efficiency in terms of research outputs increased and overall quality was further enhanced.
- \* The enhanced research capacity has triggered off important demands from regional development entities and from industry alike. The VLIR-CTU IUC programme as such led to a multitude of spin-off activities and to very substantive local, national and international networking initiatives. This is amply illustrated by the dynamic networking strategy and the multiple actual networking initiatives enthusiastically executed under project R.I.I as illustrated in more detail under Annex 6.1 to this report.
- Relevancy of research topics: In general, research is conducted on relevant topics, identified as priority by CTU. The sections on the background and rationale of the researches in the respective VLIR-IUC self-assessment reports make explicit references to their relevance and importance for the socio-economic development of the Mekong Delta region. Also, it is more likely that a research topic chosen for a sandwich PhD will be more directly relevant to CTU than when students fully integrate in an overseas university / laboratory for a number of years. Through the VLIR IUC programme, new molecular biology techniques have been introduced in CTU, which was a priority of the CTU strategy and conform with the higher education policy of Vietnam. Such selection of research topics in conformity with the priorities of CTU and of the overall policy for higher education in Vietnam ensures full support at CTU partner side, resulting for example in researches starting on time as planned. It is understandable that the choice of the research topics and the concrete direction the researches take has not always been a smooth process, but through consultations and consensus building, the respective projects / sub-programmes have successfully succeeded in overcoming some initial problems in this respect. This necessity of a fully own research agenda by the CTU entities concerned and supported by the whole team and the necessary relevance of the topics for regional development is il-lustrated for example by Project R.2.4. Excerpts of the project's self-assessment re-port and additional contributions to the final evaluation in this respect are reflected under Annex 6.4 to this report.
- \* Applied research findings are successfully *translated into extension messages and services*. Most projects are genuinely concerned with and effectively pursue enhanced development relevance of their researches, particularly to the benefit of the Mekong Delta region.
- \* Original research sets-up have been successfully broadened to other subfields, for

- example in aquaculture, in food processing, in biotechnology, etc. thus resulting in important research multiplier effects.
- \* Laboratory management skills have been substantially enhanced thanks to on-thejob and hands-on exposures during scholarships abroad. This managerial skills development had very substantive direct and indirect effects on the quality of the research processes and their outcomes.
- \* CTU contribution to international, national and local conferences: While still marginal at the mid-term stage of IUC programme implementation, the contributions to local and national conferences, but also to international conferences, significantly improved in the second consolidation phase of the CTU IUC programme. Virtually all projects now reported concrete contributions to international conferences. Particularly noteworthy during the first programme phase was the organisation at CTU of a mini-symposium on sub-programme E.2 (then B2) activities, which is fully documented in a proceedings report, with inclusion of all articles / papers presented. Amongst the highlights in this respect during the second phase was the organisation of a large, three days international conference on aquaculture by ViFINET, the aquaculture network, activated and strengthened under the / inspired by the R.I.I artemia production project.
- Successful research networking and South-South collaboration: While not yet elaborated at the end of the first phase of the IUC programme, research networking was substantially strengthened in the second consolidation phase covering the period 2002-2007. CTU is particularly dynamic in active networking for financing of its research priorities. One project for example informed that once a research topic is identified, the research team starts browsing the internet for networking and possible funding sources. In consonance with CTU's general policy, research networks are actively pursued in the context of ASEAN, the Association of South-East Asian Nations. Under the SEBA component of the E1 project / sub-programme, a PhD research took place in the Philippines, while two MBAs studies were organised in Thailand. Active South-South collaboration is also being pursued in virtually all research projects / sub-programmes, with outstanding performance in this respect documented in projects as R.I.I.<sup>28</sup>. As indicated in the introduction to the KRA-3 (extension and outreach) discussion, CTU executes a wide variety of research projects for the Ministry of Education and Training, for the Ministry of Science and Technology and for provincial authorities in the Mekong Delta, while also finding increasing recognition in different fields at the national level.
- \* Successful commencement of international networking: In the pursuit of CTU's active policy and strategy of becoming a regional academic centre of excellence, the intensity of national and international contacts gradually increases, particularly towards the end off the 10 years IUC programme. The research components initiated in the VLIR-IUC programme led to improved contacts with other institutes in the region (in Thailand, the Philippines, Malaysia and Indonesia). Symptomatic for the gradually increasing recognition of Can Tho University as steadily moving into the direction of an academic centre of excellence is the invitation extended to the Department of Food Technology (Project R2.3) for a presentation on the occasion of the recent world congress on food technology in China. Apart from its academic merits, these contacts also are an asset for obtaining funding from other international sources as for example from the European Union and hence for ensuring sustainability of CTU's research programme.

<sup>28</sup> For example with the Escuela Superior Politécnica Del Litoral (ESPOL) in Ecuador, another partner in the VLIR-IUC programme, or with the Benguet State University in the Philippines in the context of a VLIR supported NSS project.

Interdisciplinary collaboration: The IUC VLIR programme considerably contributed to improved interdisciplinary contacts both within CTU and between Flemish Universities. Improved interdisciplinary contacts have substantially impact on scientific collaboration (e.g. collaboration between CAF and COA Soil department under R.I.I, between CICT (former STIC), SoE, SEBA and CAF under E.I, between CoA and BiRDI facilitated by projects R2.I, R2.2, R.2.3 and R.2.4, amongst others) and also led to improved efficiency in the use of available equipment and laboratory facilities. Several departments expressed their willingness and intention to further improve such interdisciplinary collaboration in the near future, which is strongly supported by the rector of CTU (e.g. increased involvement of SEBA in activities of soil, marine and agriculture research groups). This can only be commended and can be considered one of the biggest challenges for the ex-post IUC initiatives (e.g. in the framework of the Research Initiative Programme or other tools in VLIR's post-IUC toolbox).

#### Challenges / Issues Needing Attention

- \* Time constraints: Generally limited time is available for research in view of (many) other pressing tasks, especially teaching. As pointed out on different occasions during the interviews, in general considerable time is spent on teaching by academic staff, amongst others in the Satellite Colleges, resulting in limiting time available for research. In addition, in some departments the core of the research staff has been abroad for a considerable period of time in recent years for HRD purposes, thus temporarily limiting research capacity. Time management continues to be an urgent necessity in all units and entities, as such ensuring a more acceptable time allocation balance between the core tasks of teaching, research and extension.
- \* As such, academic enhancement is not exceptionally hampered by and /or substantially delay by heavy workload. This particularly pertains to PhD theses and graduations, also within the framework of scholarships (e.g. Sandwich system)
- \* Finding an optimal balance and complementarity between fundamental research (e.g. facilitated and/or proactively supported by VLIR and/or other partners for example through joint researches) and applied research (e.g. for local stakeholders / parties from both the public and private sectors, including extension components) appears one of the major challenges virtually all research entities are confronted with in the years to come. Their should be no contradiction between those two types of research, on the contrary. Both are closely linked to each other, if not strongly dependent from each other: fundamental research makes applied research possible, while also in the other direction applied research may generate the necessary resources / create opportunities for fundamental research.
- \* The *intake and enhanced guidance of quality students* with high academic potentials remains a challenge, if not an absolute must in order to ensure sustained an sustainable academic research performance.
- \* Publications: While at the time of the Mid-Term Evaluation still needed to be re-ported that no or very limited international publications at A-level had been produced so far in the framework of the programme, this situation substantially approved in the second part of the institutional cooperation programme. Nevertheless, the continued and sustainable production of high quality academic research remains an element of major concern, which particularly applies to ensuring continued high quality, internal scientific publications by PhD's after

their graduation.

- \* Stakeholders involvement in research prioritization: There are no indications that the various stakeholders of both public and private sectors in the Mekong Delta region have been directly involved in or have been formally consulted (e.g. by means of a consultation workshop) for the initial determination and/or subsequent updates of the research priorities to be addressed by the VLIR-IUC programme with CTU. In a meeting with the Vice-Rector for Research the Evaluation Commission learned of a recent structured consultation of CTU with the Ministry of Science and Technology to set research priorities for the Mekong Delta regional level. It was learned that the 45 member Education and Research Council has set seven main research priorities, which are now being sent to the Provinces for concrete ideas and research proposals. CTU envisions to structure its research fund along these seven key research areas.
- Research protocols and execution: In some cases it is difficult to isolate the results of research conducted under the VLIR-IUC programme from related and/or prior research efforts. This for example applies to the research under B1, which already started way back in 1991 as an "Own Initiatives" project supported by VLIR. Now under the VLIR-IUC 1998 - 2002 programme, further refinements have been applied to the original research set-up by adding two more variables for analysis to the original focus on the artemia foodstuff, namely: soil (pond bottom) and water quality (algae, N:P ratio) of ponds for artemia culture. It is not yet so clear how the quality of the pond soil can be effectively controlled / improved in practice. Because of such cases, issues of research relevance, cost-effectiveness and cost-efficiency are starting to prop up more intensely with regard to some of the research initiatives under the VLIR-IUC programme with CTU. By far the lowest production of artemia in recent years was recorded in 1997, due to climatic / weather conditions (el Nino / la Nina phenomenon). Artemia production proved to be most vulnerable by far to climatic, weather conditions and thus beyond the control of farmers.

Mutatis mutandis, the same holds for the B4 project / sub-programme on mud crabs. Already quite some research has been done on this subject under the EU supported INCO-DC project. B4 in an innovative manner added microbiological aspects in the hatchery, nursery and grow-out tasks of mud crabs. Also B7 to a large extent is a continuation of a prior VLIR Own Initiatives project, namely VLIR-E.1 project VN 00074064 with the Soil Physics laboratory, launched in connection with a PhD study.

Needless to point out that such situations bring with it important challenges for monitoring and evaluation to isolate results, effects and impact generated by the project only. It moreover poses important challenges to financial management in avoiding double counting of use of resources from different origins.

\* Suitability of research topics: Scholarship PhD thesis subjects may need to be further adapted to the local circumstances / realities in order to ensure continued research work and publications after graduation and as such avoiding possible frustrations related to the non-availability of the necessary equipment for advanced and sophisticated research (e.g. as in the context of the fruit preservation and processing project R.2.3). While the research conducted under the VLIR-IUC programme is largely demand based, some difficulties have been registered in some projects. This particularly pertains to researches of a more sophisticated nature, e.g. PhD researches abroad, which has led to frustrations on the part of

some PhD students when returning to their original academic environment at CTU. Already at the MTE, under project B-5 (now R.2.3), it for example had to be reported in the self-assessment report: "Due to lack of equipment in the Department of Food Technology, the research of the Ph.D. candidates could not be carried out at both institutes". But at the same time, in the second five programme cycle, this situation reportedly had improved considerably, be it not yet solved.

- \* Limited writing skills in English: This not only negatively affects the quality of the publications, but also negatively impacts on the early phases of the research cycle, namely the drafting of the research proposals and protocols, and thus negatively affecting the resource basis for research, particularly in a highly competitive international, and even national, research market. See also the discussion under KRA 2 "Teaching" and KRA 5 "HRD". On the other hand, very substantive improvements in the mastering of the English language have been noted at all levels of Can Tho University, for example when compared to the situation at the time of the IUC Mid-Term Evaluation in 2002.
- \* The development and effective operationalisation of an official, transparent *incentives* system to reward academic excellence with regard to academic publications may need to be given priority attention. A system of differentiated incentives commensurate with the quality rating / importance of the research publications may be given special consideration (e.g. A, B and other levels of publications).
- \* More systematic exploration of opportunities for *Joint Researches* with Flemish and other universities abroad remains a major challenge in order to ensure sustainable excellence status of the research units and thus ensuring continued / improved high quality research. This may require the research units / departments to develop *business plans* or similar strategic plans and pursue their effective implementation, the consideration of establishing consultancy units, social and commercial marketing of research and research products, patenting, etc.
- \* Ongoing research and need for ex-post monitoring and follow-up: Since there are still quite some researches still ongoing at the end of the CTU-IUC cycle, this still poses considerable ex-post monitoring and follow-up challenges. It also brings up issues of efficiency and effectiveness of the research component of the programme.
- \* A summary account of *additional crucial challenges and issues* needing particular attention as incorporated in the debriefing presentation<sup>29</sup> include the following:
  - The MOST fund for bilateral research cooperation (mutually beneficial, win-win maximization) providing opportunities for joint research initiatives;
  - The MOST consultations in the region, actually determining research priorities in the Mekong Delta by Provinces (with the DOSTs as such determining the research priorities);
  - The MOST having assigned CTU as repository coordinator for all published researches in the Mekong Delta (approved project with a substantive budget);
  - The DOST regional budget for research which reportedly is five times bigger than the MOET budget and thus opening attractive perspectives for additional funding of CTU research;
  - The CTU Research Fund focusing on 7 research priority areas (with cross-cutting themes) based on assessed needs30;
  - Challenge now is proposals for joint researches (with possibilities for interna-

<sup>29</sup> See slide numbers 31 to 36 of the Evaluation Commission's debriefing presentation on the occasion of the Joint Steering Committee Meeting of 09 December 2009, of which an electronic copy is attached to this report (overview and summary excerpts are included under Annex 8 (page 269) to this report.

30 More details in "Contextual Information – Can Tho University" (page 32)

- tional researches executed in Mekong)
- Exploration of possibility of establishing Research and Consultancy Centres at the level of the capacitated Colleges / Institutes as Centres of Excellence in order to enhance / guarantee their financial and academic sustainability (e.g. through investments in labs and equipment, retention of high quality Faculty, etc.);
- In the same venue, more systematic attention for patenting / licensing of research and research products;
- Also in the same context and with the same aim: social and commercial marketing strategy of researches and research capacity;
- Further development of local and national networks for research with CTU as centre of excellence;
- Further development of international networks for joint researches (South-South and North-South-South);
- N-S-S internship / exchange programmes for MSc students to research for their thesis;
- Research strategic planning at the level of the Colleges / Institutes (focused research agenda);
- Improved access to updated literature on line;
- Balance between fundamental and applied research, with for latter special attention for maximizing spin-offs;
- Self-financing of research equipment / labs etc. to ensure financial sustainability;
- Impact dimensions of researches as included in the research protocols (e.g. regarding impact on farmers households incomes, poverty alleviation or environmental sustainability) also need to be effectively demonstrated / empirically verified (necessity of impact measurements, baseline surveys, and of effectively added socio-economic dimensions to researches);
- Necessary enhancement of Project Cycle Management (PCM) skills and proposal writing skills;
- Research performance (especially A-level publications) to constitute a more prominent factor in the CTU staff performance appraisal system.

#### **Teaching**

#### CTU as Prime Teaching Institute in the Mekong Delta

At the time of the Mid-Term Evaluation (academic year 2001-2002), Can Tho University offered 43 disciplines to 15,283 undergraduate students at its 3 campuses in Can Tho City. Most of them were from the rural areas in the Mekong Delta (95 %). In response to the training demand in the Mekong Delta, CTU assisted in the opening in-service centres in some provinces of the Mekong Delta. The number of students in these so-called "Satellite Centres" during that academic year 2001-02 amounted to 14,555, including 915 regular students. CTU assists these Centres in training staff, sending lecturers, development of curricula and provision of teaching resources.

At present, at the time of the Final Evaluation of the CTU IUC programme, Can Tho University has a total of 31,720 students an increase of 33.9% compared to the 22,830 at the start of the IUC programme, 10 years ago in 1998. In the same period, the percentage of students in Satellite Universities has decreased from 50.1% to 29.5%.

The number of teaching staff also increased sharply (almost 30% from 684 to 912), while staff with MSc. and Ph.D. increased to more than double, to account for nearly 60% in 2007. There is also a trend towards a better balance between male and female teachers (at present 38% of teaching staff is female). The students/teacher ratio increased from 34 in 1998 to 42 in 2003, and then improved again to reach 34 students/teacher in 2007.

#### The CTU Challenges in Teaching: Quantity and Quality

Based on the statistics, the number of candidates applying to study at CTU has been increasing substantially and steadily over the last years. On the other hand the number of students actually admitted had to be restricted since CTU has limitations in both facilities and staff teaching capacity. For the ongoing academic year at the time of the Mid-Term Evaluation (2001–2002), only 9.47 % of the candidates (or less than 1 in every 10 actual candidates for entry exams) was effectively enrolled. This huge interest in studying at Can Tho University is indicative for the appreciation of the quality of academic education at CTU and at the same time points at a large demand for university education in the Mekong Delta still not met at present. There are no indications that this situation has changed at the time of the Final Evaluation, on the contrary.

In the 10 year period of the VLIR IUC programme, one of the major objectives was to improve its infrastructure and particularly its contingent of teaching staff in order to successfully face this tremendous teaching challenge. The VLIR-IUC programme was expected to contribute to an effective achievement of these objectives, and it actually did so successfully, be it that important challenges still remain particularly with regard to a continued and sustained assurance of teaching quality. The credit system adopted by the Flemish Universities in the overall European framework context provided by the Bologna Agreement and also by Can Tho University rather recently proves to provide special opportunities in this perspective in terms of joint degrees. But also other quality assurance tools as Visitation Commissions and so provide ample opportunities, as are continued exchanges of academic staff and of students (internships) e.g. in the context of the preparation of their PhD or MSc theses.

#### Assessment on Teaching Key Performance Indicators

The results of the respective projects / sub-programmes in terms of Key Result Area 2 (KRA-2) on "*Teaching*" have been assessed basically along the following five main indicators:

- 2.1. VLIR students trained / internships at CTU (number by level);
- 2.2. Courses / training programmes developed (number by level);
- 2.3. New curricula developed or substantially updated (number by level);
- 2.4. Learning sources developed (number by type);
- 2.5. Laboratory based teaching executed on a regular basis (av. hours / week) and production of lab teaching tools (manuals, etc.)

The summary table of results of the respective CTU IUC projects / sub-programmes on these teaching outputs/results indicators is presented here below:

			Teaching		
Project / Sub- Programme	Indicator 2.1.	Indicator 2.2.	Indicator 2.3.	Indicator 2.4.	Indicator 2.5.
	No. of V LIR students trained / intern- ships	No. c ourses/ trainings developed	Curriculum development	Learning resources (text- books, learning packages, etc.)	Laboratory based teaching (incl. manuals, etc
E.1 Distance Education	N.I.	* 4 courses by STIC (DE, Using Internet, Web page design, us- ing PowerPoint) * 3 courses by AFSI (Using Internet and HTML) * 9 courses by SEBA, of which 7o nt hen etwork	None reported.  SEBA reported the organisation of a workshop on MBA curriculum development	* 4 courses developed at SEBA  * 7 web-based / CD-rom courses by SEBA for teaching at CTU  * 12 web-based / CD-ROM courses, 1 DVD and 1 video by AFSI / CAF  * 12 coursewares by CIT of which 1 on CD  * CTU web site and 6 homepages by STIC  * More than 100 courses trans-	N.A. N.I.
				ferred to electronic version and available on CTU network  * Learning Management System (Dokeos) avail-able and functioning supported by manuals and guides, with 300 teachers and 10,000 students having an individual	
E.2 Curriculum Development	* 3 short-term courses in Vietnam by VLIR sponsored stu- dents / experts	* At least five BSc engineer- ing programmes developed * Preparation of MSc pro- grammes in the field of Mechani- cal Engineering and Hydraulic Construction Engineering	Environmental Engineering curriculum developed by the College of Technology in a workshop with other CTU Departments, the University of HCMC, environ- mental agencies and Belgian Universities.	Dokeos account.  * 6 syllabi prepared on Environmental Engineering subjects  * All made available electronically on the CTU intranet  * Video tape on global and local environmental problems produced and used as a teaching	* Practice in water and waste water analysis lab  * Practice in air pollutants analysis and bio indicators detection lab  * Practice in thermal engineering lab

		KRA 2 :	Teaching		17 18 18 18 18 18 18 18 18 18 18 18 18 18
Project / Sub-	Indicator 2.1.	Indicator 2.2.	Indicator 2.3.	Indicator 2.4.	Indicator 2.5.
Programme	No. of VLIR students trained / internships	No. c ourses/ trainings developed	Curriculum development	Learning resources (text- books, learning packages, etc.)	Laboratory based teaching (incl. manuals, etc
		* Six courses on Environmental Engineering subjects	* New curricu- lum on Manu- facturing Engi- neering, Food Processing Engineering, etc.	* Application of Dokeos on 5 teaching subjects  * Web-based lecture notes for distance learning on 12 subjects  * New concept of problembased teaching introduced to replace old excathedra style of	* Practice in upgraded hydraulic engineering lab * Practice in composite engi- neering lab
R.1.1 Artemia production	N.I	* 2 courses / training pro- grammes de- veloped (1 in Vietnamese, 1 in English)	* 1 substantially updated curricu- lum on live food in aquaculture (CAF)	theory teaching	
R.1.2 Mudc rab larviculture	* Graduate students training through thesis work and re- search activities	* 1 courses / training pro- grammes developed	* 1 new / sub- stantially updat- ed curriculum		
R.2.1 Fruitt ree varieties	None	* 5 courses / training pro- grammes devel- oped * six courses for undergraduate students	* 1 curriculum for BSc and MSc students of Agronomy Sciences was developed, with two syllabi.	* Seven text- books were prepared under phase I * Many lecture notes / books * 2 textbooks developed under phase II	* In the upgraded laboratory facilities, many practical classes, e.g. on: tissue culture, physiology, molecular biology; morphology,  * 3 laboratory manuals under phases 1 plus 4 under phase 2  * 7 excursion guides
R.2.2 Biotechnology	None	* Five substantially updated curricula  * one practicum course on molecular genetics	Advanced microbiology curriculum for Biotechnology MSc (curriculum developed in a BiRDI workshop (March 2002)  * 5 updated curricula	* Five textbooks developed * course hand- outs * Multimedia presentations to illustrate lectures	* P racticum o n PCRt echnology for MSc students * 4 laboratory manuals

The state of the s	MAN SALAH MA	KRA 2 :	Teaching		
Project / Sub- Programme	Indicator 2.1.	Indicator 2.2.	Indicator 2.3.	Indicator 2.4.	Indicator 2.5.
	No. o fV LIR students trained / internships	No. c ourses/ trainings developed	Curriculum development	Learning resources (text- books, learning packages, etc.)	Laboratory based teaching (incl. manuals, etc
R.2.3 Fruit preservation and processing	2 KU Leuven students will come to CTU for five months in connection with their MSc thesis	* two short-term courses conducted by Flemish academics in CTU will be repeated at regular intervals (also including staff of food industries of Mekong Delta).	* 2 new MSc programmes developed (food science and technology, and, post harvest technology  * 1 new BSc programme planned for 2009  * 1 substantially updated BSc curriculum (credit based programme) with 37 updated syllabi	* 1 set of lecture notes in Vietnamese of ST training course conducted by Flemish academic  * One set of lectures on video of short-term course given at CTU by Belgian academic made at disposal of CTU	* 9 laboratory manuals updat- ed (for BSc pro- gramme in Food Technology * Practical train ing for students in laboratory at an average of 500 students / year
R.2.4 Enzymology	None	* One new course for MSc and BSc stu- dentson protein chemistry	Workshop conducted for curriculum de- velopment MSc in Biotechnology at BiRDi (March 2002). Curricu- lum still to be finalised.	* CD-rom with lecture notes on physico-chemistry and purification of proteins (English and Vietnamese versions) Course handouts made available to students.  * Multimedia presentations for lectures	* 1 lab manual in Vietnamese on protein chemistry  * Series of laboratory exercises on protein purification for MSo students
R.3 Soil dynamics	None	* One specific seminar intro- duced by Flem- ish professors in 2001, two in 2002 * 3 courses in soil physics given by UGent	None	None	* Participation in international cross-checked network for soil and plant analy- ses * Practical ex- ercises for five study subjects related to Soil
Overall CTU Programme		professor	66 %		Sciences

Notes: N.A.=Not Applicable

N.I. = No Information Available

#### Main Summary Findings

#### Strengths

- \* A Learning Management System (Dokeos in Vietnamese version) is available and functioning throughout the campus. Technical papers and manuals have been prepared for the effective use of Dokeos (both for end-users and system administrator), not only on technological aspects but also on pedagogic aspects of online courseware in an attempt to ensure optimum educational quality of the electronic teaching products. A very substantive amount of course materials has been developed on Dokeos at CTU. More than one hundred courses have been transferred to electronic version and are available on the CTU network. Dokeos is effectively used for teaching on-line with about 300 teachers and about 10.000 students having an individual account.
- \* New methodologies and concepts of teaching are being introduced gradually to replace old ex-cathedra style of theory teaching (e.g. problem-based teaching, project work, team work, etc.) The exposure to new teaching techniques an didactical methods during scholarships in Flanders positively influenced the quality of teaching at CTU upon their return (cases studies, problem-based and problem-solving teaching, interactivity, group work, hands-on training sessions, etc.).
- \* Higher accessibility: CTU is committed to contribute to sustainable development of the Mekong Delta. For this purpose its strategy is focused at maximal strengthening of accessibility to its teaching services to even cover remote rural areas of the Mekong Delta. The VLIR IUC programme actively supported CTU in this endeavor for example by the production during phase I of the IUC programme under A.I project / sub-programme of electronic courseware which can be used for distance education in the CTU Satellite Centres at the level of the provinces or in the communal colleges at local commune level.
- Expansion of teaching programme: CTU recorded consistent progress during both phases I and II of the IUC programme in becoming a comprehensive university, which is rather unique in the Vietnamese higher education context. The VLIR IUC programme has considerably contributed to the pursuit of this goal, not the least by its contribution to the development of a large number of new curricula and courses in different CTU Colleges, Schools and Institutes. Not less than 33 new courses were developed in the first five year period of the IUC programme, and this high production was sustained in the second five-year period.. Details by individual project / sub-programme are provided in the above table (under indicator 2.2). A.2 / E.2 is a special project for undergraduate curriculum development in the Environmental Engineering and the Mechanical Engineering Departments of the College of Technology / College of Engineering Technology. New courses have also been developed under five of the seven research projects (R-series). All courses developed under the A.1 Distance Education project have been produced as electronic courseware. During the follow-up E.1 Distance Education Project Phase II, more than 100 courses were transferred to electronic version and are available on the CTU network
- \* Successful development of new and/or updated curricula: It is a deliberate policy of CTU to maximally adapting its teaching offer to the requirements of a changing environment. To that effect, its feedback information network covering both the public and private sectors is particularly sensitive for signals from its alumni, job opportunities on the labour market and skills required in the industry. When it

is observed that some curricula do not longer generate demand or are not adapted to new socio-economic developments, CTU does not refrain from temporarily discontinuing a course and restart a new programme based on an updated curriculum some time later. This for example was the case with a course in agricultural engineering, and happened also to a course on foreign trade in SEBA. Curricula are considered by CTU as dynamic and not static instruments for structuring teaching and learning.

This flexibility rooted in the close interactions observed by CTU with the society it serves received positive support from the VLIR-IUC programme throughout the ten year programme period. A total of 15 to 20 new / substantially updated curricula have been developed in close interaction with the different stakeholders concerned, e.g. by means of multi-sectoral workshops, in virtually all projects.

- \* Under the R.2.3 project a substantially updated BSc curriculum was developed with the special, innovative feature that it was developed in the broader framework of a *credit based programme*, with not less than 37 updated syllabi.
- \* Substantive development of learning resources and of courseware: Particularly in the second five year cycle of the IUC programme, e-teaching and e-learning were successfully introduced on a broad scale. More than 300 teachers are trained and more than 10,000 students have access to the LMS. A substantive number of e-learning courses and materials was developed and uploaded on the CTU intranet through the Dokeos LMS.
  - In the framework of the AI (later EI) "Distance education" project, a whole series of 33 coursewares have been developed of which the majority made available on CD-ROM. Virtually all projects have developed syllabi and textbooks. Other learning resources developed include DVD's, video's, lecture notes, course handouts, multimedia presentations and the like.
- \* The developed / updated curricula and courses are well adapted to / are very suitable and functional for the *regional development needs*. Most curricula and courses are developed based on structured and comprehensive regional needs assessments and not exceptionally actually developed in workshops with active participation of the main (institutional) stakeholders concerned.
- \* Introduction of student centered teaching methods: Introducing new teaching techniques was a main component of the Dutch MHO programme, including case studies, block method (medical school) and hands-on training sessions. Also under the VLIR programme new teaching methods have been introduced in the various projects / sub-programmes, be it not on a systematic basis. Hands-on training has been the modus operandi in the A1/E1 computer and multimedia labs. Problem based / problem solving teaching has been piloted in A.2.1 (Environmental Engineering) in collaboration with the School of Education. It starts in year 3 of the undergraduate curriculum (total duration of the undergraduate study is 4.5 year of which the first 2 years are general and concentrate on general, basic topics).
- \* Improved access of students to support equipment and materials: The obtained results were largely due to the combined and complementary efforts of both the Dutch MHO and the VLIR projects. This particularly pertains to the AI/EI distance education project, with the MHO project basically focusing on hardware / equipment procurement, while the VLIR inputs focused on the actual use of the hardware, on networking, on software / courseware development and on the necessary development of human resources and strengthening of institutional

capacities, as well as on the pedagogical quality of the e-materials. Students have access to ICT equipment and the Dokeos Learning Management system and network, even outside of regular class hours. The three campuses are linked through intranet connections. Dokeos is effectively used for teaching on-line with about 300 teachers trained and about 10.000 students having an individual account. The opening of a very modern and state-of-the-art Learning Resource Centre further enhance the network connectivity and actual use of ICT equipment, particularly by the students. The plan is to have all students having access to the CTU network in the not too distance further (so all students having a user number and password, regardless the level).

- \* Laboratory based teaching has been substantially strengthened under virtually all research projects (R1 to R3). The upgraded laboratories and lab equipment and the trained technicians under the IUC programmes are directly benefiting the students in lab sessions as was as during thesis research in the labs.
- \* Strengthening of in-service training: In accordance with the CTU policy directions, several units supported by the VLIR-IUC programme offered in-service training (permanent education setting) on a pilot-basis, based on demand from clients / beneficiaries / target groups. Such training took place at CTU, but especially at the CTU satellite centres and even outside: at community level (virtually all projects / sub-programmes), in industry (e.g. SEBA of the A1/E1 project, but also within R.2.3 project) or with farmer organisations through agricultural extension networks (R.1.1 and R.3).
- \* Improved link between teaching and research: At the beginning of the IUC programme in 1998, research and teaching were not always fully integrated in the different institutes and departments of CTU. Also in the initial design of the VLIR IUC programme and its constituent individual project and sub-programmes, such link, interaction if not integration was all but present. Over the ten year period of the VLIR-IUC programme, and particularly in the second five year phase, considerable progress has been made in gradually overcoming this problem, even if important challenges are still to be met to effectively bring about an integrated and successful Research, Education and Training (RET) model at CTU.
- \* Emerging teaching collaborations with other Universities in Vietnam are noted (e.g. with the University of Ho Chi Minh City amongst others), with more intensive exchanges in teaching gradually materializing.
- \* Overall there is a keen interest in and a general sense of duty with CTU faculty vis-à-vis-à-vis teaching tasks and obligations.
- \* The *guest teaching* by the Flemish professors generally has been highly appreciated throughout the IUC programme

#### Challenges / Issues Needing Attention

\* Strategic re-orientation from distance education to e-learning: Phase two of the IUC programme and a change in CTU general management signified a strategic reorientation for the teaching component of the VLIR-IUC programme. While initially there was as strong focus on the decentralisation of teaching to the Satellite Colleges in the 13 Province, this policy priority appeared to have been abandoned in the process, with renewed focus on teaching within the CTU headquarters campus(es). This policy change particularly affected the E.1 Distance Education project. The E.1 project was able to adapt in a flexible manner to this strategic reorientation, with a renewed focus on e-teaching and e-learning within the

campus via the CTU intranet and Dokeos Learning Management System. Only that the initial denomination of the project as "Distance Learning" remained while meanwhile this term had already become obsolete in the context of the reoriented E-programmes at the University. This situation was further compounded for the E.2 project by a re-organisation within CTU with regard to responsibilities for, amongst others, all Information and Communication Technology and related aspects and programmes. In the evaluation interviews with the main stakeholders concerned it was learned that this organisational transition uncertainty has negatively impacted on the E.2 performance for about one and a half year (with no clarity who was responsible for E.2 in this new set-up)

- Distance education has not become operational: Despite enormous investments in equipment and HRD, distance education has not become operational at CTU, basically because of strategic reorientations decided by CTU policy makers and managers. This initially was further aggravated by technical issues (e.g. outside internet connections, bandwidth, access of students to PCs in the rural areas, etc.), but also to the lack of active interest of CTU teaching staff in distance education methodologies, because they receive extra incentives for teaching in the satellite centres. A third main reason is related to the quality of the distance education teaching materials (courseware) produced. The materials proved to be too static, not enough interactive, and thus didactically not suitable, not attractive enough for distant education purposes. In the first phase of the IUC programme, distance education was worked out under A1 too much as a technical, as an ICT issue rather than a teaching methodology and didactical tool. A fourth related reason was the overall management of the A1 programme, which was with STIC, the Science and Technology Information Centre of the University. STIC's main functions are technology and information related with regard to CTU as an organisation. The latter obviously is an entirely different perspective from ICT as merely as facilitating tool for didactical / teaching purposes as is the case with distant education. This fundamental difference also was at the basis of the not always smooth relationship between STIC as overall co-ordinator / facilitator of A1 and the other "A1 line components" at AFSI/CAT, CIT, SEBA and SoE. On different occasions during the mid-term evaluation it became obvious that the newly developed coursewares under the A1 project / sub-programme were not effectively used for distant education purposes, if used at all.
  - On the positive side needs to be observed that this situation was strongly corrected as the start of phase 2 of the IUC programme, with a project reorientation toward e-teaching and e-learning within the campus resulting in an impressive reach and coverage of the e-learning system and availability of a wide variety of e-learning tools, as documented above under the KRA's "strengths" section.
- \* Rather limited application still of new teaching methods, however with noticeable positive tendencies in this regard. The exposure to new teaching and other didactical methods has been particularly appreciated by the CTU staff who went on human resources and/or technical development courses (long-term and short-term) to Belgium. The introduction of new student centered teaching and didactical methods was a priority focus area for the second phase of VLIR-CTU institutional co-operation and remains a challenge for the post-IUC period. This particularly pertains to the further dissemination and operationalisation of the methods and techniques concerned exposed to / studied by the CTU staff while on HRD programmes / courses in Belgium.

- \* Workload: In their present form, outside teaching engagements substantially increase workload of CTU academic staff. At the time of the mid-term evaluation an estimated 2 to 3 days on average per week reportedly were spent by CTU academic staff on outside teaching assignments, to the detriment of their core teaching and research tasks at CTU itself. Imbalances in teaching tasks between CTU Campus on the one hand and the Provincial Satellites and local entities on the other, limit further development potentials of CTU as an academic centre of excellence. On the other hand, CTU stands to its vision and mission of academic catalyst of socio-economic development of the Mekong Delta region.
- English Language Skills: As reported earlier under KRA 1 "Research" major improvement with regard to the English language skills of both teachers and students have been noted and definitely are a major achievement. But substantial challenges still remain. This issue is also most relevant for, and as such also discussed in this report, with regard to the KRA "Human Resources Development". It initially was identified to be an issue to be addressed by CTU internally and not a subject for VLIR-IUC intervention. This is supported by the finding of many internal provisions within CTU already existing for English language skills upgrading. It appears that in first instance the effective application of the different measures and utilisation of existing provisions and facilities needs further enhancement. Are to be mentioned in this connection for example: (a) Technical English is already integral part of many curricula (e.g. in Environmental Engineering: 30 hours / semester with a total of 180 hours); (b) CTU has a Center for Foreign Languages, providing language course to students at minimal charge.; (c) Under the MHO project special English courses have already been foreseen; (c) Also the CTU students union organizes / supports English language courses almost free of charge. Despite these provisions and initiatives, event towards the end of the CTU programme, different IUC projects necessarily needed to engage in / support English language courses (e.g. technical and scientific English for example for the redaction of research proposals and protocols, or to maximize the cost-efficiency and cost-effectiveness of scholarships). CTU undertakes to make passing of English language tests a more stringent condition for eligibility for scholarship abroad. This initiative is strongly lauded by the Flemish promoters of thesis students (both PhD and MSc).
- \* Still rather limited involvement of Flemish and other VLIR sponsored students in the VLIR-IUC programme with CTU: Only exceptionally, Flemish and other VLIR sponsored students have visited CTU or have stayed in Can Tho for some longer time in connection with for example the preparation of his/her MSc or PhD thesis or any research or exchange assignment. As such, hardly any activity at all is noted on indicator 2.2 "Number of VLIR students trained" On the other hand, the few students or staff who have stayed somewhat longer at CTU are most laudable about their experiences. From the briefing interviews with the Flemish stakeholders it was learned that the intention is to further strengthen the exchange of staff and particularly also students in a kind of internship programmes in the context of the preparation of their theses. During the evaluation discussions with the different CTU project teams, this idea and concrete initiatives along this line were welcomed indeed by these stakeholders.
- \* Within the context of the degree courses credit system, applied by both the Flemish Universities (following the Bologna Agreement at overall EU level) and CTU alike, new opportunities arise for strengthened joint teaching programmes

and joint degrees. This was one of the major topics during the evaluation debriefing and Joint Steering Committee Meeting discussions on the last day of the evaluation mission. It may be worth to have these opportunities analysed in a more systematic and in-depth manner as basis for policy decisions on this and related important issues.

- \* The summary list of main challenges and issues needing attention with regard to KRA 2 "Teaching" as presented during the evaluation debriefing / JSCM session of 09 December 2008 includes the following:
  - (Over-)Stretched teaching workload (number hours / week) affecting quality of both teaching and research;
  - Teaching at Satellites / Education Centres taking considerable time away, requiring further development of distance education systems and courseware;
  - Assurance of value added of e-courses and of e-learning overall complementary to traditional teaching (strategizing);
  - Limited use of e-learning tools;
  - (Technical and scientific) English as standard course in all MSc curricula;
  - Translation of textbooks, syllabi in English;
  - Limited application of new teaching methods;
  - Enhancing of effectiveness, efficiency and overall quality of teaching in Satellite entities;
  - Self-financed lab equipment for teaching, especially in view of the high number of students;
  - Maximization of the opportunities provided by the Credits system in terms of the organization of joint degrees and related issues
  - Assurance of continued quality of teaching, for example through a system of international visitations involving Flemish and other partner universities, covering:
    - Curricula, courses, syllabi, e-learning courseware
    - Didactical aspects and teaching methods
    - Tutoring and guidance of students

#### Extension and Outreach

#### Outreach as Common CTU and VLIR-IUC Priority Concern

One of the general objectives of VLIR's University Development Co-operation (UDC - UOS), at the same time a key principle for the IUC programme, is the promotion of co-operation between Flemish universities and universities in the South in order to enable the southern universities to fulfill their role of development actors within their own society and/or region.

Also, in CTU's medium-term strategic plan the role of CTU as academic catalyst of socio-economic development of the Mekong Delta region is highlighted. In this connection, the mid-term plan explicitly states: "Developing linkages with the socio-economic environment is one of the most important strategies of CTU." To that effect, the following strategies "for exploring and expanding linkages with production and economics" are prioritized:

- \* Following up provincial objectives and plans for development.
- \* Introducing scientific research activities and its applications to local provinces.

This is CTU's policy aiming at enhancing CTU's role and prestige in the Mekong Delta. Consequently, more activities should be promoted for better results.

- \* Strengthening communicative activities about CTU's achievements.
- \* Enforcing technology transfer and consultant services to the whole region.

In view of the above, the importance of the outreach and extension dimension in the respective 9 projects / sub-programmes constituting the VLIR-IUC programme with CTU cannot be underscored enough. In the Mid-Term Evaluation report had to be reported with regard to the extension and outreach KRA that major challenges still needed to be addressed in this result area during the second phase of the CTU-IUC programme. Now, at the end of this second phase it may be asserted that major improvements and substantive achievements have been realized in this regard during the second phase (2003-2007) of the programme. Successes are recorded in virtually all projects. This resulted in a substantive increase of the Mid-Term Evaluation average score of 60% for this Key Result Area 3 "Outreach" at that time (lowest score of all six programme KRAs) up to 76 % now on the occasion of this Final Evaluation.

This strengthened attention for outreach and extension services as core KRA of the CTU IUC programme to a large extent is due to the higher and more explicit value given to development objectives in addition to the traditional strictly academic objectives under the IUC partnership programme. This enhanced balance between academic and development objectives is explicitly reflected in the final evaluation self-assessment templates.

# Assessment on Outreach Key Performance Indicators

The results of the respective projects / sub-programmes in terms of KRA-3 on "Outreach" have been assessed basically along the following FOUR main indicators:

- Consultancy / contract research executed, number by type (e.g. for public or private sector) and status; combined with Mid-Term Evaluation indicator 3.2 "Assignments acquired, number by type and contractual amount involved";
- Socio-economic extension services, number by type and target group / client / beneficiaries (including materials produced for that purpose, including leaflets, flyers or posters for extension, manuals or technical guides, workshops or training modules package, audio-visual extension materials
- Policy advice provided, number by type and policy level.

The summary table of results of the respective CTU-IUC projects / sub-programmes on these outreach outputs/results indicators is presented on next page:

T-VAERATE AND		Extension and Outreach	
Project / Sub- Programme	Indicator 3.1.	Indicator 3.3.	Indicator 3.4.
	Consultancy / contract research and Assignment Acquired (MTE 3.2)	Socio-economic outreach and extension (including materials produced and capacity building initiatives undertaken)	Policy advice
E.1 Distance Education	N.I.	* CAF (phase II): Several kinds of materials, especially in Aquaculture (e.g. on VCD) used for extension services  * AFSI (phase I): Use of extension videos on "Integrated Use of Artemia" and "Shrimp Culture"  * SEBA: All VLIR visiting professors had seminars with Can Tho business commu-nity. Same for MBA curriculum development workshop.  * 8 workshops on the use of Dokeos and the design of courseware.  * Different training workshops for which training programmes developed, Dokeos technical guides developed in paper format and different learning package developed (on CD-rom)  * Annual E-learning workshops at CTU in three consecutive years 2005 to 2007	None
E.2 Curriculum Development	* A.2.1 EE: contracts for water sampling and air pollution are being exe-cuted for other projects at the university and for the Export Processing Zone  * Industrial contacts / contracts with the Song Hau State Farm (Rice drying) and with the fruit processing industry (grape fruits, oranges, etc.). No indications of contract value given.	* In combination with other projects, some manuals / guidelines are published concerning environment treatment and renewable energy  * Many workshops and short trainings carried out for staff, students and also to meet social demands  * Phase I: Short training courses also participated in by students of An Giang university and the provincial satellite centres, and also by representatives of public (incl. MoSTE) and private industrial and agricultural agencies, including environ-	* Cooperation with Can Tho City to carry out a project to solve solid waste by biotechnology to produce biogas  * During the courses / seminars, staff of the Ministry of Science, Technology and Environment (MoSTE) are updated on environmental management and policy issues

Project / Sub-	Indicator 3.1.	Indicator 3.3.	Indicator 3.4.		
Project / Sub- Programme	Consultancy / contract research and Assignment Acquired (MTE 3.2)	Socio-economic outreach and extension (including materials produced and capacity building initiatives undertaken)	Policy advice		
R.1.1 Artemia production	* Two consultancy / contract researches (in Sri Lanka and in India)	* 8 leaflets, flyers or posters for extension, in Vietnamese;  * 2 workshops or training modules packages: 1 in Vietnamese and 1 in English  * 1 documentary on R.1.1 project for Can Tho television  * Different training sessions of key farmers to transfer new artemia culture techniques to farmers.  * Further improvements / investments in outreach / extension are prioritized for an eventual follow-up project  * MTE Phase I: Reach in 1999: 200 farmers trained and 300 field visits conducted by AFSI extension team  * MTE Phase I: Survey conducted in Vinh Chau – Bac Lieu in 2000 covering 80 households.	* Advice to Provincial authori-ties to promote production of artemia in view of higher profit making for farmers compared to traditional salt production.		
R.1.2 Mudc rab larviculture	None	* Support the local staff and farmers through direct guidance at their hatcheries  * Supply free mixture of beneficial bacteria  * Supply and guide the local hatcheries with algae and culture procedure of green water systems to operate the hatcheries  * Crab nursery stations in Can Gio and Soc Trang;	None		
		* MRT Phase I: About 20 farmers are operating shrimp hatchery using recir- culating system			

Project / Cub	Indicator 3.1	Extension and Outreach	Indicator 2.1
Project / Sub- Programme		Indicator 3.3.	Indicator 3.4.
	Consultancy / contract research and Assignment Acquired (MTE 3.2)	Socio-economic outreach and extension (including materials produced and capacity building initiatives undertaken)	Policy advice
R.1.1 Artemia production	* Two consultancy / contract researches (in Sri Lanka and in India)	* 8 leaflets, flyers or posters for extension, in Vietnamese;  * 2 workshops or training modules packages: 1 in Vietnamese and 1 in English  * 1 documentary on R.1.1 project for Can Tho television  * Different training sessions of key farmers to transfer new artemia culture techniques to farmers.	* Advice to Provincial authorities to promote production of artemia in view of higher profit making for farmers compared to traditional salt production.
outreach, spi	led picture of R.1.1 project in-offsand networking initia- ded under Annex 6.1 to this	* Further improvements / investments in outreach / extension are prioritized for an eventual follow-up project	
		* MTE Phase I: Reach in 1999: 200 farmers trained and 300 field visits con- ducted by AFSI extension team * MTE Phase I: Survey con- ducted in Vinh Chau – Bac	
		Lieu in 2000 covering 80 households.	
R.1.2 Mudc rab larviculture	None	* Support the local staff and farmers through direct guidance at their hatcheries * Supply free mixture of beneficial bacteria * Supply and guide the local	None
		hatcheries with algae and culture procedure of green water systems to operate the hatcheries  * Crab nursery stations in	
		* MRT Phase I: About 20 farmers are operating shrimp hatchery using recir- culating system	

	KRA 3 : I	Extension and Outreach	
Project / Sub-	Indicator 3.1.	Indicator 3.3.	Indicator 3.4.
Programme	Consultancy / contract research and Assignment Acquired (MTE 3.2)	Socio-economic outreach and extension (including materials produced and capacity building initiatives undertaken)	Policy advice
R.2.1 Fruitt ree varieties	* 3 consultancies / contract researches with Can Tho City, 2 with Ben Tre province, 1 with Vinh Long province and 1 with Dong Thap Province  * MTE Phase I: 4 contracts with Tra Vinh and Can Tho provinces, 6 contracts with Bac Lieu Province	* 4 leaflets, flyers or posters  * 8 manuals or technical guides  * 6 workshops or training module packages  * 9 audio visual extension materials  * 14 short training courses for local technicians and advanced farmers  * 4 radio programmes  * 22 television programmes  * Articles in local newspapers  * Distribution of pamphlets to farmers (10,000 pamphlets)  * Preparation of special tools / products aiding farmers  * 5,055 farmers reached out to for problem solving or	* Annual participation in the Provincial consultant commit-tees in the Mekong Delta * MTE Phase I: Policy advice on 5 topics (e.g. zoning of fruit development in Can Tho Province, conservation of valuable fruit trees in the Me-kong Delta,)
R.2.2 Biotechnology	* Study on biodiversity of white spot syndrome virus on black tiger shrimp (Penaeus monodon) (financed by MOET) (15,000 USD, 2006-2008).  * Development of molecular techniques for species identification of pummelos, orange, and durian in Ben Tre (financed by DOST of Ben Tre Province) (25,000 USD, 2008-2009).  * "Germplasm conservation of Vietnamese local rice varieties (financed by MOST) (12,500 USD 2008).  * Study on the phylogeny of mango (Mangifera indica) in Dong Thap (financed by DOST of Dong Thap Province)  (25,000 USD, 2008-2009).	* Utilisation of diagnostic kits for detection of HLB pathogen and of white spot syndrome virus WSSV  * Training of the members of the extension service of Dong Thap province on (i) general biotechnology, on(ii) basic microbiology and on (iii) controlling the HLB disease  * Establishment of the Citrus free disease root stock in the nursery of Tan Khanh Dong Station, Dong Thap Province.  * Intention to transfer technology from BiRDI to research institutes, governmental enterprises and extension services in different Provinces of the Mekong Delta	* Coordinator of project  "Research the policy of biotechnological development in Can Tho city until 2020". Regional project financed by Department of Science and Technology of Can Tho city. MTE Phase I:  * Policy advice regarding detection of white spot syndrome virus on shrimps as result of an international workshop.  * Advise agriculture extension services of three Provinces on the diagnosis of pathogen in shrimp and citrus.  * Advise the Provincial People Committee on HRD of Kien Giang Province.  * Member of the National Education Council to advise the Prime Minister

	KRA 3 : I	Extension and Outreach	<b>人工的企业工程</b>
Project / Sub- Programme	Indicator 3.1.	Indicator 3.3.	Indicator 3.4.
	Consultancy / contract research and Assignment Acquired (MTE 3.2)	Socio-economic outreach and extension (including materials produced and capacity building initiatives undertaken)	Policy advice
R.2.3 Fruit preservation & processing	16 Consultancy / contract researches respectively with: Can Tho city (02), Dong Thap province (05), Tra Vinh province (02), HauG iangp rovince (02) TienG iangp rovince (02) UCDavis – US (01), The Ministry of Education & Training (02)	* Workshop on "Fruit Processing in Small Scale", CoAAB, CTU, Sep 4-6 2003 to transfer technology of fruit processing to local producers (60 participants)  * Two day training course on "Food and Microbial Technology", CoAAB, CTU, 28-29 Jan 04  * Seminar entitled "Processing of Foods: Today and Tomorrow", CoAAB, CTU, 23 Mar 09 (80 staff)	
	3 contract researches on fruit processing (canning, drying, fresh storage) with Angiang and Bentre Provinces, Sohafarm  * At MTE: Total value of research contracts: 300 million VND.	CTU, 23 Mar 08 (80 staff members and students participating)  * International Conference: 1st International Conference on Food Science & Technology (MekongFood 2008)m CTU, 20-22 Mar 08	
		* Staff of food industries in Mekong Delta also attend ST training courses given by Flemish academics at CTU.	
		* A "Handbook in Fruit Processing" is under prepa- ration for publication * Outreach / extension to farmers, fruit growers and processors only vaguely	
		technology successfully transferred to local farmers (e.g. longan drying process, palm juice processing,),	
		having led to reduction of post-harvest losses and more economic benefits for the local farmers.	

Consultancy / contract research and Assignment Acquired (MTE 3.2)  R.2.4  R.2.4  * 1 research contract with Enzymology  * 2 training sessions were origin hydrolysate.  * 1 research contract with the Office of Science and Technology of the Dong Thap province on production of antibodies for disease diagnosis and prevention in Pangasius farming. MTE Phase !:  * 2 contract research financed by Rinistry of Science, Technology and Environment  * At MTE: rotal value of 3 research contracts: 24,300 USD  R.3  R.3  R.3  Initial contracts have been made with local farmers (compensation of products)  * 2 posters for extension planed for end 2008  * 3 posters findings and recommendations had results to local authorities and recommendations had results to local authorities and research findings and recommendations had results to local authorities concerned to mprove soil management  * About 10 reports were presented during the workshops  * MTE Phase I:  * Initial contracts have been made with local farmers (compensation of products)  * Initial introduction of some adaptive and suitable cultivation methods to local farmers in those areas where experiments have been carried out. (not yet systematic)  * Outreach to farmers through agricultural extent-recommendation for formers through agricultural extent-recommendation for farmers through agricultural extent-recommendation farmers through agricultural extent-recommendations farmers through agricultural extent-recommendations farmers through agricultural extent-recom		KRA 3:	Extension and Outreach	(1995年) [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]
Consultancy / contract research and Assignment Acquired (MTE 3.2)  R.2.4  * 1 research contract with CTU on production of protein hydrolysate.  * 1 research contract with the Office of Science and Technology of the Dong Thap province on production of antibodies for disease diagnosis and prevention in Panagasus farming. MTE Phase I:  * 2 contract research financed by resp. Kien Glag and Can Tho Provinces 1 contracts: 24,300 USD  R.3  R.3  Initial contracts have been made with local farmers (compensation of products)  * 2 posters for extension purposes  * 2 workshops in resp. 2006 and 2007 to present findings and results to local authorities and farmers.  * 3 limital contracts have been made with local farmers  * 4 MTE Phase I:  * 4 At MTE: Total value of 3 research contracts: 24,300 USD  R.3  R.3  Initial contracts have been made with local farmers  * 5 Similar final workshop planned for end 2008  * About 10 reports were presented during the workshops  * 5 Similar final workshop planned for end 2008  * 1 Initial contracts have been made with local farmers (compensation of products)  * 1 Initial introduction of some adaptive and suitable cultivation methods to local farmers in those areas where experiments have been carried out. (not yet systematic.)  * 0 Utreach to farmers through agricultural extension production of some adaptive and suitable cultivation methods to local farmers in those areas where experiments have been carried out. (not yet systematic.)  * 0 Utreach to farmers through agricultural extensions and recommendations has already been made with local farmers in those areas where experiments have been carried out. (not yet systematic.)	THE RESERVE AND ADDRESS OF THE PARTY OF THE	Indicator 3.1.	Indicator 3.3.	Indicator 3.4.
Enzymology  CTU on production of protein hydrolysate.  * 1 research contract with the Office of Science and Technology of the Dong Thap province on production of antibodies for disease diagnosis and prevention in Pangasius farming.  MTE Phase I:  * 2 contract research financed by Rhinistry of Science, Technology and Environment  * At MTE: Total value of 3 research contracts: 24,300 USD  R.3  Blitial contracts have been made with local farmers (compensation of products)  * Similar final workshop planned for end 2008  * About 10 reports were presented during the workshops planned for end 2008  * About 10 reports were presented during the workshops planned for end 2008  * About 10 reports were presented during the workshops planned for end 2008  * Total contracts have been made with local farmers (compensation of products)  * Initial introduction of some adaptive and suitable cultivation methods to local farmers in those areas where experiments have been carried out, not yet systematic)  * Outreach to farmers through agricultural exten-		research and Assignment	and extension (including materials produced and capacity building initiatives	Policy advice
R.3 Soil dynamics  Initial contracts have been made with local farmers (compensation of products  * 2 posters for extension purposes  * 2 workshops in resp. 2006 and 2007 to present the research findings and results to local authorities and farmers.  * Similar final workshop planned for end 2008  * About 10 reports were presented during the workshops  * Initial contracts have been made with local farmers (compensation of products)  * Initial introduction of some adaptive and suitable cultivation methods to local farmers in those areas where experiments have been carried out. (not yet systematic)  * Outreach to farmers through agricultural exten-		cTU on production of protein hydrolysate.  * 1 research contract with the Office of Science and Technology of the Dong Thap province on production of antibodies for disease diagnosis and prevention in Pangasius farming.  MTE Phase I:  * 2 contract research financed by resp. Kien Giang and Can Tho Provinces 1 contract research financed by Ministry of Science, Technology and Environment  * At MTE: Total value of 3	organised for staff from institutions in the region.  MTE Phase I:  * Technology is being transferred from BiRDI to research institutes and governmental enterprises in different provinces in the Mekong Delta (no further	be-come Vice-Rector responsible for research and publications at CTU.  * Mrs. Duong Thi Huong Giang is a scientific advisor in the research contract with the Ministry of Education on pro-teolytic enzyme production from earthworm  * Advise the Provincial People Committee on HRD of Kien Giang Province.  * Member of the National Education Council to advise
sion and education initiated		USD Initial contracts have been made with local farmers	purposes * 2 workshops in resp. 2006 and 2007 to present the research findings and results to local authorities and farmers.  * Similar final workshop planned for end 2008  * About 10 reports were presented during the workshops  MTE Phase I: * Initial contracts have been made with local farmers (compensation of products)  * Initial introduction of some adaptive and suitable cultivation methods to local farmers in those areas where experiments have been carried out. (not yet systematic)  * Outreach to farmers	* Based on initial results, some useful discussions and recommendations have already been made to the
Overall CTU 76 %	Overall CTU		sion and education initiated	

Notes : N.A.=Not Applicable N.I. = No Information Available

## Main Summary Findings

### Strengths

- \* Very substantive improvements on this Key Result Areas "Outreach and Extension" during the second five year cycle of the CTU Programme in virtually all projects, resulting in a relatively low overall score of 60% (lowest of all CTU-IUC KRAs) at the time of the Mid-Term Evaluation in 2002 to a high 76% now five years later, at the end of the ten years CTU-IUC programme cycle.
- \* Can Tho University is generally recognized as the most important academic institute in the Mekong Delta region with *strong commitments to regional and local development* enshrined in its vision and programmes.
- \* Policy framework: Provisions for outreach with regard to both teaching and research are explicitly integrated in the CTU overall policy, plans and strategies concerning its contribution to the overall socio-economic development of the Mekong Delta aspired for.
- \* Outreach teaching institutional framework: Institutional provisions for outreach teaching in the Mekong Delta in principle are established and available. This in first instance pertains to CTU's network of Satellite Centres in the 13 Provinces of the Mekong Delta region. These Centres are financed by the provincial authorities. CTU assists them in training staff, sending lecturers, development of curricula and provision of teaching resources. Further down, CTU occasionally even reaches out to the communal level with teaching services at Community Colleges.
- \* Distant education and outreach in the VLIR-IUC programme: In the design of the VLIR-IUC programme with CTU, this prioritisation of outreach in CTU overall policies and plans has been explicitly accommodated by means of project / sub-programme A.I (renamed E.I in phase 2) on distance education. A.I / E.I is by far the largest project / sub-programme in budgetary terms. The outreach component of E.I was de-emphasized during the second phase of the IUC programme following an overall policy shift towards stronger centralization of education, research and extension services within the CTU central campuses to the detriment of the Satellites and other outreach structures.
- \* Outreach to economic groups and the business community: Major developments and strengthened achievements are noted during the phase II of the CTU-IUC programme with regard to contract research and other private sector spin-offs, just another prove that different entities within the university have grown into Centres of Excellence creating their own demands for services. At the time of the MTE, it was basically only under the SEBA component of project / sub-programme A.1/E.1, that the business community participated in seminars, conferences, curriculum development workshops, and the like. Also under B.5 (now R.2.3), staff of food industries in the Mekong Delta attended ST training courses. Some fruit processing technology has been successfully transferred to local farmers and to the food industry. As can be gleaned from the above summary results table, contract research is now being executed by virtually all CTU Colleges, Schools and Institutes
- \* Another success story during the second phase of the CTU-IUC Programme, are the more structured and more substantive research outreach and extension to farmers: At the level of the individual researches in the respective Colleges, Schools and Institutes, concerns for outreach and extension are getting more strongly and solidly integrated in both research protocols and research execution.

- Research outreach and extension to farmers: Outreach and extension to socio-economically deprived beneficiary / target groups are getting more prominent attention in the research protocols. Efforts are exerted to more systematically translate research findings in extension messages and services to small-scale farmers and other deprived beneficiary groups. Special workshops are organised to share research findings with extension workers and with farmers groups to ultimately reach out to the individual farmers. Concrete initiatives and positive experiences were reported in this respect by virtually all VLIR-IUC projects / subprogrammes, and particularly by R.I.I, R.I.2, R.2.I and R.2.3. Formation of key farmers / advanced farmers by extension workers is a key strategy in the aquaculture projects. Already at the time of the MTR, sub-programme B1 (now R.I.I) reported to have trained 200 farmers in 1999 and 300 field visits conducted by the AFSI extension team. In the framework of B.4 (now R.1.2), some 20 farmers are involved in piloting of new shrimp hatchery techniques. The extension trainings under R.2.1 (including a broad number of ST training courses for local technicians and advanced farmers) are complemented by a multi-media Information, Education and Communication (IEC) strategy including distribution of flyers and leaflets to farmers, articles in local newspapers, spots and information programmes on local radio stations, television programmes, etc. B.2 (now R.2.1) reported to have reached out to 5,055 farmers with problem solving advice and further support. In the R.3 soil dynamics sub-programme, participatory approaches with farmers and outreach through agricultural extension and education have been successfully pursued.
- \* CTU alumni in both public and private sectors are actively mobilized to strengthen the outreach component of researches or are proactively tapped in the pursuit of contract researches.
- \* Leaflets, flyers, posters, audio-visuals and other multi-media materials for extension are produced as a direct offshoot from research. Posters have been developed for extension purposes. Two workshops have been organised to present the research findings and results to local authorities and farmers.
- \* The organisation of workshops for extension workers, farmers groups, individual farmers, small businesses and/or local industry are becoming more and more standard practice for the direct dissemination of research findings and to solicit direct feedback from key stakeholders and stakeholder groups.
- \* Research contracting and spin-offs: Strengthening of the relevancy and potentials of applied research for direct economic and industrial applications in the Mekong Delta in the pursuit of sustainable socio-economic development of the region is a concern of highest priority for CTU. Also this component under the CTU-IUC programme has been addressed with increasing success during the second (consolidation)phase of the programme. Consultancies, contract research and other spin-offs as a result of CTU research have been taking off and are expanding. Examples in case are the impressive record so far already of the R1.1 artemia project with local, regional, national and international spin-offs, both non-commercial and commercial (see Annex 6, page 254 for a more detailed account), and also the very substantive accomplishments under the four fruit projects under IUC programme cluster R.2 (fruit trees).
- \* Feedback mechanisms from the local level: CTU makes effective use of a number of direct feedback mechanisms to adapt its programmes and services to the changing development needs of the MD region. Those mechanisms include: maintenance

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of close contacts with regional, provincial and local authorities and with the economic and business community, inclusion of stakeholders in the CTU science and education committees, active alumni associations, participation in regional development, economic and trade fairs, etc. As far as the VLIR-IUC programme is concerned, the short training courses under A.2 / E.2 for example are attended by representatives of both public and private sectors in the Mekong Delta, including environmental agencies. They also have been actively participating in A.2 / E.2's curriculum development workshops.

- \* A major CTU-IUC programme achievement is the enhanced intra-CTU multidisciplinary collaboration for extension and outreach (e.g. between R.I.I and R.3 or between the four fruit projects under R.2)
- \* Policy advice: Policy advice on specific topics to the provincial authorities is reported by the majority of CTU-IUC projects, as can be gleaned from the entries under indicator 3.4 in the above table. Such advice is given on an ad hoc basis (on request in relation to specific issues) or on a more permanent, structure basis for example as member of a regional / provincial development committee or sub-committee. Research findings are proactively discussed with provincial and local government and administrations to integrate them in policy making and development programmes (feedforward mechanisms). The collaboration with and support of local authorities and communities generally is well established.
- \* And last but not least should be noted in this context the substantially strengthened international South-South (S-S) and North-South-South (N-S-S) networking (e.g. ViFINET) brought about by the IUC programme for different project. It appears that the further quantitative expansion and qualitative strengthening of these networks constitutes one of the priority strategies and main challenges for the post-IUC period.

### Challenges / Issues Needing Attention

- \* Further strengthening of research results distribution strategies and further qualitative enhancement of research and outreach / extension linkages remain priority points of attention and of concrete initiatives, even if substantive accomplishments have been realized in the second programme phase. Such comprehensive distribution (marketing) strategy includes the more systematic translation of research findings in practical, easy to understand extension messages, the development and dissemination of extension materials, the more systematic organisation of dissemination workshops and extension classes through specialized intermediary organisations, etc.
- \* Major challenges still need to be addressed in relation to the *socio-economic dimensions* of the agri- and aquaculture projects (e.g. effects / impact on farmers income and overall economic viability and sustainability in an international context of intensifying globalisation) and the methodological didactical aspects of the distant education project to ensure effective dissemination, distribution and accessibility of research findings and teaching content. The more explicit incorporation of outcome and impact indicators in research proposals and protocols is a most laudable general tendency, but the actual achievement of these indicators needs to be ensured more systematically in order to lift the projects above the level of window dressing and paying lip services only. This would require baseline data collection, explicit target setting on outcome and impact indicators (both final and interim, e.g. on an annual basis to effectively enable their monitoring) and regu-

- lar actual measurement of achievements on these indicators. It would also require the more systematic integration of socio-economic dimensions in research protocols and execution plans. In practice, this would require for example a more prominent supportive role for SEBA and the establishment of multi-disciplinary teams including socio-economists, environmentalists, amongst others.
- The reorientation of E.1 A.1 and the Effects on its Outreach-Extension KRA Performance: Underperformance with regard to outreach and extension is observed with regard to the A1/E1 project / sub-programme on distance education, particularly since outreach is its very raison d'être. At the time of the Mid-Term Evaluation in 2002 for example, hardly any use for distant education purposes has been made of the courseware materials produced under A1. This situation was not remedied in the second phase, but this was basically because of reasons beyond the control of project / sub-programme management. Following a policy re-orientation, new university executive management de-emphasized the importance of the network of Satellite Universities / Colleges and as such the main rationale for E.I eroded. A second factor beyond the control of project management was the re-organisation with new responsibilities for the organisational entities concerned having a substantive negative impact on the E.I (in fact resulting in more than one year of inactivity of the project). These issues got solved and E.1 was able to establish itself as the leading force and programme for e-learning and e-teaching (largely thanks to the successful operationalisation of the Dokeos LMS). Although still under the title "Distance Education", the outreach and extension dimension of the project had almost completely disappeared as a consequence of this strategic reorientation. The project was also not able to establish itself / or better did not attempt to establish itself as a conduit / a key player in the research, education and extension continuum, despite the ample opportunities in this respect.
- \* ICT issues: On the positive side, through A1 project / sub-programme CTU now has acquired substantial technical knowledge and skills in courseware and other e-tools development and moreover possesses the necessary state-of-the-art equipment. More importantly even is that e-teaching and e-learning skills and knowledge have increased very substantially. Also most ICT technical problems and other restrictions related to bandwidth and internet access were solved / removed ensuring effective use of the equipment for the networking purposes they are intended for. Remains the important challenge of optimization of ICT use for outreach and extension purposes.
- \* Courseware quality: As reported on the occasion of the Mid-Term Review already, because of the didactical shortcomings in the quality of the produced courseware, the successful use of these materials as distance learning tools was rather doubtful. Improvement of didactical / educational quality of distance education materials and methods therefore remained one of the priority areas to be concentrated on in the second phase of the VLIR-IUC programme with CTU. But then the whole idea of distance education was basically abandoned.
- \* Operationalisation challenges of research outreach and extension: In the case of R.I for example, dissemination of research findings to local farmers via extension services is included in the project's specific objectives, however no expected outputs are formulated in this regard, let alone quantitative targets. Other projects have improved farmers income include as outcome or impact indicator included in their logical framework. But in most, if not all, cases these indicators are formu-

- lated in a vague, not-verifiable manner and no provisions for actual measurement, monitoring or evaluation are foreseen.
- \* In other projects, explicit provisions for extension are incorporated in the objectives, but an implementation strategy has not been developed and subsequently only limited concrete action have been taken. Outreach / extension activities to farmers, fruit growers and processors are only vaguely described as them "being informed". Moreover, a rather special development was noted in B5-R.2.3 project planning in as much as for the second phase the HRD component was scheduled to be scaled down with a complementary stronger focus on research, however not on applied research but on more fundamental research, contrary to the extension / outreach objectives explicitly put forward for the second phase.
- \* Commercial aspects: An issue of continuous concern in general with regard to outreach to the business sector is a clear definition of the roles and responsibilities, rights and duties of both academic and business partners, and of course also the independence and integrity of academic work. This obviously requires a stringent separation of academic and business interests of all those involved in the co-ordination, management and implementation of the programme and/or its constituent projects / sub-programmes, both Flemish and Vietnamese.
- \* Main challenges and issues needing special attention for the post-IUC phase, as incorporated in the debriefing presentation of the Evaluation Commission in conjunction with the Joint Steering Committee Meeting include the following:
  - Need for an extension and spin-off policy and strategy of the University guiding the Colleges and Institutes;
  - Development of extension and spin-off strategic plans and business plans at the level of the Colleges and Institutes concerned (with clearly spelled out priorities and directions);
  - Outreach teaching assignments put a heavy burden on CTU staff, affecting both research and campus teaching work;
  - Continued development of suitable e-courseware for satellite universities / community schools (phase 1);
  - Limited spirit of commercialization. Spin-off often limited to showing that research results can be applied;
  - Exploration of possibility of establishing Research and Consultancy Centres at the level of capacitated Colleges / Institutes to enhance their financial and academic sustainability (e.g. investments in labs and equipment, retention of Faculty);
  - More systematic attention for patenting / licensing of research and research products to enhance auto-financing / sustainability;
  - Social and commercial marketing strategy of researches and research capacity;
  - Impact in research protocols (e.g. households income, environment) often not more than a paper tiger. Necessity to complement with impact assessments on OVIs, incl. baseline surveys;
  - Evidence of impact generates demand for additional research and related services;
  - Multi-disciplinarity (business, socio-economics) needs to be strengthened further;
  - Maximizing use of intermediary organisations for extension work (multiplier effects and more effective). Examples: local government extension

services, NGOs, farmers associations, cooperatives, etc.;

- Maximizing complementarity between fundamental and applied research, with first facilitating second but also vice-versa (also in terms of income generation);
- Further strengthening of international networking with Flemish and other universities to maximize benefits of this fundamental research applied research cycle;
- Further strengthening of National, South-South, and North-South-South networks based on experiences and lessons learned from successful existing networks as for example ViFINET;
- Maximizing learning from Flemish and other international universities' expertise in generating and managing spin-offs.

# Management

## Assessment on Management Key Performance Indicators

The results of the respective projects / sub-programmes in terms of Key Result Area 4 (KRA-4) on "Management" have been assessed basically along the following two main indicators:

- New skills acquired (descriptive), including research protocols; Laboratory or departmental management skills upgraded; Building new capacity (e.g. capacity for programme management)
- Creation of new bodies, reorganisations, new institutional procedures, streamlining of information flows, etc.

The summary table of results of the respective CTU-IUC projects / sub-programmes on these management outputs/results indicators is presented here below:

	KRA 4 : Manageme	ent
Project / Sub- Programme	Indicator 4.1.  New skills / new capacity	Indicator 4.2.  Creating new bodies / new procedures / re-organisations, information flows
E.1 Distance Education	* Raising awareness and fostering e-learning development on a university-wide scale  * Core programme staff of the respective constituent projects (especially the Secretaries) reportedly have received basic training on the application of integrated project cycle-management based on logical framework analysis (LFA), applied to a university development co-operation setting.  * Enhanced skills in strategic planning, work planning, budgeting, progress reporting, monitoring and evaluation (Project Cycle Management).  * Upgrading of professional communication skills of staff.	* University information network (network services, information system) contributes effectively to the CTU management  **MTE Phase I:  * Within each sub-programme (A and B types) of the VLIR programme, there is a specific section for distant education.  * As the ICT service function of STIC for other CTU entities grew over time, a Help Desk was established in STIC and was further strengthened  * Regular, weekly meetings of heads of Unit.

	KRA 4 : Manageme	nt
Project / Sub- Programme	Indicator 4.1.	Indicator 4.2.
	New skills / new capacity	Creating new bodies / new procedures / reorganisations, information flows
E.2 Curriculum Development	* A new academic culture is gradually being established at the College of Technology, shifting from ex-cathedra courses to more student centred teaching. At managerial level, a more dynamic co-operation at national (with other Vietnamese universities and agencies) and international, regional levels (e.g. AIT, Bangkok and Putra University, Malaysia) is being pursued.  * Enhanced skills for research proposals writing in order to attract research contract from the outside	* Improvement of lab capacity to enhance cost-efficiency of investments, both for research and teaching  * Enhancement of e-management systems for communication between lecturer and students and also between teaching staff members in the University  * In-house production of research protocols, e.g. on water treatment, process engineering equipment etc.
R.1.1 Artemia production	* Development of social and commercial marketing skills	* Management of inter-disciplinary discussion and cooperation fora
	* Networking strategies and skills	
R.1.2	* Management of international conferences  MTE Phase I:  * Research established as an inter-disciplinary effort involving three different CTU departments: Aquaculture and Fisheries Institute (AFSI), Soil Science Department and Department of Environment and Natural Resources management. Interagency co-ordination also established at the Flemish side between UGent (aquaculture aspect) and KU Leuven (soil and water aspect).  * Knowledge and skills of involved staff in financial man-agement and co-ordination strengthened.  * More experiences in lab management	N.I
Mudc rab larviculture	* Staff are more experienced and skilful in operating research lab  * Business plans: planning to produce "probiotics" to be applied in crustacean farming	
	* Strengthening of co-ordination and financial management skills in operating international projects  * New approaches in aquaculture system with management concentrated on microbial awareness.	

Project / Sub-	Indicator 4.1.	Indicator 4.2.
Programme		
	New skills / new capacity	Creating new bodies / new procedures / reorganisations, information flows
R.2.1 Fruitt ree	* Development of research protocols: determination of the fruit quality indexes,	* Two- weekly staff meetings on Monday afternoon
rarieties	respiration rate, nutrient contents (of plant and soil samples) following the national standards	* Regular seminars for all staff members
	MTE Phase I:	* Management inputs for 2 labs, 2 departments and 1 experimental farm
	* Presentations by the staff of their work in workshops	* Organisation of two overall programme strategic and/or management co-ordination
	* Drafting scientific papers with the objective of having them published.	meetings
	* Report writing and financial reporting.	
R.2.2 Biotechnology	* With regard to research protocols: The way of working of Belgian scientists was transferred to Vietnamese trainees, which proved very useful for the management of the project.  With regard to business plans: The com-	* Cooperation of BiRDI with other colleges and institutions in the Mekong Delta for developing biotechnology on agriculture an medicine for improving the living condition of farmers in the Mekong Delta. The first step is creating the RIP project on "Rice breeding tolerant to brown plant hoppers."
	mercialization of the diagnostic kit is not yet finalised. As is reported: "The members of R22 subproject don't have the "spirit of commerce".	* Systems development (e-management, software etc): Softwares learned at Ghent University were used for teaching Bioinfor-
	MTE Phase I:  * Extensive use of computerized communication systems (intranet and internet)	matics at Can Tho University.
	* Networking with other Belgian Universities	
R.2.3 Fruit pres- ervation & processing	* Acquaintance with international co-operation procedures  * Human resources management and financial management skills acquired	*The department of Food Technology (CTU was re-organised to form four research groups: (1) Food product development (foo nutrition), (2) Food Bioprocess Engineering (food enzymology, food fermentation), (3) Post-harvest Technology, (4) Food Process and Machinery (process control)
		* A far as new institutional procedures / policies are concerned: the university developed a new policy for lecturing and non lecturing staff members in order to promote the research activities (research activity load and publications will be taken into account for extra benefits)
		* Project co-ordination meetings are conducted 2 times / year
R.2.4 Enzymology	MTE Phase I:  * ICT procedures successfully introduced (incl. e-communication through intra en internet)	MTE Phase I:  * Several meetings on management matter  * No special co-ordination and/or management bodies created.
	* New management skills acquired through courses organised by VLIR-CTU manage- ment team	ment boules createu.
	* "Well prepared management formats of VLIR are very useful in report writing and document formatting."	

	KRA 4 : Manageme	nt Control of the Con
Project / Sub- Programme	Indicator 4.1.  New skills / new capacity	Indicator 4.2.  Creating new bodies / new procedures / reorganisations, information flows
R.3 Soil dynamics	* New skills acquired in project management (PCM and LogFrame), project coordination and accounting	* Laboratory for soil microbial studies was newly constructed and lab management needed to be established / strengthened * Working Group meetings are organised on a monthly basis.
Overall CTU Programme	67	%

Notes: N.A.=Not Applicable

N.I. = No Information Available

## Main Summary Findings<sup>32</sup>

### Strengths

- \* There generally is a strong, positive learning culture at both CTU and Flemish Universities' sides of the CTU-IUC programme. With few exceptions, conclusions and recommendations of the Mid-Term Review were effectively incorporated in programme design updates and operations. VLIR programme enabled a further strengthened academic culture at CTU: e.g. cooperation between CTU units, honouring of quality research and teaching, sense of social responsibility, etc.
- \* The demonstrated *flexibility in adapting to changed circumstances* is a strong programme feature of the CTU-IUC programme (e.g. under E.2 from distance education to campus based e-learning and research).
- \* The *clear and standard tools and procedures of VLIR-UOS* regarding programme / project cycle management are much appreciated by all parties concerned.
- \* Programme Cycle Management: For the Mid-Term Evaluation, almost all projects / sub-programmes reported that their Secretaries had participated in a much appreciated training course on programme cycle management organised jointly by VLIR and the CTU-IUC Programme Co-ordinating Office (PCO). However, for the second phase no such training and HRD opportunities have been reported anymore.
- \* PCM and Logical Frameworks have been introduced in all projects / sub-programmes bringing with it a more strategic outlook and results orientation of the projects and the programme as a whole. Most interviewed parties (both Flemish and Vietnamese) expressed their appreciation of the tool in this regards, despite difficulties at the start to get acquainted with the tool and the results management (instead of the traditional activities management) orientation brought with it.
- \* Exposure to International Co-operation Practice: The very learning process of managing an international co-operation programme in accordance with the established procedures, standards, rules and regulations is highly appreciated by all CTU parties interviewed, both at overall programme co-ordination (PCO) level and at the level of the constituent individual projects / sub-programmes. Capacity strengthening elements which have been reported in this regard include: strate-

**<sup>32</sup>** A more detailed analysis is provided in the special chapters on programme management (e.g chapter 2.4) and in the summary conclusions and recommendations (e.g. chapters 3.2 and 3.3).

- gic planning and work programming; periodic reporting; financial management including budgeting, accounting, expenditures control and reporting;
- \* In the same venue, exposure to departmental, research unit and/or laboratory management approaches, systems, practices and skills during scholarship and other programmes in Flanders generally had a very important positive impact on the professional / managerial functioning of the scholars / graduates when back in their CTU academic working environment, as testified by these alumni;
- \* Information management: The active use of ICT equipment for project management and for communication purposes has been substantially strengthened throughout CTU. Training and HRD of staff on computer and network use has been given special attention.
- \* Organisational development: Initially sporadic and in phase II more systematic initiatives have been reported with regard to the organisation of regular management and/or staff meetings (e.g. R.2.1, R.2.3, R.2.4 and R.3). Some units organise such meetings on a two-weekly basis. Under A1-E1 a special Help Desk has been created to assist CTU units with ICT problems. Under R.2.3, the Department of Food Technology (CTU) was re-organised to form four research groups: (1) Food product development (food nutrition), (2) Food Bioprocess Engineering (food enzymology, food fermentation), (3) Post-harvest Technology, (4) Food Process and Machinery (process control)
- \* Strategic balancing of research and education: A far as new institutional procedures / policies are concerned, the university developed a new policy for lecturing and non-lecturing staff members in order to promote the research activities (research activity load and publications will be taken into account for extra benefits). The effective implementation of the policy reportedly remains a major challenge.
- \* Courses and other capacity building efforts to strengthen *proposal writing skills* were found most useful, relevant and necessary.
- \* Interdisciplinary coordination between the different projects / sub-programmes has substantially improved in the second phase of the CTU-IUC programme, however with important challenges for further improvement still there.
- \* Participatory planning and execution: In some projects / sub-programmes as R.3 deliberate attempts are registered to more systematically involve the farmers and other stakeholder /beneficiary groups in programme cycle management / logical framework manners.
- \* The enhanced mastering of the English language brought with it also an improvement of *research proposal and research protocol writing capacities*, amongst others, but important challenges in this respect still remain.
- \* The ability to *organise complex international conferences* with multiple simultaneous sessions.

## Challenges / Issues Needing Attention

- \* Programme/Project Cycle Management Tools: While PCM and LogFrames have been introduced relatively successfully and were recognized as strong and valuable tools for planning and management purposes, major challenges still need to be met to effectively use these as such and to bring about the benefits that go with it.
- \* Capacity Building on Programme/Project Cycle Management: For the Mid-Term Evaluation, almost all projects / sub-programmes reported that their Secretaries had participated in a much appreciated training course on programme cycle management organised jointly by VLIR and the CTU-IUC Programme Co-ordinating

Office (PCO). For the second phase, under the inspiration of VLIR-UOS Secretariat LogFrames have been introduced in all CTU-IUC projects for their plans and reports. But remarkably, no HRD and capacity strengthening activities on PCM and LogFrames have been reported anymore since Phase II, despite the fact that such needs became even more stringent in this Phase II, just because of this VLIR-UOS introduction of PCM and LogFrames. The well appreciated PCM training jointly organised by VLIR and PCO towards the end of Phase I turned out to be a one time affaire and was not succeeded by follow-ups, feedback sessions or on-the-job training and coaching. Moreover, only the project / sub-programme secretaries attended the training and not the project / sub-programme promoters / spokespersons or other stakeholders.

Apart from the above-mentioned PCM training no other structured training or HRD exercises have taken place on management development. This is rather remarkable for a programme which very essence is institutional development and capacity building. Moreover, the Mid-Term Evaluation had made strong recommendations to that effect for phase 2. It therefore should come as no surprise that the self-ratings in the different CTU-IUC projects for the KRA management systematically score lowest. This issue needs to be firmly addressed in any other / new IUC programme that will be supported by VLIR-UOS, as well as in the ongoing projects. Also the quality of the LogFrames and progress and final reporting thereon leaves room for further improvement.

Another important factor is that the domestic sources of funding (e.g. from MOST, DOST, etc.) do not follow standard or related PCM methodologies, which made it also harder for CTU to adopt PCM more systematically.

The strengthening of PCM and related strategic and results management skills remains an important challenge for the post-IUC phase, the more since virtually all international donors and financing institutions require PCM or a variation thereof for project proposals and as project management tools.

- The *reorganization* at Can Tho University following a changed policy direction vis-à-vis the Satellite Universities proved to have a negative impact on the E.I distance education project for an extended period of time in as much as it was not clear who would take the lead of this very important cross-cutting flagship project in the CTU-IUC programme. In the evaluation interview with the E.I stakeholders it was mentioned that this issue had paralyzed project activities for more than a year. This case illustrates the crucial importance of organisational aspects and clear cut allocation of responsibilities for successful project management.
- With different Institutes / Units within Can Tho University having successfully achieved a status of Centre of Excellence, a new major challenge has become one of sustaining and further expanding this excellence. This would require proactive strategic planning combined with operational business planning. With regard to business planning, illustrative for the broader picture may be what is reported by R.2.2 in its evaluation self-assessment report: "The commercialization of the diagnostic kit is not yet finalised. The members of R.2.2 subproject don't have the spirit of commerce."

- Transparency of financial management: Generally, the projects proved satisfied with the quality of programme financial management. On the other hand, at CTU projects level there are no official, consolidated data available of expenditures made (only budgets are reported by main standard budget line)<sup>33</sup>. Also, only limited financial data are available at that level regarding the Flemish component of the budget, which amounts to 51.9% of the overall budget.34 There is a gradually increasing financial management empowerment of CTU as South partner of the IUC programme, with the proportion of the budget managed by CTU gradually increasing over the years to reach 67.5% in the final programme year 2007. Hardly any information is present at the level of the individual projects / subprogrammes regarding funding from other national and international sources, other than VLIR, although in many cases these resources are very substantial. Both PCO and most of the individual projects complained about late transfer of payments, particularly towards the end of the programme, as such hampering project activities. In quite some cases, CTU was able to pre-finance from its own resources thus cushioning the negative impact of these delays in actual availability of required financial resources. In view of the incompleteness of quite a number of financial reports in the self-assessment reports by the projects, the summary financial tables provided under Annex 7 to this report are based on the tables compiled by VLIR-UOS Secretariat and provided to the evaluation team. In these base tables, expenditures in the North are calculated as the mathematical difference between the approved budget and the reported expenditures in the South, as such resulting in an automatic rendering equal of the reported total budget and reported total expenditures figures. No figures on administrative costs are available
- \* Reporting: Quality of managerial reporting varies substantially from one project / sub-programme to the other. The reporting formats have been further streamlined and made more results oriented, thanks to the efforts of VLIR-UOS Secretariat. But for quite some aspects, no reporting at all is done by projects. This for example pertains to the ex-post IUC plans and priorities, prompting the Evaluation Commission to design a special questionnaire<sup>35</sup> to that effect in view of the crucial importance given to this evaluation aspect in the evaluation Terms of Reference (with 3 of the 4 objectives explicitly related to the ex-post phase and concrete proposals / initiatives for that purpose). It is recommended to have the final self-assessment reports and post-IUC plans prepared and finalised at an earlier stage, for example by the Steering Committee / Group in year 10 of the programme, rather than in year 11.
- \* Strengthening of institutional provisions for sub-programme / project level steering and management: The main mechanism in most projects / sub-programmes for planning, programming and review reportedly are the bi-annual consultation meet-ings between the two (Flemish and Vietnamese) overall co-ordinators. Towards the end of the programme, the coordination, management and monitoring visits and exchanges have decreased. Two projects reported on the occasion of the MTE to have internally created institutional bodies for project management which meet on a regular basis. None of the projects / sub-programmes reported the existence of stakeholder committees or steering committees at that level with multi-sectoral representation from outside of the University.
- \* Main challenges and issues needing special attention for the post-IUC phase, as incorporated in the debriefing presentation of the Evaluation Commission in conjunc-

<sup>35</sup> A copy of the questionnaire is attached under Annex 4.



 $<sup>{\</sup>bf 33}$  For more detailed budgetary and financial figures, pls. refer to annex 7

<sup>34</sup> For more details, pls. refer to annex 7.2 and 7.3 for activity programme years 1998 and 1999.

tion with the Joint Steering Committee Meeting include the following:

- Management development component under-represented in the VLIR-IUC programme which is a bit unexpected for an institutional development programme
- Also no strategic planning capacity strengthening component
- Organisational development and institutional networking issues not systematically addressed as a programme component
- Strategic choices in research and teaching (limited resources, academic rate of return, expected spin-offs, etc.)
- Enhanced continuity and consistency in academic policies, strategies, organisational set-up, in order to ensure smooth continuation of projects and programme and results achievement (e.g. E.I)
- Integration of management concerns in CTU overall ICT system platform and programmes
- Strong need for further strengthening of project proposal writing skills
- Skills upgrading of scientific writing
- Need for leadership training, training on strategic management, results oriented management, team building, staff motivation, conflict resolution, and other management skills

# Human Resources Development of Staff

At the moment of the Mid-Term Review in 2002, out of a total of 1,347 staff members, women comprised only 38.2%. Only 31.4 % of the staff had obtained a master degree and only 4.2 % a doctoral degree. Consequently, senior lecturers were rare. However, due to the special efforts of CTU, in collaboration with its national and international partners, this rate increased rapidly.

The below table provides an overview of the evolution of CTU teaching over the 10 year IUC programme period from 1998 to 2007

	Table 12 :	Number of	Teaching Staff at CTU (1998 – 200	07)
			医二甲基甲基甲基基氏 医多种性 医克勒氏 计分类 化对原性试验 经成份	
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Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Teaching staff	684	713	795	824	835	751	814	828	890	912
Having MSc or Ph.D.	248	316	373	394	413	384	494	523	540	546
% staff with MSc and Ph.D	36.3%	44.3%	46.9%	47.8%	49.5%	51.1%	60.7%	63.2%	60.7%	59.9%
- Female	229	235	276	296	297	261	214	298	337	346
% Female teaching staff	33.5%	33.0%	34.7%	35.9%	35.6%	34.8%	26.3%	36.0%	37.9%	37.9%

In these last ten years, the total number of students increased from 22,830 to 31,720 students. The number of teaching staff also increased sharply (about 30%), while staff with MSc. and Ph.D. increased to more than double, to account for nearly 60% in 2007. There is also a trend (bet it not outspoken) towards a better balance between male

and female teachers (about 38% female in 2007 as compared to 33.5% ten years earlier in 1998). The students/teacher ratio increased from 34 in 1998 to 42 in 2003, and then improved again to reach 34 students/teacher in 2007.

The percentage of doctors and associate doctors at CTU remained considerably below the national average of partner institutes. Hence the rationale for CTU management of a deliberate and intensive drive for human resources development of its staff. The HRD programme is the cornerstone of CTU's institutional development programme. For CTU staff development is a concern of highest priority not only for reasons of quality upgrading of its academic staff but also for financial, subsidy-administrative reasons related to the regulations of the Ministry of Education and Training (MoET) concerning higher education. In order to ensure continued subsidy from MoET, by 2005 60% of all staff needed a graduate degree (MSc or PhD). For 2010 this target is 70%. Against this background, Environmental Engineering Department for example is offering training of MSc lecturers in Vietnam (2 years course in addition to 4.5 years of bachelor) and in 2003 started offering a complete masters in EE in co-operation with the University of Ho Chi Minh City. Particularly project R.2.3 understood and underscored the crucial importance and primacy of Human Resources Development for achieving research and teaching excellence and to sustain this level. Under Annex 6.3 to this report, the lessons learned and main arguments concerned are summarily presented by the Flemish Project Leader.

## Assessment on HRD Key Performance Indicators

The results of the respective projects / sub-programmes in terms of Key Result Area 5 (KRA-5) on "Human Resources Development" (HRD) have been assessed basically along the following three main indicators:

- \* Academic staff development, number by level (Ph.D., Pre-doc, M.Sc., B.Sc., B.A., MBA, ...)
- Technical staff development, by type, number and level
- \* Management staff development, number and level

The summary table of results of the respective CTU-IUC projects / sub-programmes on these HRD outputs/results indicators is presented hereunder:

KRA 5: Human Resources Development					
Project / Sub- Programme	Indicator 5.1  Academic Staff Development (Ph.D, M.Sc. B.Sc, M.A., MBA,)	Indicator 5.2.  Technical Staff Development	Indicator 5.3.  Management Staff Development		
E.1 Distance Education	Phase II:  * PhD: 1  * MBA: 1  MTE Phase I:  * 1 S andwich PhD a quaculture ongoing (UGent)  * 1 Full-time PhD economics ongoing (Philippines)  * 4 MSc computer sciences (Vrije Universiteit Brussel)	*Training in Belgium for professional development: 6, comprises of: - Training of SoE staff in new educational skills at UGent - Training STIC staff in system management of LMS - Training English staff in Academic writing  MTE Phase I: * Short training of staff in Belgium:	MTE Phase I:  * 8 staff on short training in Belgium (subjects not reported)  * 10 staff attended the local workshop on Project Cycle Management organised by VLIR & PCO		

KRA 5: Human Resources Development					
Project / Sub- Programme	Indicator 5.1	Indicator 5.2.	Indicator 5.3.		
	Academic Staff Development (Ph.D, M.Sc. B.Sc, M.A., MBA,)	Technical Staff Development	Management Staff Development		
E.1 Distance Education	*3 M BAe conomics T hailand (2 graduated)	* 4 o n web p age development * 2 o n networks (Linux) * 7 on courseware development * 2 on courseware recording  * Various local training courses			
		by STIC (42 classes / 565 participants)			
	三省 经工作证	* Local seminars / workshops: 70			
		* Courses by visiting Flemish pro- fessors (4 at SEBA)			
KERTE		* English language training (CTU)			
E.2 Curriculum	* PhD: 1	* S hortt raining in V ietnam: 9 times and 7 staff of CoT			
Development	* MSc: 5  * Pre-doc: 3	*S hortt raining in o ther C ountry: 1 time and 1 staff	MTE Phase I: 6 project secretaries trained on project management issues by VLIR & PCO (e.g. planning,		
	* 9 Belgian students have done their thesis at CoT (to exploit the equipment of the project).	* 3 short term training courses at CTU by Belgian experts	reporting)		
	MTE Phase I:  * 4 PhD under A.2.2. Mechanical Engineering ongoing (KU Leuven)	MTE Phase 1:  * 4 EE short-term courses in Belgium completed, 1 still to be completed			
	* 2 MSc under A.2.2 Mechanical Engineering completed with dis- tinction (KU Leuven)	* 5 ST courses and 2 paper presentations on EE subjects by Flemish academics in Vietnam			
	* 1 MSc under A.2.1 Environmental Engineering (EE) completed (KU Leuven)	* 4 short-term courses and 4 sem- inars on mechanical engineering conducted by Flemish academics in Vietnam			
	* 1 MSc under A.2.1 Sanitary Engineering ongoing (KU Leuven)	* 2 staff in turn trained by inter- nationally trained CTU staff			
R.1.1 Artemia production	* PhD: 5 of which 1 graduated  * MSc: 2	* 1 short-term training in Belgium  MTE Phase I:	MTE Phase I: 3 project secretaries trained on project management issues by VLII		
	* BSc: 7	* 1 BSc (ongoing, academic years 2002-2004). No info on	& PCO (e.g. planning, reporting)		
	MTE Phase I : * 2 Sandwich PhD students at UGent (ongoing, academic year	locBSc:			
	2002-03) * 2 MSc (ongoing acc				
	* 2 MSc. (ongoing, academic years 2002-2004 and 2001-2003)				

KRA 5: Human Resources Development					
Project / Sub-	Indicator 5.1	Indicator 5.2.	Indicator 5.3.		
Programme	Academic Staff Development (Ph.D, M.Sc. B.Sc, M.A., MBA,)	Technical Staff Development	Management Staff Development		
R.1.2 Mudc rab larviculture	* PhD: 1  * MSc: 2  * BSc: 9  MTE Phase I:  * 1 Sandwich PhD student at UGent (ongoing)  * 1 MSc on Rotifer Culture Systems (location not indicated)  * HUFA experiments of one staff member as part of PhD thesis preparation  * PhD: 2 in Plant Science (UGent) and 4 in Agronomy ( CTU)  * MSc.: 28 in Agronomy and 06 in Biotechnology (CTU)  * BSc.: 44 in Agronomy and 20 in Biotechnology (CTU)	* Training in Belgium: 2  * Other: students who were not directly involved as part of their theses work but have been trained through participation in the research getting more experience and skills in microbiology manipulation  **MTE Phase I:*  * 2 staff members to operate the intensive rotifer culture  **Training in Belgium: 5  **MTE Phase I:*  * 4 staff members on short-term training courses at UGent  ** 17 BSc students graduated on subjects related to B2 project	MTE Phase I:  * project staff (1 promoter and 2 secretaries) trained on project management issues by VLIR & PCO (e.g. planning, reporting)		
	MTE Phase I :  * 2 Sandwich PhD students at UGent (ongoing)	Logoco, and the second			
R.2.2 Biotechnology	* PhD: 1 in Applied Biological Sciences (Ugent)  * Predoc: 1 PhD (defending in 2010 at Vrije Universiteit Brussel)  * 11 MSC of Biotechnology (of which 3 graduates in Belgium)  * 22 BSC of Biotechnology  MTE Phase I:  * 1 Sandwich PhD student at UGent (ongoing)  * 1 MSc at Vrije Universiteit Brussel-UA-KU Leuven inter-university programme  * 1 short trainings at UGent	* 3 trainees on training in Belgium  MTE Phase I:  * training of two researchers at CTU	* 2 project secretaries trained on project management issues by VLIR & PCO (e.g. planning, reporting)		
R.2.3 Fruit preservation & processing	* PhD: 3 completed and one expected by end 2008  * MSc: 11 completed  * The MSc programme in Food Technology started at CTU in 2006 based on the Inter-university MSc programme in Food Technology jointly organized by UGent and KU Leuven: two student generations recruited, 9 in 2006 and 37 in 2007	* 4 staff members on short-term training courses (3-months) at KU Leuven  * 4 short-term courses in Vietnam	N.I.		



Project / Sub-	Indicator 5.1	Indicator 5.2.	Indicator 5.3.
Programme	demic Staff Development (Ph.D, M.Sc. B.Sc, M.A., MBA,)	Technical Staff Development	ManagementS taff Development
R.2.3 Fruit pres- ervation & processing	* The MSc programme in Post-harvest Technology started at CTU in 2008, first student generation recruited in May and September 2008	Development	
	MTE Phase I: * 3 Sandwich PhD students at KU Leuven (ongoing)		
	* 2 Full-time PhD students at KU Leuven with scholarship from KU Leuven (ongoing).		
	* These 2 students had graduated before to MSc at KU Leuven with magna cum laude.		
	* 3 more MSc students at KU Leuven (2 in joint KU Leuven-UGent programme) of which 1 with VLIR-IUC scholarship and 2 other with VLIR scholarship outside of B5 sub-programme		
nzymology	* 2 PhD in progress (1 at Vrije Universiteit Brussel and 1 at University of Science in HCMC)	* 1 technical staff being trained to start MSc at BiRDI	MTE Phase I :
	* 5 MSc (at BiRDI Lab of Enzymology)  * 10 BSc (at BiRDI Lab of Enzymology)	* 1 BiRDI co-worker trained at Vrije Universiteit Brussel in post-grad- uate programme "GGS Molecular Biology and Biotechnology"	2 project secretari trained on project management issues by VLIR & PCO (e.g
	* Pre-doc: 1 MSc staff being trained to start PhD at BiRDI	MTE Phase I:  * Hands-on training in protein research of 1 junior staff and 1 MSc	planning, reporting)
	MTE Phase I:  * 1 PhD at Vrije Universiteit Brussel (scholarship from Vrije Universiteit Brussel, bench fees from B6)	student	
	* 1 MSc at Vrije Universiteit Brussel (completed)		
	* 1 MSc at Vrije Universiteit Brussel (ongoing)		
	* 2 short trainings at Vrije Universiteit Brussel		
R.3 Soil dynamics	* 1 PhD completed, 2 in progress (of which 1 expected by end 2008)	* Two PhD. students trained following the Vietnamese system with one 3-month training in the U.S.	MTE Phase I:
	* 1 trained at UGent  MTE Phase I:  * 1 MSc on Physical Land Resource Management (planned)	MTE Phase I: * 3 CTU staff exchange visits (2000-01)	3 sub-programme human resources (project leader, secretary a accountant) traine
	* 14 BSc graduated from CTU with study subjects within the B7 sub-programme	* Specific seminars presented by Flemish professors: one in ac-tivity year 2001, two in 2002.	on project management issues by VLI & PCO (e.g. planning)
		* Regular trainings organised for staff involved in B7 (no further details known).	- sporting)
Overall CTU Programme	73 %		

Notes: N.A.=Not Applicable

N.I. = No Information Available

## Main Summary Findings

#### Strengths

- \* Ph.D. level: Over the whole CTU-IUC programme period a total of 22 PhD's have been successfully supported of which 12 graduated and 10 are ongoing / about to be completed by the end of the cycle (December 2008). At the time of the Mid-Term Evaluation in 2002, a total of 18 CTU doctoral students were reported to be either supported by the VLIR-IUC programme or to be preparing their thesis on a scholarship provided by a Flemish university. Based on the CTU Rector's report at that time, a total of 13 Ph.D. studies were carried out under the VLIR-IUC programme, which represented almost one fourth (23 %) of all doctoral degrees at CTU at that time.
- \* M.Sc. level: A total of 46 MSc's have been successfully completed under the IUC programme in Flemish universities and at CTU, and some also in Thailand and Germany. At the time of the Mid-Term Evaluation in 2002, based on the CTU Rector's report, a total of 16 M.Sc. studies had been organised under the VLIR programme or 5 % of CTU's total number of M.Sc. staff.
- \* A total of 71 CTU staff followed *short training courses* in Flanders during the IUC programme period from 1998 to 2007.
- \* Not less than 120 *staff exchanges* took place in this period, either at CTU or at Flemish Universities. Nine Belgian students have done their thesis at CoT (to exploit the equipment of the project).
- \* Qualitative appreciation: Staff development abroad is highly appreciated by CTU staff and management alike and the substantive Human Resources Development ("strengthening of the university brains software") is unanimously acclaimed as the biggest accomplishment under the VLIR-IUC programme.
- \* Feedback from beneficiaries of HRD opportunities in Flanders: As transpired from a special feedback session the Evaluation Commission had with the CTU staff who have benefited from a VLIR scholarship to a Flemish university (either on a long-term basis or for a particular short-term course), the following aspects were particularly appreciated by the benefiting staff:
  - exposure to a conducive research environment (incl. infrastructure, laboratory facilities, libraries, ICT equipment, etc.);
  - introduction to new research and technical skills;
  - familiarization with innovative teaching methods;
  - interdisciplinary contacts and coordination;
  - regional contacts;
  - personal (and family) wellbeing very well looked after;
  - very cordial and friendly personal contacts and overall atmosphere
  - improvement of English language skills
  - continued contacts and networking after the end of the scholarship
- \* Re-integration policy: Even while almost half of the PhD studies are still ongoing, there is a guarantee that all students will return effectively to Vietnam and render services to Can Tho University for a minimum period of time (provision formally laid down in a contract issued by CTU with the staff member on a long-term HRD assignment abroad).
- \* Support to local B.Sc. training: The VLIR programme also supports CTU human resources development at the bachelor (BSc) level locally in Vietnam. Both Education (E) projects / sub-programmes support BSc students. The E1 project

in fact indirectly benefits all BSc students since e-learning in principle is made available to all CTU students (a total of 10,000 students now already have access with the a personal login number and password. The E2 project / sub-programme on development of undergraduate curricula, has the development of BSc training at CTU even as explicit objective. Also the research projects / sub-programmes (R-series) also supported BSc training. As can be gleaned from the above summary results table, a total of 126 BSc graduates are explicitly reported by the research projects in connection with the IUC programme (7 in R.1.1, 9 in R.1.2, 64 in R.2.1, 22 in R.2.2, 10 in R.2.4 and 14 in R.3).

- \* Technical Staff Development: Technical staff development has been pursued basically through short-term courses either in Belgium or through lectures / seminars / short courses provided at the CTU campus by visiting Belgian professors. A total of 71 CTU staff attended such short-term courses at Flemish / Belgian universities. On different occasions, these courses served as basis for the preparation of lecture notes and became part of the regular curriculum.
- \* Management Development: Management development has been initiated, albeit on a limited scale only and basically focusing on CTU IUC project secretaries only. Management development on project cycle management and related topics has been introduced on the initiative of the VLIR-UOS secretariat in co-operation with the CTU-PCO towards the end of the first five year programme cycle.

#### Sandwich Ph.D.

Because of its crucial importance, the sandwich PhD system deserves some more elaborate attention. It may be recalled that the sandwich PhD. system<sup>36</sup> has been established especially for purposes of academic staff development in an international cooperation setting. It intends to ensure the same quality HRD as in advanced academic settings in developed countries while at the same time reducing the time actually spent in those host countries. The benefits in terms of avoidance of brain drain and maximizing return for the developing countries and for the sending universities concerned in particular are obvious. But also the recipient universities gain from the experience both in academic output and in terms of international contacts and networking.

Sandwich PhDs also give senior staff of CTU the opportunity to still obtain a degree. For CTU, this is considered as a temporary necessity because of acute shortages in qualified academic staff at the moment. In the long term, all senior staff would need a PhD degree as a precondition for appointments and career advancement. Furthermore, sandwich PhDs actively promote research on topics that are more relevant for the region and the CTU.

While adhering to the basic principles and recognizing the above benefits of the sandwich PhD system, many critical remarks surfaced on the occasion of the evaluation exercise, from both the Flemish promoters side and the doctoral students themselves. Generally a repetition of what already was noted on the occasion of the Mid-Term Evaluation in 2002, these remarks include the following:

- \* The timeframe for finalizing a sandwich PhD is too stringent, particularly in view of the many other obligations of staff concerned (particularly teaching);
- \* The time organisation of stays abroad should not be linear, but should be more intense at the end of the cycle, when the student has to concentrate on the finalisation of the research and actual writing of the thesis, under close supervision of the promoter;

**<sup>36</sup>** A PhD sandwich system implies that most of the time the PhD student works in the country of origin. However, yearly the student has an occasion to go abroad to the university of his/her promoter for a short period of time. This should allow him/her to conduct special laboratory techniques, analyse data, discuss results or write up the thesis.

- \* The organisation of sandwich PhDs is not attractive enough for the organising universities in the North (I) in terms of academic quality of the candidate (particularly related to / as a result of insufficient knowledge of the English language) and (2) also for financial / budgetary reasons (e.g. benchmark fees are often considered too low, particularly in the positive sciences with many experiments and intensive laboratory research). Some reservations have been filed with regard to low rates of return, both academically (in terms of publications, etc) and financially.
- \* For a promoter of a Flemish university, a sandwich PhD entails a relatively higher workload and the topics are not always compatible with the policy of the laboratory of the Flemish laboratory. For certain components (e.g. E1 component), it was difficult to find a promoter for PhD candidates in a Flemish university. This caused delay in the development of human resources. In certain institutes (e.g. SEBA of the E1 component) this difficulty was solved by strengthening South-South links with universities of the region (Thailand, Philippines, ..), which turned into an asset.
- \* Restrictive clauses by VLIR for the financing of sandwich courses, e.g. the initial requirement of a minimum of two "A" publications.
- \* The sandwich system is considered not to be most appropriate for certain research objects, as for example plant materials. For R.2.1project, the sandwich system in this field even is said to be avoided at all<sup>37</sup>. Also the Flemish Team Leader of R.2.3 made explicit suggestions in that direction. The Team Leader of R.3 project then shared the more pragmatic view that it all depends on the research field and topics themselves. In the field of soil dynamics for example, because of the very nature of the subject matters, PhD research can only be done meaningfully in the original environments in the South and for that matter the sandwich system makes for an ideal instrument, permitting if not requiring substantive part of the research to be done in the home university and its environment.
- \* In the interim periods at CTU, between the visits to the promoter university in Flanders, a good follow-up and guidance system needs to be ensured.
- \* And most importantly, because of the many managerial and teaching tasks in their original working environment at CTU, oftentimes PhD students simply lack sufficient time to concentrate on their thesis, resulting in substandard quality of work and/or substantial delays in submission of the thesis, if submitted at all.

A number of suggestions and initiatives have been discussed and reported to the Evaluation Commission to ease the problem, including:

- \* Effective (formal) assurance<sup>38</sup> of a minimum time reservation at CTU for sand-wich PhD research and thesis writing by the candidates concerned, based on their position and responsibilities:
  - Leaders (with managerial responsibilities): min. of 30 % of time
  - Teachers: min. of 50 % of time
  - Researchers: min. of 70 % of time

Exclusive availability for PhD work to be effectively ensured and controlled, for example by means of a system of time sheets to be maintained by the persons concerned and periodically submitted to the rectorate for control.

\* A re-organisation of the timeframe in Belgium/Flanders for sandwich PhDs, with one proposal<sup>39</sup> as follows differentiated by position of the candidate:

**<sup>37</sup>** "With plant material as research object a sandwich system in PhD studies has to be avoided. Either the work has to be performed in Flanders (Gent), or the work needs to be performed in Vietnam, but then more frequent visits of the promoter need to be foreseen", B2 Mid-Term Evaluation Self Assessment Report, p. 10.

<sup>38</sup> Preferably from the CTU rectorate itself.

<sup>39</sup> By the CTU rectorate at the time of the Mid-Term Evaluation.

- Leader (with managerial responsibilities): increase in time and rescheduling of time in Belgium (6+9+12 months)
- Teacher: increase in time (6+12 months)
- Researcher: re-assigning of research topic, adjusting work-load and increase in time, if necessary.
- Making (sandwich) PhDs financially more attractive for promoting universities and departments: bench fee chargeable against VLIR budget; tapping of available resources with the Ministry of Education and Training (MOET) for academic upgrading abroad (there reportedly is persistent underutilization of the available MOET budgets concerned). Ease the requirement of at least two "A" scientific publications for approval of a sandwich PhD budget, and replacement by an equivalent of for example at least four "B" publications, international or national within Vietnam. This appears to be more realistic, if not more relevant, for research on topics relevant to developing countries, which are not always appreciated / honored at the same level of other publications, even in spite of similar intrinsic scientific qualities. This main issue at the time of the Mid-Term Evaluation way back in 2002 meanwhile appears to have been solved.
- \* Making English language requirements more stringent as a pre-condition for entering into an international HRD programme. CTU from its own side is introducing further proactive initiatives in this regard (including more stringent language proficiency tests).
- \* Promotion of alternatives to the sandwich system, e.g. through regional networking for staff human resources development (as for example already is the case in the SEBA component of project E.I in an ASEAN setting).
- \* More systematic exploration of the possibilities provided under the degrees credit system in place not only in Flanders for quite some time since the Bologna Agreement at EU level, but also at CTU. The discussion on joint degrees between Flemish universities and CTU was one of the main points on the agenda of the VLIR-CTU IUC Joint Steering Committee Meeting following the debriefing by the Evaluation Commission.
- \* Some Departments / Institutes now have achieved a *critical mass of academic excellence* to enable institutional tutoring of other academic institutes, in the Mekong Delta region, national and regional.
- \* As an indirect off-shoot of the substantive Human Resources Development results realized under the VLIR-CTU IUC programme, *important spin-offs* materialized for Can Tho University, including for example "Mekong 1000". CTU has been recognized by the Mekong Delta regional authorities as the official coordinator of the Mekong 1000 international scholarship programme for academic upgrading of local government personnel, sponsored by local authorities.
- \* Certain aspects of the "PhD Sandwich System" are currently being reviewed. There for example is more flexibility in the organisation of the number of months in Belgium. It will also be possible for some topics to raise the mandatory number of person/months stay in Belgium from max. 16 to max. 24 months, as the topic may require. On the other hand, it will also be necessary to charge bench fees for absence from Belgium (but on the other hand, the bench fees in some cases are too low in comparison to the actual cost of a scholar for the recipient Department at the Flemish University.)

## Challenges / Issues Needing Attention

- \* Persisting Human Resources Development Needs: While very substantive accomplishments in terms of Human Resources Development of CTU staff have been realized through the VLIR-CTU IUC programme, both in the short and medium term, the total number of CTU staff with a PhD and/or MSc degree remains a drawback for the development of CTU. Therefore it is important to continue paying special attention to human resources development in the future in the post-IUC period. On different occasions it was stressed by the interviewed project team leaders as well as by the programme team leader, that Human Resources Development is and remains the necessary basis of any sustainable and sustained academic development process.
- The Flemish Team Leader of the R.2.3, a CTU-IUC project with an outstanding academic publications record and which also significantly contributed to developing the Department of Food Technology concerned into a Centre of Excellence widely acknowledged as such, testified to HRD as crucial basis for sustainable academic excellence in a special note drawn up and addressed to the Evaluation Commission<sup>40</sup>: "Based on the experience gained in this project the CTU Department of Food Technology has completely changed its investment strategy to substantially improve its academic output. Our past strategy consisting of a process of allocating funds followed by investment and identification of research ideas has been turned into a new step-wise systematic approach consisting of: step 1: human resource development (human capacity building); step 2: identification of focused relevant research lines/ideas; step 3: identification of compatible funding lines; step 4: application for and acquisition of necessary funding; step 5: investment in research infrastructure; step 6: carrying out planned research activities; step 7: transfer of results in peer review publications, and; step 8: transfer of know how to society."
- Local salary and incentives: Relatively low local salaries remain a drawback for the development of CTU in general and the IUC programme in particular. CTU staff has to look for additional income to complement their official income. This to a large extent explains the eagerness, if not necessity, of staff to teach in Satellite Centres, managed by the provinces, for which staff receives extra incentives. However as a result staff is often traveling, teaching the same course several times for a limited number of students, and is not available at CTU. This situation still entails serious constraints in cost-effectiveness and cost-efficiency of investments in human resources development of staff at CTU. Moreover, limited availability of staff also has a negative impact on research. Moreover, in the fast growing Vietnamese economy, the demand for highly qualified personnel is strongly increasing, putting additional pressure on retaining qualified staff in CTU. The fierce competition for "brains" by the commercial private sector and also by the growing number of private universities already at present poses one of the biggest challenges for CTU's overall personnel and human resources development policy.
- \* Staff on CTU-IUC payroll: While at the Mid-Term Evaluation the topping up of salaries and other incentives schemes still was one of the main personnel and HRD issues, also having an impact on the IUC programme, no such issues have been raised anymore on the occasion of the final evaluation, neither in the self-assessment reports nor during the different evaluation interviews with the different stakeholders concerned at both Flanders and CTU sites. Moreover, as can

be gleaned from the summary financial tables under Annex 7 to this report<sup>41</sup>, personnel costs represent less than half of a percent (0.46%) of the total CTU-IUC budget. There is no evidence that personnel costs or incentives would be covered under other budget lines. The absence of staff on the CTU-IUC payroll also guarantees financial sustainability of the project and in principle also retention of the upgraded staff. In the Mid-Term Evaluation report was already mentioned in this respect: "In order to ensure programme sustainability, all incentives and other payments should be on a regressive scale with explicit provisions for proportionate take-over by the counterpart, in casu the CTU, and fading out entirely by the last year of programme implementation. In any way, incentives should be well within the provisions concerned agreed upon by the EU and its member states for their co-operation programmes with Vietnam.<sup>42</sup>"

- English language skills: Overall, the level of English language skills has remarkably improved in the course of IUC programme implementation. It was amongst one of these first impressions of important changes for the visiting Evaluation Commission during its first exposures and contacts at CTU after five years since the Mid-Term Evaluation in 2002. However, as was attested to by both Flemish and CTU key stakeholders, there remains scope for improvement, both individually and generally (in particular writing and especially scientific writing skills, a concern which became also more systematically addressed under the IUC programme in the later phases, for example under E.1 project). Poor English writing skills is pointed to by virtually all project leaders as one of the main reasons limiting publications as well as successful research proposals. Moreover, insufficient English language skills also hamper making full use of the staff development opportunities abroad. Studying in Flanders requires a sufficient level of English. CTU offers English courses for interested staff at low cost. Moreover, English (and particularly English writing skills) are integral part of most curricula at CTU. Therefore, new candidates for studying abroad have opportunities to improve their English level at the CTU campus. Attaining an acceptable basic level of English therefore in first instance should have been the responsibility of the individuals and in last instance of the VLIR programme.
- \* *Visa problems*: At the beginning of the IUC programme, several CTU students encountered difficulties in obtaining the required visa. It appears that these have been solved as no such issues where brought to the attention of the Evaluation Commission anymore on the occasion of the final evaluation.
- \* Sandwich Ph.D.: see earlier special discussion.
- \* Temporary understaffing at CTU and possible brain drain: The high number of students abroad for HRD continued to result in temporary understaffing in the CTU mother unit in quite a number of projects. This was most striking in the B5 (now R.2.3) project / sub-programme were at the time of the MTE about half of the staff were abroad on a HRD scholarship: of the total of 27 staff members, of which 22 academics, 10 were out of the country, of which 8 in Belgium (5 PhD and 3 MSc). Two candidates of this department left for a two year MSc course. After graduating "magna cum laude" for their MSc, the two staff members were offered by the host university (KU Leuven) to stay on for a full PhD cycle on a university scholarship. This means that they were absent from their CTU home department for at least 6 years.

<sup>41</sup> See for example summary financial table on page 264.

**<sup>42</sup>** In this respect, the Evaluation Commission refers to the document "EU Guidelines for Financing of Local Costs in Development Co-operation with Vietnam, June 2001" which focuses on this problem.

Also E.2 experienced disruption of local capacity because of PhD and other HRD staff training abroad, with not less than 4 mechanical engineering PhD students on doctoral study in Belgium at the time of the MTR, in addition to one in the Netherlands and one in Germany. Even the secretary of the project was changed three times because of HRD events abroad. To avoid similar problems at the home departments, any long-term staff HRD projects abroad would need careful planning well in advance, fully taking into account any contingencies. This observation also pertains to the post-IUC period. Replacement strategies for the temporary absentees for HRD reasons need to be worked out.

- \* Follow-up after return: CTU has formal commitments that after obtaining their degree, PhD students return to their units and will be involved in the implementation of one of the components of the IUC programme, as such contributing to the added value and cost-effectiveness of the overall programme. Nevertheless, it remains recommendable, if not imperative that more structured follow-up programmes are designed and effectively implemented, in order to assure that their acquired knowledge, skills and experiences are used to the fullest extent possible in their teaching and research tasks at CTU. It for example is noted that there is a substantive decrease in the production of scientific publications (particularly internationally peer reviewed publications) after return from graduation abroad. Joint researches, for example with Flemish Universities, are one of the means suggested to counterforce such potential academic downward tendencies.
- \* Selection of PhD subjects: For the demand-based identification and ultimate selection of the PhD subjects based on a participatory process of mutual consultations, and optimum relevance for the specific academic needs of CTU and the Vietnamese socio-economic development context on the one hand in balance with the opportunities and interests of the host partner universities in Flanders on the other hand has not always been assured as a win-win situation and remains constituting challenges to both sides in the post-IUC period.
  - As suggested earlier above in the discussion on the Sandwich PhD system, more systematic exploration of the possibilities provided under the academic degrees credit system in place not only in Flanders for quite some time since the Bologna Agreement at EU level, but now also at CTU. The discussion on *joint degrees* between Flemish universities and CTU was one of the highlights of the VLIR-CTU IUC Joint Steering Committee Meeting discussions, following the debriefing by the Evaluation Commission.
- \* Limited training in management: The VLIR-IUC programme being an institutional strengthening programme, one would expect a strong programme component on organisational development and managerial capacity building. Remarkably, there still is no explicit project / sub-programme on this topic, even despite the strong recommendations in that direction made on the occasion of the MTE. Moreover, individual activities on these issues also have remained very marginal up to this moment, both at overall programme level and within the respective projects / sub-programmes. In fact, only one training is recorded on programme cycle management and related topic on the initiative of VLIR in co-operation with PCO. This training was directed to the secretaries and administrative assistants of the respective projects / sub-programmes, hence not to in first instance to the promoters and assistant promoters. This training took place towards the end of the first five year cycle. No such activities or initiatives are recorded in the second five year cycle. During the CTU-IUC programme, management capacity

- strengthening therefore in first instance has been an on-the-job learning-by-doing process. This exposure to administration and management practices and requirements of internationally assisted projects continued to be highly appreciated by all CTU parties involved (see further).
- \* PCM capacity development: Although Project / Programme Cycle management was introduced by VLIR-UOS across the board for all IUC programmes and LogFrames made a mandatory planning, management, monitoring and reporting tool in 2002 for all component projects under these programmes, no continued training and related HRD activities on PCM for projects staff and managers appeared to have taken place in the second phase of the CTU-IUC programme. This no doubt has impacted on the general quality of LogFrames and their monitoring as evidenced in different reports submitted by the stakeholders concerned to VLIR-UOS Secretariat.
- \* Main challenges and issues needing special attention for the post-IUC phase, as incorporated in the debriefing presentation of the Evaluation Commission in conjunction with the Joint Steering Committee Meeting include the following:
  - Multitude of other tasks at CTU home university prevent concentration on PhD research and thus delay / prevent graduation
  - Reserved sufficient time allocation for PhD research at CTU to be formally guaranteed in scholarship contracts
  - PhD sandwich format to be applied with more flexibility (case-dependent: more suitable in certain fields, less in other)
  - Need for formal, agreed upon work plans for scholarships with close followup by promoter based on regular progress and results reporting by scholar (to ensure timely achievement of graduation)
  - Continuation of research publications after graduation
  - More effective guidance of strong, promising MSc graduates towards PhD level
  - Use of videoconferencing or (free) skype conferencing as follow-up to stays abroad of sandwich scholars to still stay in close contact with promoter on key moments and for monitoring purposes
  - Ensured language proficiency at selection intake of scholars
  - Age considerations for eligibility of scholarships in order to guarantee rate of return of investments
  - Increasingly fierce competition for qualified staff from new universities and industries poses a major risk for CTU in the future
  - Elaboration and effective implementation of transparent incentives system based on performance / merit (combination of research, education, extension and managerial criteria)
  - Consideration of establishment of Research and Consultancy Units or so
  - Strengthening of N-S-S human resources networks with both CTU and Flemish Universities functioning for each other as regional and international "hubs" for contacts and exchanges of personnel
  - Further strengthening of internship exchanges programme between Flemish Universities and CTU (and NSS) for MSc students doing their masters research
  - Flemish academics better recognized for engagement in international development cooperation (e.g. for tutoring of PhD scholars, higher ratings for local development relevant research publications)

- Encouragement of young Flemish academics to engage in international development cooperation

### Infrastructure

## Base Data on CTU Infrastructure

Can Tho University has experienced a massive expansion and improvement of its infra-structure in recent years. In the period 1990-1996 for example, it has accomplished 24,759 m² construction works<sup>43</sup> for classrooms and related teaching infra (3,405 m²), laboratories (8,269 m²), dormitories (677 m²), sports facilities (1,500 m²), staff and other houses (1,220 m²).

Since 2006, the Learning Resource Center (LRC) whose precursor was the Central Library, has been put into operation. The LRC is considered a modern model of library and multi-media centre in Vietnam. About 200.000 books and reference materials are stored in the Center. It has not less than 460 computer terminals located on three floors and is an importance centre of e-learning servicing both CTU staff and students. It serves a venue for conferences and exhibitions. It has a staff component of 59 persons and its facilities at present are used for about 60% of the time.

## Assessment on Infrastructure Key Performance Indicators

The results of the respective projects / sub-programmes in terms of Key Result Area 6 (KRA-6) on "Infrastructure" have been assessed basically along the following four main indicators:

- \* Physical infrastructure, by type and with indication of surface measure;
- \* Computer rooms, Information and Communication Technology (ICT) equipment, number by type;
- \* Libraries and library equipment, number by type (incl. books);
- \* Laboratory equipment, number by type;

The summary table of results of the respective CTU-IUC projects / sub-programmes on these infrastructure outputs/results indicators is presented below:

KRA 6: Infrastructure					
Project / Sub- Programme	Indicator 6.1 Physical Infrastructure	Indicator 6.2.  Technical Staff Development	Indicator 6.3 Library (inc. books)	Indicator 6.4  Laboratory Equipment	
E.1 Distance Education	* Parts of CTU campus network * Multimedia lab at STIC	* Central servers, network equipment at STIC. * 3 Computer rooms: 1 at CAF, 1 at STIC and 1 at SEBA * Dokeos Learning Management System (LMS) installed	* Books, magazines at SEBA and at STIC MTE Phase I: SEBA: 199 economics books in English and 437 in Vietnamese	MTE Phase I: CIT: Multimedia lab (incl. TV, LCD projectors, scanner, amplifier, CD/DVD writers, digital camera, video camera, multimedia computers (see full equipment list in self-assessment report)	

KRA 6: Infrastructure					
Project / Sub- Programme	Indicator 6.1	Indicator 6.2.	Indicator 6.3	Indicator 6.4	
	Physical Infrastructure	Technical S taff Development	Library (inc. books)	Laboratory Equipment	
E.1 Distance Education		MTE Phase I: STIC: campus backbone (3 fiber optic cable routes from STIC); network equipment; 3 PC servers (2 at STIC and 1 at SEBA); 42 PCs and notebooks; leased line internet; telephone lines; office equipment (incl. photocopier and airconditioner) CIT: telephone lines SEBA: 4 P Cs, 1 server, 1 s canner, 1 p rinter, 2 laser lights AFSI: 6 PCs			
E.2 Curriculum Development	* 1 computer room  MTE Phase I:  * Upgrading / maintenance of laboratory infrastructure	* 21 computers in new computer room  MTE Phase I:  * EE PC-room equipped with some extra PCs  * Detailed e quipment list is included in the A2 self-assessment report	* Many technical books and documents purchased to support teaching and researching for staff and students.  **MTE Phase I:* ** Upgrading of College of Technology library*  ** Purchase of 91 ME and MS books in English and 40 in Vietnamese  ** Software on thermal engineering,	* Laboratories Equipments for Food processing Engineering lab. and Environmental Engineering lab. (Equipments and scale-models for teaching and researching, Storage silo system, Non-Destructive Testing equipment, etc.)  MTE Phase I:  * Water and waste water analysis lab  * Air pollutants analysis and bio indicators detection lab  * Thermal engineering lab	
				* Upgrading of hydraulic engineering lab  * Composite engineering lab  * Material engineering lab  * Detailed equipment list is included in the	
				A2 self-assessment report	

KRA 6: Infrastructure					
Project / Sub-	Indicator 6.1	Indicator 6.2.	Indicator 6.3	Indicator 6.4	
Programme	Physical Infrastructure	Technical S taff Development	Library (inc. books)	Laboratory Equipment	
R.1.1 Artemia production	* Key to the services:  * MTE Phase I:  * 60 m² in CTU (3 labs)  * Land titles of e.g. research stations can be acquired from Government for proven services:  2 ha in Vinh Chau experimental field station	MTE Phase I: 2 PC's 1 Laptop	None	MTE Phase I: Digital camera, microscopes, meters and testers, p ump, r efrigerator (seede tailedl ist in self-assessment report)	
R.1.2 Mudcrab larviculture	* 1 microbiology lab for beneficial bacteria research * 1 wet lab	MTE Phase I : 1 desktop computer	MTE Phase I: Books incl. dictionaries	MTE Phase I: Microbial equipment, rotifer culture tanks, larvae tanks	
R.2.1 Fruitt ree varieties	* 2 laboratories  * 5 classrooms  * 1 store room (80 m²) was constructed for storing the harvested samples, and to collect and prepare the samples for practicing and/or transplanting  MTE Phase I:  * Greenhouse with mist system (250 m²), 6 net houses for nursery plants ( total of 1500 m²), plastic house for experiments (250 m²), 2 inset-freed net houses (500 m²), 2 waterproof-shaded houses (500 m²), room for plant sample preparation (100m²)	None	None	26 items for tissue culture lab  21 items for crop management lab  Different types of equipment for greenhouse and field work (see self-assessment report for complete list)	
R.2.2 Microbiology	* Innovation of molecular biological laboratory  * Innovation of net house containing citrus and rice varieties protected from insects  MTE Phase I:  * Construction of a net house (70 m²)	MTE Phase 1: 1 PC	* 100 titles of books and journals	MTE Phase 1: 15 principal lab instruments including PCR machine, Electrophoresis system, Elisa Microplate reader, etc. (for complete list, see self-assessment report)	

	KRA 6: Infrastructure					
Project / Sub-	Indicator 6.1	Indicator 6.2.	Indicator 6.3	Indicator 6.4		
Programme	Physical Infrastructure	Technical S taff Development	Library (inc. books)	Laboratory Equipment		
R.2.3 Fruit preservation & processing	N.I.	MTE Phase 1: *4de sktopc omputers 1 printer	MTE Phase 1:  * 4 video tapes on HACCP and standards	Installation of new equipment and tools: Texture Analyzer, Colorimeter, Spectrophotometer, Automatic Titrator, Sterilizer, Moisture Analyzer, Cooling Chambers, Nitrogen Determination System, Automatic Lipid Extraction System, etc.  * Different equipment items for food analysis and food processing incl.: heat pump dryer, vacuum fryer, colorimeter, autoclave, viscometer, nitro-gen determination system, etc.		
R.2.4 Enzymology	* 2 laboratories of protein chemistry and enzymology have been installed for teaching and research (chromatography, electrophoresis, spray dryer, freeze dryer)  * Renovation of 2 research laboratories for protein technology (200 m2)  * Renovation and modernization of microbiology lab financed by Ministry of Education and Training: 200,000 USD	MTE Phase 1: Computer accessories 1 printer Internet connections	* Books and manuals on molecular biology, enzymology, biotechnology and protein chemistry have been made available.  MTE Phase 1: 90 books	MTE Phase 1:  * Basic equipment for protein extraction, chromatography and electro-phoresis (full list in self-assessment report)		
R.3 Soil dynamics	* Soil Microbial Laboratory with nec-essary analytical equipments was newly constructed.  MTE Phase 1: Enlargement and upgrading of soil physics laboratory (30m²)	None	* Registration for on- line accessing Ameri- can Society of Soil Sciences Journal.	* Significant invest- ments have been done for the Laboratories of Soil Chemistry and Soil Physics. MTE Phase 1: Soil physics laboratory equipment purchased		
Overall CTU	aboratory (Solli )	200	0/	and used (complete list in B7 self-assessment report)  Some equipment already purchased under preceding VLIR Own Initiative project VN 00074064.		
Programme		80	) %			

Notes : N.A.=Not Applicable N.I. = No Information Available

## Main Summary Findings

#### Strengths

- Considerable upgrading of equipment at CTU44: Avoiding substitution of national and local initiatives and responsibilities, the VLIR-IUC programme, being an institutional strengthening programme, has basically refrained from engagement in CTU infrastructure works. Its engagements under the infra component are especially related to: (i) ICT equipment, particularly under the A1 / E1 Distance Education project which in the second phase strongly concentrated on e-teaching and e-learning system installation and operationalisation at the CTU campus (both hardware and software aspects). Substantial parts of the CTU main campuses network were installed and operationalized under E1 with in addition computer rooms at CAF, STIC and SEBA, the installation of a multimedia laboratory at CIT (phase I), amongst others. (ii) The other major infrastructure upgrading component facilitated under the CTU-IUC programme is the upgrading of laboratories under all component projects, both education and research projects. (iii) Apart from these two priority investment areas, investments in infrastructure and equipment cover greenhouses, libraries and library equipment (incl. books and magazines). One vehicle and a medium-size passenger bus were purchased for the PCO.
- \* Quality and client satisfaction: A high satisfaction with the types and quality of the equipment purchased under the VLIR-IUC programem was noted by the Evaluation Commission in all projects / sub-programmes, with one small exception related to E.2 project.
- \* Effective equipment use: The LMS e-network operationalized, the equipment purchased and the laboratories established and / or upgraded under the VLIR-IUC programme are effectively and extensively used and are easily accessible by the users, both staff and students, even beyond regular office / class hours and during the weekends.
- \* Training on equipment use: Equipment purchase has been routinely accompanied by training and human resources development on effective equipment use. This has proven to be particularly important with regard to the ICT equipment. Special training courses on e-teaching and e-learning, different software programmes, networks and internet use have been organised, with particularly STIC but also CIT, CoE and CAF playing active roles herein. A helpdesk has been set-up within STIC and is fully operational. Unfortunately, a strategic re-organisation at overall CTU level caused a substantive disruption of E.1 activities and thus of e-learning network upgrading and maintenance for a considerable period of time. As far as the laboratory equipment is concerned, staff has been especially trained on effective equipment use. Some laboratory equipment / set-ups have even been designed and developed by research staff themselves (e.g. in E.2). Special training sessions for staff have been organised for effective use of the state-of-the-art PCR equipment purchased under R.2.2 and R.2.4.
- \* Maximising complementarity: CTU managed to ensure maximum compatibility and complementarity between equipment items purchased with funds from VLIR and other sources (e.g. Dutch, JICA, German, AusAid, etc.). This is quite impressive in the lab equipment chains installed under R.2.2 and R.2.4. VLIR's equipment policy was also lauded for not being auto-PR and external visibility oriented but focusing on functionality and effectiveness. For example, under E.I

substantive ICT and multi-media equipment has been purchased, but the project in first instance concentrated on training and HRD of staff on effective use of these ICT and multi-media items, and not only of those purchased under the VLIR-IUC programme, but also those under other projects as for example with MHO-Dutch or JICA-Japanese funds. This was particularly appreciated by CTU management, academic staff and technical staff alike.

\* Maintenance: Maintenance of facilities and equipment items is given special attention to keep the equipment operational on a continuous basis and thus ensuring maximum productivity and cost-effectiveness. The visited laboratories were all well maintained and clean. All purchased books are indexed / catalogued.

## Challenges / Issues Needing Attention

- \* Effective use of equipment for intended purposes: In the first phase of the CTU-IUC programme, main weaknesses were notified with regard to the effective use made of the ICT and multimedia equipment purchased under A.1 for distant education purposes. Main issues concerned have been discussed earlier above, respectively under KRA-2 (teaching) and KRA-3 (outreach) hereafter. With the laudable flexible reorientation of the A.1 project following changes in strategic directions as per decision of CTU policy makers and managers (de-emphasis of distance education with re-focus to e-teaching and e-learning at the campus sites), these shortcomings were squarely addressed even despite the organisational revamp strongly affecting ICT programmes at the University for quite some time. Moreover, these weaknesses / shortcomings were related to the quality and the effective use of the products made with the purchased ICT and multimedia equipment (courseware on CD-ROM basically), and as such are not related to the purchased equipment itself.
- \* Academic return on VLIR investments in laboratory infrastructure and equipment: Mutatis mutandis the same positive assessment holds for the lab equipment purchased under E.2 and the 6 research projects / sub-programmes R.I.I, R.I.2, R.2.I, R.2.2, R.2.3, R.2.3 and R.3, which, despite the initial hesitance, were able to provide increasingly stronger evidence over time of the cost-efficiency and cost-effectiveness of the purchased equipment items in terms of researches successfully completed, (international) publications realized and improved quality of teaching based on the use of the equipment items.
- \* Networking problems: Bandwidth and other internet access and network related problems persisted throughout the first phase of the programme, despite different follow-ups of both local and Flemish co-ordinators of E.I with CTU general management. This jeopardizes not only the optimum use of the purchased ICT equipment, but also the cost-effectiveness if not the very rationale of the substantive VLIR investments in distant education courseware development, training and human resources development under A.I during the first phase of the CTU-IUC programme. As reported earlier, these problems, which for the largest part are beyond the control of the respective projects and even beyond overall programme management, got satisfactory solved.
- \* Procurement co-ordination: Despite a very positive proven track record of CTU management so far in this respect, procurement co-ordination and avoidance of duplicate purchases of equipment should remain a continued concern. During the Mid-Term Evaluation for example some indications of equipment duplication were brought to the attention of the Evaluation Commission for example

in relation to the PCR equipment purchased under R.2.2 and R.2.4. Efficient coordination of and even joint use of laboratories amongst the different projects, amongst the different Departments and even with other Universities got effectively ensured. The CTU initiatives to ensure better co-ordination of equipment purchases, maintenance and use are equally laudable, e.g. in relation to the Advanced Lab and similar central facilities.

- \* Relevancy of lab purchases: Optimum relevancy of laboratory purchases for the research and teaching purposes they are intended should remain a continuous concern, particularly from cost-efficiency and cost-effectiveness maximization perspectives.
- \* Main challenges and issues needing special attention for the post-IUC phase, as incorporated in the debriefing presentation of the Evaluation Commission in conjunction with the Joint Steering Committee Meeting include the following:
  - Considerable part of the equipment purchased during the early phase of the programme is getting worn out, with some even getting obsolete. Updated replacements in some cases becomes imperative.
  - Courseware developed during first phase of programme has not been used in a distance learning framework, as originally envisioned. Updated status of the strategic option for a network of Satellite Colleges / Universities or not needs to be clarified, since having major implications for any distance education and/or campus based e-learning strategy which may need to be pursued.
  - Necessary development of strategic plans for facilities upgrading and equipment procurement priorities (especially for labs).
  - The strategizing of shared or sub-contracted lab use with partner universities, locally and internationally, including Flemish Universities, needs to be prioritized in order to minimize costs and to maximize cost-effectiveness.
  - Purchases of equipment still heavily dependent on external sources.
  - Linking of faculty libraries to Learning Resource Centre and guaranteeing access to students of other colleges.

# Mobilisation of Additional Resources / Opportunities

## Sustainability Concerns

With the ten year institutional cooperation between VLIR and CTU coming to an end, programme sustainability and ownership issues are of even more crucial importance. One of the crucial dimensions of sustainability of course is financial sustainability. The ability of CTU to mobilise on its own additional resources is one of the crucial indicators for measuring the University's abilities in this respect.

Throughout, sustainability has been a key concern in VLIR's IUC programmes throughout the world. The final evaluation self-assessment templates include a special section on follow-up plans, strategies and concrete initiatives. VLIR developed a special toolbox for continued post-IUC assistance and continued collaboration with the Flemish partners universities.<sup>45</sup> The Evaluation Commission introduced a special questionnaire to solicit priorities and concrete proposals for continued post-IUC collaboration with Flemish Universities by making use of these different instruments in the

**<sup>45</sup>** Under Annex 4.2 more details are provided on this VLIR post-IUC toolbox of possible modalities of cooperation assistance.

ex-post toolbox<sup>46</sup>. In the case of the IUC programme with Can Tho University a whole series of other concerted efforts and processes have been initiated and followed-up on in order to ensure sustainability and continued mobilization of additional resources.

Within the CTU-IUC programme itself and particularly in the respective projects therein, increased attention has been given in the latter part of the programme to multiplier effects, to outreach programmes, to contract consultancies, to non-commercial and commercial spin-offs and particularly also to networking, both local, national, regional and international. In some projects, in particularly R.I.I<sup>47</sup>, but also in others as the fruit projects, impressive spin-offs and networks already have been materialized or are being pursued with increased vigor, all in the perspective of ensuring institutional sustainability of the Departments / Institutes concerned as (emerging) academic Centres of Excellence and financial sustainability through sustained and autonomous generation of additional resources and the pursuit of dynamic funding opportunities.

Assessment on Mobilisation of Additional Resources / Opportunities KRA Key Performance Indicators

The results of the respective projects / sub-programmes in terms of Key Result Area 7 (KRA-7) on "Mobilisation of Additional Resources / Opportunities" have been assessed basically along the following four main (clusters of) indicators:

- Flemish travel grants, Flemish PhDs, other PhDs
- Consultancies, contract research, other spin-off projects
- Networking initiatives: Local, national and international
- Other

It should be noted that performance on indicators 7.2 "Consultancies, Contract research, other spin-off projects" and 7.3 "Networking initiatives: Local, National and International" is already partly covered under the discussion of KRA 7.3 "Extension and Outreach", be it from a different perspective of provision of services to society and the broader community.

The summary table of results of the respective CTU-IUC projects / sub-programmes on these mobilisation of additional resources and opportunities outputs/results indicators is presented below:

	KRA 7: Mobilisation of additional resources and opportunities					
Project / Sub- Programme	Indicator 7.1  Flemish travel grants,Flemish PhDs, other PhDs	Indicator 7.2.  Consultancies, contract research, other spin-off projects	Indicator 7.3  Networking initiatives: Local, national and international	Indicator 7.4 Other		
E.1 Distance Education	* Other PhDs: 1	* Spin off project: A project is granted by Belgian Embassy in Ha No for sharing e- learning resource and experience between institutions in ViFINET	* Networking in e-learning through a network of aquacultural institutions in Vietnam, namely ViFINET			

<sup>46</sup> See Annex on page 243

<sup>47</sup> See Annex on page 254 for more details.

	KRA 7: Mobil	lisation of additional resou	rces and opportunities	
Project / Sub-	Indicator 7.1	Indicator 7.2.	Indicator 7.3	Indicator 7.4
Programme	Flemish travel grants, Flemish PhDs, other PhDs	Consultancies, contract research, other spin-off projects	Networking initiatives: Local, national and international	Other
E.2 Curriculum Development	* Flemish PhDs: 1 PhD scholarship from BTC  * Other PhDs: 1 PhD scholarship from the laboratory of composite materials, KU Leuven and 2 PhD scholarships from IRO KU Leuven  * One MSc scholarship from BTC, one MSc scholarship from BTC, one MSc scholarship from K.U.Leuven  * 9 Belgian students have done their thesis at CoT (to exploit the equipment of the project)	* From the former cooperation of VLIR project, CoT has another research activity with Leuven University concerning composite materials  * Spin off project: Cooperation with Can Tho City to implement a project concerning environmental issues  * Spin off projects: SANSED project (re-search project cooperation with German Universities).  * New materials research project i with Leuven University in ongoing		* 1 expert from Leuven University will come to organise the training course on equipment operation (in the field of composite materials)
R.1.1 Artemia production	* 1 Flemish MSc  * 1 Other PhD	* Spin off projects: 3 international consultancies (Sri Lanka, India and Iran)  * Introduction of solar salt works in new areas after successful introduction in Vinh Chau – Baclieu (Mekong Delta)  * Commercial spinoffs: INVE-Vietnam, consisting of a network of 55 local shops and sponsoring extension projects on sustainable shrimp farming  * International commercial spin-offs: Marine Harvest Pieters (pan-gasius)  * Exploration of "Fair Trade" initiatives potentials as for example with the supermarkets chain Colruyt in Belgium	* ViFINET (Vietnam Fishery and Aquac- ulture Institutional Network), now consist- ing of 4 Vietnamese research institutes and 4 universities, and facilitated by 3 Europe- an Universities: UGent (Belgium), Wageningen University (Nether- lands) and Trondheim University (Norway)  * NSS (North-South- South) networking: participation in ASEM Aquaculture Platform cooperating with India, Sri Lanka, Kenia, Ecuador, etc.  * Association of artisan-al salt farmers of Vin Chau — Bac Lieu area with the aim of improving household income by combining salt production with Artemia farming, sup- ported by grants from KWT, a Dutch NGO, the FAO TCP programme and 2 EC STD projects	* Sustainable financial resources generation through diversification and networking covering for example VLIR, BTC, EU, VVOB, E-FI, EWI, BELSP, Province of Eastern Flanders.  * Sustainable funding diversification also applies to the Vietnamese side including MOST, MOET, MARD, MPI, regional and provincial governments, etc.  * In NSS context of VLIR-IUC follow-up activities: internship of African students from the UGent Masters course at CTU

	KRA 7: Mobi	lisation of additional resou	rces and opportunities		
Project / Sub-	Indicator 7.1	Indicator 7.2.	Indicator 7.3	Indicator 7.4	
Programme	Flemish travel grants,Flemish PhDs, other PhDs	Consultancies, contract research, other spin-off projects	Networking initiatives: Local, national and international	Other	
R.1.2 Mudc rab larviculture	None	None	None	None	
R.2.1 Fruitt ree varieties	* Flemish travel grants: 14  * Flemish PhDs: 02	* Spin off projects: Contract research: 11		* Attending international conferences : 7	
	* Other PhDs: 04	<b>表达得到</b> 19			
R.2.2 Biotechnology	* MSc scholarship received from VLIR at Vrije Universiteit Brussel	* Spin off contract research: Rice gene transformation technique was transferred to BiRDI. Technique adapted on other short day crops such as soybean, mungbean and red pepper, for which projects in the pipeline.  * Spin off contract research: Diagnostic procedure based on PCR technology applied on tuberculosis diagnosis (cooperation with University of Medicine,			
R.2.3	* 2 full Flemish PhD	Can Tho city)  * Spin off contract			
Fruit preservation & processing	* 4 partial PhD grants from KU Leuven  * Other PhD: 1 admission to CTU for PhD training at local institute  * 8 MSc grants in ICP programme	researches with Can Tho city (02), Dong Thap province (05), Tra Vinh province (02), Hau Giang province (02), Tien Giang province (02), UC Davis in the USA (01), The Ministry of Education & Training (02)			
R.2.4 Enzymology	* Flemish travel grants: 1 Vrije Universiteit Brussel student to visit BiRDI for practical work for thesis	* Spin off projects: Contract research: 1 research contract with CTU on production of protein hydrolysate.			
		* One research contract with the Department of Science and Technology of the Dong Thap province on production of antibodies for disease diagnosis and prevention in Pangasius farming.  * Spin off consultancy: Consultancy for BIO-RAD-Vietnam and for institutions on protein technology			
R.3 Soil dynamics	N.I.	N.I.	N.I.	N.I.	
Overall CTU	73 %				
Programme			The state of the state of the		

Notes : N.A.=Not Applicable N.I. = No Information Available

## Main Summary Findings

### Strengths

- \* Contract research for local and regional authorities has been initiated and is substantially gaining in importance in most Departments / Institutes under the VLIR-IUC programme. Research priorities are set in consultation with local and regional authorities. Contract research for local and regional authorities also includes policy advice components.
- \* Commercial spin-offs of applied research taking off and proactively searched for. Still on a limited scale and with substantive differences amongst the projects, but increasing dynamism and assertiveness is noted.
- \* Important programmatic spin-offs for CTU as a whole have been realized, attesting to CTU's growing recognition as an academic centre of excellence: e.g. (i) Mekong 1000 with scholarships for academic upgrading abroad of local government public servants; (ii) CTU assigned by MOST as coordinator guardian of the repository of scientific publications for the Mekong Delta region, entrusting CTU with important scientific networking functions and responsibilities.
- \* The VLIR-IUC programme is effectively complemented by ex-post toolbox financing by VLIR to ensure continued coordination and collaboration with its Flemish partner universities in joint projects and exchanges (e.g. Research Initiative Programme, North-South-South Cooperation Programme, Own Initiatives Programme, South Initiatives Programme, VLIR Research Fund, Close the Gap ICT Programme, etc.) and more Departments / Institutes effectively getting access to these mostly highly competitive programmes.
- \* Complementary financing ensured by individual member Universities of VLIR, for example for PhD scholarships, MSc scholarships, joint researches, internships, etc.
- \* New venues of collaboration are being pro-actively explored by both CTU and its Flemish partner universities (e.g. joint degree courses based on a shared academic credits system, internships and exchanges of students for example in the framework of thesis work, creative and innovative joint research, etc.).
- \* Complementary financing from other Flemish / Belgian sources has materialized and is further expanding: BTC-CTB, Belgian Embassy, Provinces, etc.

## Challenges / Issues Needing Attention<sup>48</sup>

- \* Making sustainable mobilisation of additional resources integral part of CTU strategic plans. The drafting of a CTU wide special business plan to that effect may be considered a priority exercise by CTU, possibly with the assistance of / supported by VLIR and/or Flemish partner universities.
- \* Development of strategic and business plans necessary for those Institutes having achieved critical mass in order to maintain their academic excellence in a sustainable manner and retain highly qualified staff
- \* More systematic attention for licensing, patenting and commercialisation of research and research products and strengthening of interdisciplinary coordination to that effect (e.g. involvement of SEBA, School of Law, etc.)
- \* Exploration of the desirability and feasibility of establishing special business units ("Research and Consultancy Centres" at the level of the capacitated, "critical mass" Departments / Institutes with the aim of enhancing their financial and academic sustainable (e.g. investment in labs and equipment, retention strategies

**<sup>48</sup>** See also the list of challenges and issues needing attention developed for KRA 3 "Extension and Outreach" on page 69.

- and incentives of faculty, etc.)
- \* Effective tapping of the resources available from the IUC ex-post toolbox (ref. questionnaire distributed by Evaluation Commission see Annex on page 243)
- \* Continuous preparation of high quality project proposals (ideally a set of proposals should be ready at hand at all times to show / submit to interested parties, both national and international) and pro-actively scouting for local, national and international funding sources, particularly since this is a highly competitive market.
- \* More systematic and pro-active tapping of the substantial resources available with MOST (apart from MOET), decentralised to the regions and below levels

#### Other

The rest category "Other" covers all outputs / results brought about by the project, directly or indirectly as spin-offs, which cannot be classified explicitly under any of the previous seven main key results areas.

As far as the "Other" category included in the Final Evaluation Self-Assessment Reports by the respective CTU-IUC projects is concerned, all the entries therein could be integrated in one of the above 7 Key Result Areas, thus not needing to be reflected separately here under the "Other" rest KRA.

# Higher Level Programme Performance

#### Some Introductory Notes and Methodological Aspects

The first main evaluation focus, discussed above, concentrated on the progress of the VLIR-IUC programme, on its activities, processes and direct results related to the seven Key Result Areas of the VLIR-IUC programme. The *second main evaluation focus* is on, what is referred to the Terms of Reference, the quality of the programme.

Since the evaluation takes the perspective of an integrated performance assessment, the evaluation focuses is at least on an equally important basis on the *higher performance levels* of both the programme and its constituent project / sub-programmes. In the Terms of Reference, these higher performance levels are referred to by the generic name "quality". It is learned however that "quality" at the same time is one of the six constituent criteria under the generic "quality" assessment. Moreover, clearly also the progress / results evaluation contains main quality assessment aspects.

Therefore, in order to avoid confusion in terminology and also in order to be more in line with the international practice concerned based on the three E's (economy, efficiency and effectiveness) of performance management, monitoring and evaluation, it is preferred by the Evaluation Commission to refer to this second main evaluation focus as "Higher Level Programme Performance". The indication "higher" refers to the higher level results in the results management terminology, thus not so much on the direct results or outputs, but more on the intermediate and high level results of "outcomes" and "impact" (see results levels in the LogFrame vertical intervention logic).

For consistency purposes with the Terms of Reference (ToR), the six criteria<sup>49</sup> listed in the ToR to assess higher level performance of the respective constituent projects / sub-programmes have been retained:

- Quality
- Effectiveness
- Efficiency
- Impact
- Development relevance
- Sustainability

Since this is a final evaluation with explicit concerns for suitable modalities of continued cooperation and collaboration between Can Tho University and its VLIR partner universities in Flanders amongst other partners, both internationally and nationally, a special evaluation focus is on sustainability and impact. Moreover, sustainability and continued cooperation issues are the subject of a special concluding chapter 2.6 on the follow-up plan of the CTU-IUC programme and its constituent projects / subprogrammes.

The discussion of the above six projects / sub-programmes criteria is presented in *more general terms*, with *concrete references* made to individual projects / sub-programmes when necessary and/or for illustrative purposes.

## Methodological Remarks and Evaluation Limitations

The evaluation on these higher level performance criteria, basically referring to the higher levels of the vertical intervention logic in Logical Framework parlance (goals and purpose), is hampered by the absence of operationally defined objectives and of objectively verifiable indicators with concrete target setting (both interim and final), even if substantial improvements are noted in this respective in comparison to the mid-term review. This particularly pertains to effectiveness (and to a certain extent also efficiency), since target setting is the very basis for the measurement / assessment of effectiveness. This observation with concrete recommendations were shared on the occasion of the Mid-Term Review in 2002. Actions have been taken accordingly by the VLIR-UOS Secretariat with the mandatory introduction of Project/Programme Cycle Management (PCM) and its tools as for example LogFrames in the IUC Programme down to the levels of the individual IUC Projects in the respective umbrella programme with partner universities. However, despite good efforts in a number of projects to include LogFrames and actively use them to enhance the results orientation of the programme, projects and individual activities therein, there are still quite some challenges to effectively use these LogFrames and the workplan based on these as management and monitoring instruments.

Too often LogFrames are still seen as an externally imposed condition to get projects approved for funding or as an external accountability tool, and not yet as powerful tools for effective project / programme management, both at strategic and operational levels. It therefore is regrettable that the procedural introduction of PCM and accompanying tools by VLIR-UOS especially since the start of the second five year cycle after the mid-term review, apparently has not been accompanied by the necessary training and other Human Resources Development and capacity strengthening processes at the level of the individual programmes and the constituting individual projects therein,

**<sup>49</sup>** With the exception of "quality", these criteria are within the more or less standard set of evaluation criteria from the Development Assistance Committee (DAC) of the Organisation of Economic Co-operation and Development (OECD) for the evaluation of development cooperation programmes and projects.

In the Paris Declaration on Aid Effectiveness of 2 March 2005, the following are identified as main effectiveness concerns / criteria: ownership, alignment, harmonisation, managing for results and, mutual accountability. For each of these concerns a number of key progress indicators are identified.

at least as far as the IUC programme with Can Tho University is concerned. Also the suggested additional socio-economic component for many projects, especially focusing on these higher performance levels, has not realized, as was to be learned from the Self-Assessment Reports and the evaluation interviews.

All this has as consequence that the available data on the higher performance levels are rather limited, if available at all for a number of projects, and thus seriously hamper the higher level performance assessment of the programme and projects. This particularly pertains to the overall programme levels, and as such the evaluation findings and observations to a large extent are limited to mainly qualitative assessments as made by the main stakeholders concerned, for example in the self-assessment review of the ten years IUC cooperation.

For the evaluation of the *programme as a whole*, the assessment of higher performance in accordance with the Terms of Reference concentrates on four of the above-mentioned DAC criteria: Efficiency, impact, development relevance and sustainability. Since the below assessment of the higher level performance of the CTU-IUC projects / sub-programmes transcends the individual projects as such and concentrates on common denominators for lessons learned and best practices, the chapter on the assessment of the programme as a whole will be merely a summary of the most salient findings and observations. Moreover, programme level KRAs and indicators have been introduced only in the more recent series of IUC programmes and as such cannot retroactively and meaningfully used as assessment reference frameworks and tools for the current final evaluation of the CTU-IUC programme.

Another methodological observation for consideration is that perhaps the relevance of the programme's higher performance assessment may have increased if the assessment on the set of evaluation criteria would have been related to the programme's Key Result Areas (KRAs) rather than to the individual projects / sub-programmes as is now the case. This enhanced relevance would particularly relate to the drawing of conclusions, identification of lessons learned and the formulation of recommendations which transcend the boundaries of this specific VLIR-IUC programme with Can Tho University.

After the higher level performance evaluation, the overall programme evaluation discussion continues with a broad assessment of the overall added value of the VLIR-IUC programme vis-à-vis other donor supported programmes and projects, followed by the analysis of programme management, overall and on specific management aspects and tools as management systems development, implementation and financial management, visibility, synergies and networking, organisational development, amongst others. The assessment of overall programme performance also covers the evaluation of the quality of the co-operation between the different parties involved as well as the follow-up strategy and plan of the CTU-IUC programme now having come to an end. In view of their special importance for the continued collaboration and cooperation between CTU and the VLIR Flemish Partner Universities, these two topics are summarily discussed in separate chapters.

# The Constituent Projects / Sub-Programmes

## **Summary Scoring Sheet**

The summary scores of the respective CTU projects / sub-programmes on the VLIR IUC programme higher level performance criteria as per the ToR are presented in Table 13 here below. It should be read while keeping in mind the methodological remarks and reservations contained in the above introductory paragraphs.

Table 13 : Summary Scoring Sheet on IUC Programme Higher Level Performance Criteria, by Project / Sub-Programme (\*\*) (\*\*\*)

Project / Sub-Programme	Criterion 1 Quality	Criterion 2 Effectiveness	Criterion 3 Efficiency	Criterion 4 Impact	Criterion 5 Development Relevance	Criterion 6 Sustain- ability
E.1 Distance Education	3	3	3	3	4	4
E.2 Curriculum development	4	3	4	4	5	4
R.1.1 A quaculture: Artemia	5	4	4	4	5	5
R.1.2 Aquaculture: Mud crab larviculture	2	1	2	2	3	2
R.2.1 Fruittree varieties	4	4	3	4	4	4
R.2.2 Biotechnology	3	4	3	3	4	4
R.2.3 F ruit preservation & processing	5	5	4	3	4	4
R.2.4 Enzymology	4	4	3	3	4	4
R.3 Soil dynamics	4	3	3	3	5	3
Total score CTU Programme/ N° of Sub-Programmes	34/9	31//9	29/9	30/9	38/9	34/9
Average score CTU Sub- Programmes (1-5 scale)	3.78	3.22	3.22	3.33	4.22	3.78
Average score CTU Sub- Programmes ( in %) (**)	76 %	69%	64 %	67 %	84 %	76 %

Notes: \* N.I. = No / Insufficient Information Available

\* Scores are on a five-point evaluation scale, with: 1 = (very)poor

2 = insufficient / low

3 = sufficient

4 = good / high

5 = excellent / very high

<sup>\*\*</sup> The above scores relate to actual performance so far by the end of the ten year IUC programme cycle, but at the same time to a certain extent also reflect an assessment of potentials with regard to anticipated future performance ex-post, after the phasing out of the IUC assistance. This anticipation dimension particularly pertains to the impact and sustainability criteria, which can only be meaningfully measured after external funding and support has terminated considerable period of time before already.

## Quality

Based on the ToR, the quality criterion is a kind of summary criterion, encompassing all other project/sub-programme higher performance criteria<sup>50</sup>.

Substantive Improvements in Overall Quality: As can be gleaned from the summary scoring sheet on the preceding page, average quality score of the different projects / sub-programmes on this summary criterion is 76 %, which is an increase of 9% compared to the Mid-Term Evaluation score, pointing in the direction of a substantive improvement of overall programme quality in the second five year phase of the CTU-IUC programme, which is the consolidation phase. Overall quality improvement of the programme in first instance is due to improvements in programme development relevance, sustainability and also, be it to a lesser extent in programme impact.

CTU Centres of Excellence: As far as the Key Result Areas are concerned the programme demonstrated considerable enhanced achievements and overall performance with regard to KRA 3 outreach and extension and the newly included KRA 7 resources mobilisation, while also noticeable improvements related to performance areas research and management could be registered. These results led different CTU Departments / Institutes which have been supported by the VLIR-IUC, to successfully become centres of academic excellence, not only recognized as such in the Mekong Delta region, but also nationally and beyond internationally.

#### Strengths

- \* A summary overview of the main VLIR-CTU IUC programme strengths in terms of overall quality, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:
  - The overall quality of the VLIR IUC programme is highly appreciated by both CTU management and academic staff;
  - Especially the strong IUC programme focus on Human Resources Development (HRD) of staff as basis for sustainable excellence of the Institute is very strongly valued;
  - Academic critical mass has been achieved by a number of CTU Institutes / Departments, which as such are recognized as centre of excellence, nationally and beyond;
  - Overall, a strong ownership of the programme and of the individual projects therein has been observed at all CTU levels (empowerment of CTU staff at all levels);
  - Generally, there is a high appreciation of the quality of the inputs, support and cooperation from/with the Flemish partners;
  - There are noticeable improvements in terms of enhanced overall quality of teaching;
  - Reportedly, most students got relevant jobs upon graduation;
  - Publications in international and national journals are on the rise;
  - Research and teaching curricula in principle are based on regional needs;
  - Strong outreach, emerging spin-offs and institutional networking have been realized, especially towards the end of the programme;
  - CTU generally masters the provided equipment and tools.

<sup>50</sup> For the higher performance / qualitative assessment, the evaluation ToR do not provide a clear cut definition of the respective criteria to be used, neither a fixed short-list of indicators operationalising these rather abstract criteria. The indicators listed under each of the criteria are described as "possible" indicators only. This flexibility is conform with VLIR-UDC's general philosophy of evaluations being learning exercises, not only content wise, but also with regard to the methodological aspects of evaluations themselves.

Some further details on the above, and other, overall quality aspects / dimensions of the programme and its components include the following:

- \* Projects / sub-programmes ownership: During the meetings of the Evaluation Commission with the CTU staff of the different projects / sub-programmes, it became obvious that there is a strong local ownership at all levels. It goes without saying that this is an important asset for the post-IUC era, particularly with regard to sustainability and impact. The CTU staff met generally were well aware of implemented activities and obtained results of the components of the IUC programme in which they were involved. Moreover, they gradually became pro-active proponents and promoters of the Programme. This observation of genuine project / sub-programme ownership particularly pertains to the technical aspects of the sub-programme, but in quite some cases to a lesser extent to managerial and financial aspects. Remarkable also is that although the IUC programme was ending / had ended already, management and staff generally however had no clear ideas about the way forward with the project / sub-programme in the future
- \* Programme coherence and complementarity of projects: Initially, the IUC programme with CTU was a loose collection of individual projects without any links to each other. In the second five year programme period, the rector and the management team of the VLIR-IUC programme (both CTU staff and Flemish professors) materialized their concerns about improving the coherence of the programme, and thus of further strengthening the complementarity of the constituent projects / sub-programmes and to further integrate them institutionally and academically. A motor in this respect is the R.I.I project with further strengthened interdisciplinary cross-links to E.I, RI.2, R.2.2, R.2.4 and R.3. Also the collaboration between the four fruit research projects strongly improved in the second half of the programme period.
- \* Strategic vision and objectives: In the first five-year period of the VLIR institutional cooperation programme, Can Tho University had developed a medium term strategic plan spelling out the University's vision and main objectives with regard to staff development, teaching, research, outreach services and infrastructure. Also at individual projects / sub-programme levels, be it less systematic and less formalized, plans for the future were worked out, periodically re-assessed and, if necessary, updated in reply to changed conditions or on the basis of more accurate information. Unfortunately, during the second five year period this strategic orientation and documentation somehow eroded. Quite a number of interviewed parties, both from CTU and VLIR sides, indicated this an issue needing priority attention and action taken accordingly.
- \* Empowerment of CTU staff at all levels: Project / sub-programme ownership is manifested in combination with enthusiasm of staff at all levels, resulting in many projects in addition introducing local initiatives on top of what had been planned initially. Staff of the different components generally showed a lot of confidence to move forward. They effectively used new opportunities and even created new opportunities themselves. This ownership and dynamism got stronger in the process when the results of the human resources development programme started bearing fruits in terms of graduated PhD's and MSc's in the different departments and institutes covered by the VLIR programme and beyond (cfr. above regarding the Centres of Excellence remarks). This was very obvious in projects as R.2.3 and R.2.4, amongst others.
- \* Quality of staff HRD programme: The quality of the human resources develop-

- ment programme of CTU staff in Flanders is highly appreciated not only by the staff who have participated in it but also by their supervisors / management.. This overall satisfaction covers both academic and more personal aspects of these staff capacity strengthening exercises. This concerns both academic (degree level PhD, MSc, Bsc) and technical staff development (short term courses).
- \* Interest in adopting innovative teaching methodologies: In the first five year cycle of the 10 year VLIR-IUC programme cycle, innovative teaching methodologies had been introduced mainly under the MHO programme. In the VLIR component, with the exception of then B2 (now R2.1) this had remained rather limited. However, word got spread and also the exposure of CTU staff while in Belgium for HRD purposes, to students centered teaching methodologies in Flemish universities created active interest. The second phase of the VLIR-IUC programme effectively responded to this interest and created additional interest and commitment. This was largely due to the E.1 Distance Education project, which evolved gradually into an e-learning project focused on campus operations. Substantive improvements were also noted thanks to the E.2 project. Generally, the research projects had an important spin-off for enhanced teaching methodologies thanks to lab based practical and hands-on teaching and training.
- \* Access of graduates to the labour market / self-employment: The ultimate proof of quality of academic training lies in entrance patterns into the formal labour market and the self-employment market. In view of the ongoing restructuring of the Vietnamese economy, this particularly pertains to jobs in the private sector (both local and international). Unfortunately however, no statistics are available (yet) on employment of graduates from CTU entities supported by the VLIR-IUC programme. The Mid-Term Review had recommended this generation and analysis of employment statistics of graduates from CTU entities supported by the VLIR programme as an important challenge for the second phase of the VLIR-IUC programme, but there is no evidence that this also has materialized.
  - The CTU mid-term plan concluded that the fields of study related to food technology, mechanical engineering, animal husbandry and aquaculture had high employment potentials in the private sector (both local and international) and therefore should be pursued as a matter of priority. Indirectly, this plan based on statistical evidence gave ample evidence of the development relevance of the VLIR-IUC programme, since the departments / institutes assisted by the programme in the fields of food technology, mechanical engineering and aquaculture are amongst those with the highest employment potentials in the private sector. However, no further hard evidence thereof could be found during the final evaluation, simply because of the lack of base data, although that generally this fact was acknowledged as a matter of fact. Only E.2 "Curriculum Development" project provided a statistic on the percentage of graduates finding gainful employment / self-employment within a 3 to 6 months period after graduation: this is a high 70 to 80% of graduate students, as based on feedback from them.
- \* Outreach services to society and economic spin-offs: While at the moment of the midterm review at about 2002, most projects were still at an infant stage as far as outreach services to society and economic spin-offs, their successful pursuit has been a major achievement during the second phase of the project. This has been broadly illustrated before under the discussion of Key Result Area 3 "Extension and Outreach" Most of the projects are engaged in outreach training services to divulge research findings to the, mostly poor segments of the, population of the

Mekong Delta region. Examples in case are R.I.I, R.2.I, R.2.3, R.2.4 and R.3. Policy support services are being provided to regional and local authorities via contract research. Economic / commercial spin-offs with the private sector are being generated, for example under R.I.I, R.2.2, R.2.3 and R.2.4. Academic and related networks are being strengthened and expanded, not only locally but also nationally, regionally and internationally. R.I.I project for example manifests a very dynamic and successful drive in this respect, as further evidenced under Annex 6.1 to this report. The demand from society (both private and public) for such outreach and extension services is strongly expanding providing evidence of programme sustainability in the medium- and long run.

- \* Mastering of equipment and tools: Equipment purchased under the VLIR-IUC pro-gramme is being used intensively (ICT, multimedia, laboratory, ...) and is effectively accessible to staff and students. Staff of the different components were proud to prove that the new equipment functioned properly and that they mastered its use. Equipment maintenance strategies are in place and are effectively operational. While most VLIR-IUC equipment was purchased during the early phases of the ten year programme, some of it getting worn out and/or outdated already.
- \* Spill-overs of ICT equipment provision and training: The ICT equipment provided under the VLIR programme and especially the e-teaching / e-learning platforms (e.g. Dokeos Learning Management System LMS) and the training under E.2 on its effective use and applications have contributed to a dynamic information and communication technology culture at CTU, with results and impact much beyond the strict scope of the directly assisted pilot entities.

#### Challenges / Issues Needing Attention

- \* A summary overview of the main VLIR-CTU IUC programme challenges and issues needing special attention as far as overall quality is concerned, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:
  - Clarity of overall strategic directions, and need for more focus and priority setting:
  - Necessity of continued strengthening of Human Resources (HR), particularly in an international setting as for example with the VLIR universities in Flanders, as expressed by all CTU partners, both staff and management;
  - Further strengthening of publications production (especially nationally and internationally peer reviewed), especially after PhD graduation;
  - Effective focus of extension and outreach on impact generation and its measurement (not just lip service), thus arguing for a stronger socio-economic component (as standard) in the applied research projects;
  - Establishing an enhanced mutually beneficial balance between academic and applied research, with successful fundamental academic research in many cased automatically leading to applied research opportunities, and with applied research helping to ensure sustainable resources generation to finance fundamental research;
  - Substantially improved language skills over time, but still needing further priority attention;
  - Need for further improved quality assurance and control, for both teaching (with regard to both materials and methods e.g. via visitation com-

missions, joint training / graduate programmes based on complementary credit units) and research (through joint researches, institutionalized peer reviews, staff and student exchanges, etc.)

Some further details on the above, and other, challenges and issues needing further attention as far as the overall quality aspects / dimensions of the programme and its components are concerned, include the following:

- \* The concept of quality control: The CTU-IUC Mid Term Review was quite explicit in mentioning that quality control is a concept not uniformly / not properly understood in CTU, as became evident from both the reports and the discussions. As was reported, quality control is interpreted as progress monitoring instead of the internal and/or external control of the quality of HRD, teaching, research and/or outreach processes and products. While there have been sporadic initiatives to improve quality of processes, this still remains a main issue needing further priority attention. It appears that quality support, assurance and control may be one of the main subjects of continued VLIR-CTU cooperation in the post-IUC era, and this both fields of education and research.
- \* Quality control mechanisms: The above observation on the concept of quality control is illustrative for a situation with regard to the VLIR IUC programme with CTU whereby still no special procedural and/or institutional provisions have been made yet for more systematically addressing this issue, even despite the MTR recommendations concerned at that time. This situation had proven most unfortunate for project / sub-programme A1 with regard to the didactical quality of the developed courseware for distant education purposes, as further illustrated hereunder, and to a certain extent remains that way under the successor E1 e-teaching / e-learning project (e.g. ensured complementarity and value added vis-à-vis the "regular", more traditional teaching).

But also in the different research projects / sub-programmes, quality control remains an issue which generally, be it in varying degrees, still needs to be tackled in a more systematic and effective manner. This proves particularly important and urgent with regard to, amongst others:

- Statistical sampling;
- Data collection and validation processes;
- Analysis and interpretation of statistical summary data;
- Redaction of papers and publications;
- Drafting of project proposals and research protocols;
- Peer review procedures of publications.
- \* Rather limited research outputs still: As mentioned above, the number of publications is still rather limited, but is steadily on the rise. This momentum needs to be sustained and further supported. Sustainability issues (including financial sustainability issues) need to be given due attention to that effect. Particularly international "A" publications remain a challenge. Graduated PhDs and MSc need special guidance after graduation to sustain their academic production. The design and effective implementation of appropriate incentive schemes may need to be considered as argued in the next topic.
- \* Absence of merit / performance based incentive systems: There are no indications of performance based incentives systems in operation at CTU in general and in

the VLIR-IUC programme in particular. In the first five year cycle, topping up of salaries in the programme was a common practice. However the system was assessed not to be transparent, and moreover these topping up incentives were not made dependent on / were not linked to actual performance (production of outputs, achievement of results). The introduction of staff performance appraisal systems based on objectively verifiable performance indicators may need to be considered. Moreover, feedback received suggests that also under phase two substantive charging of personnel costs via service contracts remained not uncommon practice and also that still a considerable administrative overhead ("K2") continued being charged to the VLIR-IUC programme.

#### Effectiveness

Effectiveness refers to the extent to which the stated objectives have been achieved / accomplished<sup>51</sup>. It pre-supposes that these objectives have been formulated in such way as to make possible measurement of actual achievements / accomplishment in relation to the stated targets on these objectives.

On the occasion of the Mid-Term Review, a number of problems have to be reported in connection with the assessment of effectiveness in the VLIR-IUC programme with CTU, including:

- \* At the onset of the 10 year programme, no clear objectives have been defined, neither at the level of the overall programme, nor for the individual constituent projects / sub-programmes.
- \* If objectives are available, this in most cases is the result of incremental planning exercises in the course of programme implementation with a partially retroactive character.
- \* The listing of objectives of the different projects / sub-programmes as in-corporated in for example the mid-term evaluation self-assessment reports is not always logic as far as the hierarchy of general and specific objectives is concerned. Specific objectives are sometimes reflected as general objectives and the other way around (e.g. in B4, now R.1.2). In other cases, it is not clear if and how stated specific objectives in turn would contribute to the achievement of the general objective.
- \* The general objectives are only exceptionally formulated at the level of the ultimate socio-economic target groups in the Mekong Delta region, making assessment of programme and/or sub-programmes impact and development relevance particularly in relation to the outreach and extension dimension not an obvious exercise.
- \* No measurable targets have been identified for these objectives, neither for the end of the VLIR assistance period, nor have interim targets been set. The latter are particularly important for programme monitoring purposes and also for interim evaluations as the current mid-term review;
- \* No baseline data are available on the situation at the start of the programme with regard to the different objectives, thus making a comparative analysis of the present situation as compared to the original situation which is the essence of trend analysis virtually impossible.

For these reasons, the Evaluation Commission has refrained from giving individual

assessment scores to the respective projects / sub-programmes as far as the criterion "effectiveness" is concerned on the occasion of the Mid-Term Review.

In the meantime, thanks to the special efforts from VLIR-UOS and its Secretariat, during the second 5-year period of the CTU institutional cooperation programme, a number of initiatives and tools have been introduced to further rationalize processes and especially to enhance overall results orientation and performance management. This for example pertains to the introduction of Logical Frameworks, including indicators and target setting thereon for the different levels of the results chain, including the identification of means of verification, progress reporting based on these indicators, etc.

However, while formally introduced, the actual use of these tools for project / programme management and monitoring remains rather limited. It appears that Logical Framework are merely introduced for compliance reasons, rather than being pro-actively used as crucial management tools. One of the reasons for this may be that the introduction of these tools has not been accompanied by the necessary capacity building and training programmes and concrete initiatives, neither at the side of CTU nor of the Flemish Universities. VLIR-UOS may want to put this important issue as a priority concern on its general action agenda.

On the other hand should be noted that, even while during Phase 2 no specific provisions for LFA training at CTU have been foreseen, the issue has surfaced in a generic manner on different occasions during the IUC partner meetings. In principle, the ICOS and PM have been provided such trainings on different occasions and consequently were expected to assume this role of catalyst and promoter of PCM and PCM-related processes. Feedback has been received that maybe especially for the latest batch of IUC's, this may have proven a bit difficult still.

A summary overview of the main VLIR-CTU IUC programme strengths and challenges in relation to programme effectiveness as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:

#### Strengths

- \* Improved use of results management tools in the VLIR programme (e.g. use of indicators, LogFrame, risk management, etc.);
- \* Enhanced effectiveness towards achieving the intended results in the different programme Key Result Areas, however with still considerable challenges to be met in the different KRAs of the IUC programme;
- Improved multidisciplinary coordination and collaboration between different Departments / Institutes within CTU enhancing the effective delivery of the intended results;
- \* Enhanced consultations, coordination and networking with partner institutes to achieve the objectives.

#### Challenges / Issues Needing Attention

- \* Target setting (both final and interim) on indicators needs to be strengthened / ensured in order to facilitate effectiveness monitoring and evaluation (this pertains to both the necessary baseline and targets benchmarks);
- \* Generally enhanced effectiveness is noted (e.g. with regard to the development

objectives in terms of reaching out to the wider Mekong Delta region and its population), but with still considerable challenges to be met in the different KRAs of the IUC programme, especially at the higher levels of the results chain (outcomes and impact levels);

- \* There is a generally felt need for continued collaboration with Flemish partner universities in order to sustainably achieve the effectiveness aspired for by the IUC programme (for example through the VLIR ex-post toolbox and other means/sources of collaboration), e.g.:
  - Continued HR upgrading (exchanges)
  - Teaching quality (visitations)
  - Number and quality of researches and publications (joint researches, peer reviews)
  - Extension effectiveness (socio-econ dimension)
- \* The effectiveness of scholarship programme is severely affected by other pressing tasks and duties of scholars at CTU, e.g. about half of the PhD scholarships is still ongoing at the end of the IUC programme needs to be closely followed-up (but by whom and through what facility since the IUC programme has already ended and books are closed;
- \* The value added of the e-learning programme needs to specified and enhanced, especially in complementarity with and support to the more "traditional" base teaching and training programmes and modalities;
- \* The still rather limited number of research publications after graduation, especially international peer reviewed "A" level publications;
- \* Retention of excelling trained staff despite the increasingly fierce competition for private universities and/or research institutes and of the private sector, which poses a serious general risk for programme effectiveness and sustainability in the longer run;

#### Some General Observations

It may be good to recall as lessons learned, the general observations with regard to projects / sub-programmes effectiveness made on the occasion of the Mid-Term Review, which to a large extent still remain valid, and with further updates where necessary:

- \* Objectives, OVIs and Targets: Sub-programme / project objectives should be properly formulated to ensure effectiveness at the desired level of the vertical intervention logic. This was dramatically illustrated by project AI (now E-I) at the time of the programme mid-term review, where project / sub-programme effectiveness had been realized to a large extent as far as the installation and operationalisation of the CT hardware component (except internet access) and the training of staff on the use of the hardware were concerned, but where the ultimate effectiveness in terms of actual use of developed courseware for distant education purposes remained virtually nihil so far. Objectives of the AI (now E-I) project simply at that time simply were not formulated at a high enough level with regard to impact and development relevance.
- \* Independence of programme and sub-programme objectives: Effectiveness should be assessed in relation to the explicitly stated CTU-IUC programme and project / sub-programme objectives and therefore should not be altered for reasons of changes in personnel (e.g. changes in promoter or secretary positions) and/or because of institutional changes in the process (e.g. changes in the internal organ-

isational set-up of CTU university into colleges, schools, institutes, and the like). The broader basis for effectiveness assessment are the CTU-IUC strategic programme documents and the mid-term and long-term strategic plans of Can Tho University. For example, organisational changes have deeply affected the effectiveness and efficiency of the E.2 distance education project beyond the project's control and responsibility (about one year to one a half year of inactivity because of a CTU reorganization and no clear cut instructions as to the responsibilities for E.2 programme implementation).

- \* Improved effectiveness but with substantive unmet challenges still: Generally, overall effectiveness of CTU-IUC programme implementation in terms of key results, effects and impact, has substantially improved in the second part (also understandably so since outcomes and impact generally only manifest themselves with some time lag, so at best towards the end of the programme to be further strengthened in the follow-up post-IUC programme period. So at the same time successes and challenges still with regard to:
  - PhD and MSc degrees successfully obtained under the VLIR programme;
  - number of international publications;
  - contributions to international conferences and the like;
  - research projects completed;
  - spin-off research projects started up;
  - extension services to farmers;
  - number of farmers reached out to by extension;
  - raise in average farmers income:
  - industrial applications of research topics;
  - paid consultancies acquired, research contracts concluded;
  - policy advice to the official authorities;
  - new management skills acquired by staff involved in the programme;

- . . .

- \* Established basis for effectiveness: During the first phase of the VLIR programme, the groundwork was laid in terms of HRD, equipment, learning resources, lab infrastructure etc. for ensuring effectiveness in the pursuit of the stated objectives. The 2nd phase saw the further strengthening of programme and sub-programmes effectiveness for example in reaching out to deprived groups of the Mekong Delta region, to local authorities with policy preparation research, to the private sector with spin-offs, to the international community through international conferences and networks, etc.
- \* Language barriers: Improvement of English language skills has been given special attention during programme implementation and undeniably major improvements are noted. However language barriers still remain a major challenge as of the present, despite concerted efforts from CTU to improve this situation and important accomplishments registered over time, particularly when compared to the situation at the start of the VLIR-IUC programme. It goes without saying that language barriers put a serious burden on the effectiveness and efficiency of the Flemish international co-operation inputs to the programme with regard to HRD, teaching and research alike. Moreover, it hinders CTU in its aspiration of becoming an international centre of academic excellence in South-East Asia.

## Development Effectiveness Self-Assessments

Overall development effectiveness remains hard to be measured / assessed in view of the relative absence of hard data on outcomes and impact accomplishments. Elements with regard to development effectiveness described in the self-assessment reports for example include the following, amongst others:

- \* E.I: "E-learning can help CTU to offer more chances for studying to people in the Region"
- \* E.2: "The project affects the staff of College, with many people becoming more self-confident in their jobs in comparison to before, because their knowledge improved in teaching and also in research. For example, they can give their ideas to develop a curriculum or the can be leader of a research group."
- \* R.1.2: "Solar saltworks in Vinh Chau Baclieu (Mekong Delta) have been properly exploited as successful introduction of new activity (i.e. Artemia production and later production of fish, shrimp and crab) and later on through studies of environment and culture systems, the project helps local farmers to sustain their production on a year-round basis. Through which farmer incomes have been increased considerably."
- \* R.1.2: "Increasing numbers of mud crab hatcheries using green water systems, which results in better survival of crab larvae. Mostly the farmers who are interested in operating mud crab hatcheries are the external stakeholders involved in the production of mud crab larvae."
- \* R.2.1: "With the upgraded plant tissue culture lab and mastering some plant tissue culture approaches our staff members have been usually requested to act as consultants for many local researchers and even universities / institutes' staff members."
- \* R.2.2: "The HLB diagnosis techniques contributed to control of the HLB disease in the Mekong Delta together with the Southern Fruit Tree Institute (SOFRI). The phylogeny study of citrus revealed several interesting things on classification of citrus varieties / cultivars."
- \* R.2.3: "The establishment of two new MSc. Programmes in (i) Food science and technology (200t) and (ii) Post-harvest Technology (2008) at CTU creates great opportunities to train young lecturers of other universities in the Mekong delta. This helps to substantially improve the quality and level of human resources in the Mekong delta in the future."
- \* R.2.4: "Utilisation of pineapple waste for the preparation of bromelain to be used in food processing. As such, waste can be valorised and converted in a product with added value. The studies on fish proteins will allow the development of diagnostic tools for fish farming. The studies of proteases from earthworm will lead to the development of the new product that can be used in food; feed and medicine. Besides that, the culture of earthworms gives poor farmers the opportunity to increase their income."
- \* R.3: "The project unravels the factors affecting sustainable rice production in the Mekong Delta of Vietnam, focusing on soil using types, cropping systems and soil management. The results obtained on long-term changes on soil fertility and rice production under certain conditions were discussed and shared among the academic staffs, researchers and team workers. Workshops were subsequently organized to present the obtained achievements and to give recommendations to farmers, extension workers and local authorities. For example, we recognized that soil organic matter quality and soil microbial population decreased under inten-

sively continuous rice cultivation throughout long-term field experiments. We also proved that rotating rice crops with alternative upland crops could improve soil fertility and rice-based farmer's income."

The above summary self-assessments regarding achievement of the developmental objective, in terms of changing lives, can also be issued as illustration in the discussion of project impact and of project sustainability.

## **Efficiency**

# Some Methodological Notes

Efficiency refers to the manner in which inputs are processed for the production / delivery of the expected outputs / results in a timely and cost-efficient manner. Efficiency therefore relates to the processes, to the activities executed for the production of the planned results in the pursuit of higher level(s) objectives. For the VLIR-IUC programme, efficiency is defined as "the degree to which the installed capacity (human / physical / financial) is used; goals/means ratio in human, physical and financial resources<sup>52</sup>".

As such, efficiency is another important dimension of results based management, of better of performance management. Efficiency analysis therefore also requires operational definitions of objectives with target setting and time schedules in order to assess how well and how cost-efficient the executed activities contribute to the achievement of the long-term (LogFrame goal level) and immediate (LogFrame purpose level) objectives of the sub-programme. In the above discussion on the effectiveness criterion, a number of limitations, inadequacies and shortcomings have been summed up in this regard which thus to a certain extent also affect efficiency assessment.

The other limiting factor is that the inputs, the resources (= economy in the 3E's analytical framework) dimension has not been included in the VLIR-IUC evaluation framework. Obviously, quantity, quality and timeliness of inputs have a crucial impact on (sub-)programme efficiency and ultimately on (sub-)programme effectiveness. Summary financial figures on the IUC programme with CTU and its constituting sub-programmes are provided in Annex 7 to this report. The series of summary financial tables relate to budgets, transfers of resources and expenditures.

# General Efficiency Assessment

\* Overall Improvement but still lowest higher level performance criterion: As programme implementation progressed and procedures got firmly established, also project efficiency gradually improved. Still, with 64% on average this criterion relatively scores lowest of all higher level performance criteria (with the other five criteria scoring between 67% and 84%). As such, one cannot conclude at this stage yet to a very efficient use of resources. On the other hand, towards the end of the project, efficiency started improving substantially. this should not come as a surprise, since results, effects and impact show more outspokenly towards the end of an intervention cycle. This particularly pertains to institutional development programmes. Moreover, delivery mechanisms in the outreach programmes are being further developed and strengthened, for example by tapping specialized intermediary entities for doing outreach work, as such maximizing extension multiplier effects of research and their findings and thus cost-efficiency. The same also pertains to lab research and the production of international publications now

- starting to take off with increased intensity
- \* General efficiency assessment over time: The total budget for the five year period of the first phase of the VLIR-IUC programme with CTU amounts to about 3.7 million Euro, or an average of about 750,000 Euro per year. As compared to the projects / sub-programmes results summarized in the tables of the preceding chapter 2.1.2., the MTR at that time could not conclude at this stage to a very efficient use of resources. In accordance with the standard budgetary provisions for VLIR-IUC programmes, VLIR funding towards the end gradually decreases (particularly in the last three years) in order to ensure financial sustainability. On the other hand despite the gradually reduced financial resources, the intensified production of outputs and the enhanced achievement of results towards the end of the programme cycle point at enhanced overall efficiency. But still further enhancing efficiency of CTU operations (for all categories, e.g. teaching, research and extension) therefore remains a major CTU managerial challenge, even after the end of the VLIR IUC programme. The necessary provisions and structures need to be worked out and activated in order ensure this continuity.
- Comparative analysis of individual projects / sub-programmes: As far as the individual projects / sub-programmes are concerned, when comparing outputs realized so far in relation to the utilized resources / budgets, one can conclude to the best efficiency comparatively realized by projects R1.1, R2.3 and E.2 curriculum development in that order, with the other research projects R.2.1, R.2.2, R.2.4 and R.3 together with E.1 taking an intermediate accomplishments position on efficiency, while R.1.2. shows weakest on efficiency. R.1.2 relatively lower performance is basically due to turnover / dropout of personnel and vacancies remaining not filled up for a considerable period of time. At the end of the first five year cycle, lowest efficiency scores were attributed to cross-cutting E.I. It may be recalled that the latter project E.I (at that time still labeled A.I) could show limited use so far of the courseware developed for distant education purposes, despite the heavy investments (within the 9 projects CTU-IUC programme, project A.1 had been allocated more than 25 % of the total budgetary resources). Over the ten year period, the E.1 Distance education project has been allocated 19.87% of the overall VLIR-CTU IUC budget, substantially more than the second in line, the other cross-cutting e-programme on curriculum development (E.2) with 13.29%, closely followed by R.2.3 with 12.81% of the total IUC resources
- \* Scholarships and academic HRD: A breakdown of the CTU-IUC budget by main budget lines learns that the scholarship programme is the largest programme component in budgetary terms. Scholarships account for almost one third (32.44%) of the total programme budget. When taking into consideration the rather limited outputs of the scholarship programme in terms of academic staff development (number of M.Sc., M.A., Ph.D, ..., with for example a total of 12 PhDs graduated for the whole programme and another 10 in the pipeline as of the end of the programme), one cannot but conclude to a rather limited efficiency of this important programme component, even in spite of its high intrinsic value and high appreciation by all parties concerned. Moreover, the 10 or so pipeline PhD students are about the finish their doctorate, so that number of graduates will substantially increase in the next twelve months, raising the overall efficiency of the programme's human resources development programme considerably.
- \* Efficiency in research: A gradual increase in research efficiency has materialized for example in terms of number of M.Sc. and Ph.D. theses successfully completed,

- as well as for the number of publications (with outstanding performance in this respect in the second five year cycle for example in R.2.3 with an impressive record of both international and local publications), number of contributions to international conferences and number of research projects.
- \* Efficiency in outreach: With the basic infrastructure put in place and significant gains in staff development, most substantial improvements in efficiency have been realized with regard to outreach in terms of average number and value of consultancies / research contracts acquired per college/institute and/or per trained staff member and also in the fields of social extension and policy advice. Also institutional networking (domestic and international) has successfully taken off in is gradually expending further, both quantitatively and qualitatively.

# Efficiency Strengths - Key Observations:

- \* Generally in the second half of the IUC programme, enhanced overall efficiency of the programme and most of its constituent individual projects is noted, especially when compared to the pre Mid-Term Review period;
- \* Maximum use is made at CTU of the enhanced Human Resources capacities for both teaching and research purposes (to the extent even that use of human capacities not exceptionally get overstretched even), with a disproportionately high work load on the former component;
- \* Generally, throughout CTU and particularly in the IUC programme there is a most laudable overall commitment of staff and enthusiasm to take on new assignments;
- \* Gradually more efficient use of upgraded ICT and networking equipment, laboratories, lab equipment, etc. materialized;
- \* Flexibility in adapting to changed circumstances. This has been noted particularly, but not exclusively, in project E.I on distance education. Programme management was able to reorient this project to campus based e-learning and e-teaching when the distance education strategy e.g. at the level of the Satellite Universities, got de-emphasized. Successful programme / projects management adaptations were also noted in case of changes / turnover in key personnel;
- \* Further strengthened coordination and collaboration at the side of the involved Flemish Universities was acknowledged as such by both the VLIR-UOS Secretariat and the individual Flemish Universities concerned;
- \* Intense consultation and follow-up contacts between Flemish and CTU partners through various means, including exchange visits, steering committee meetings (at CTU or in Flanders), e-mail correspondence, etc.;
- \* Complementarity of VLIR inputs to those of other donors (this particularly pertains to the complementarity with the MHO programme in the first five year period).

## Efficiency Challenges / Issues Needing Attention - Key Observations:

- \* The high burden of other tasks (especially teaching) has a strong negative impact on the efficiency and effectiveness of the Human Resources Development (HRD) programme component (e.g. delays in PhD graduations);
- \* More particularly, in general the high teaching workload negatively affects efficiency of research processes;
- \* Limited use of intermediary organisations affects the efficiency of the extension / outreach programmes (limited multiplier effects). The reality is one of academic

- staff engaging itself in extension work at the level of the ultimate beneficiaries, which not in all cases is the most cost-efficient conduit;
- \* The considerable number of staff abroad in staff development programmes affects the operations at the CTU mother units concerned (non-filled vacancies);
- \* Salaries, emoluments and incentives of CTU staff (e.g. teaching at Satellites) in not all cases ensure optimum efficiency
- \* End of MHO programme by the moment of the MTR and no replacement complementary to the IUC programme has materialized at that time.

## Some More In-Depth Comments on Efficiency Aspects:

- \* Factors with a positive impact on projects / sub-programmes efficiency in either the first or the second five year CTU-IUC programme period include the following:
  - Flexibility: The programme and its constituent individual sub-programmes / projects in general have proven to posses the necessary flexibility to adapt to changing conditions in the programme's broader environment. For example, E.I refocused on e-learning and e-teaching instead of distance education; curriculum development and syllabus writing are adapted well to the signals from the industrial sector and from the economy of the Mekong Delta region in general.
  - Staff dynamism and enthusiasm: Staff dynamism and enthusiasm have been important factors positively affecting efficiency of the projects / sub-programmes. They also have been important factors as compensation for cases of lower relative productivity.
  - Close consultation and follow-up processes between the different responsible parties concerned, especially between the Flemish and CTU project leaders, and also between the project co-ordinators and between the project secretaries as far as the overall programme is concerned.
  - Equipment and infra cost-efficiency: Strategies have been developed to make more intensive and better co-ordinated use of available equipment and infrastructure (e.g. Learning Resource Center, central "advanced laboratory", multimedia laboratory, ...).
  - Complementarity with other externally assisted programmes: The first five year cycle of the VLIR-IUC programme with CTU for example was truly complementary to the Dutch supported MHO programme through NUFFIC. This complementarity in for example the ICT sector had important repercussions for the overall performance and efficiency of the programme.
  - Secondary effects and spin-offs: Moreover, due to the enthusiasm and commitment of CTU staff also spin-offs, secondary effects of the initiatives launched under the VLIR-IUC programme have materialized substantially. This no doubt is one of the main achievements / success stories in the second five year period of the VLIR-IUC programme. Additional initiatives surpassing original plans and targets are introduced by CTU staff. This phenomenon pertains to both education and research projects / sub-programmes, therefore having important positive effects on overall programme efficiency.
  - Strong organisational level of stakeholders: The existence of well organised stakeholder groups has an important positive effect on the design and execution of outreach / extension strategies and programmes which are relevant for the overall socio-economic development of these target groups /

- clients / beneficiaries, and which therefore are also sustainable.
- Programme fragmentation: In the first five year cycle of the CTU-IUC programme, there was rather strong fragmentation of the programme Although inter-projects co-ordination under the CTU-IUC programme was gradually improving and strengthening, the initial fragmentation of the programme over not less than nine (9) largely independent projects / sub-programmes still had negative repercussions on the efficiency of the programme and of its constituent projects / sub-programmes. One of the recommendations of the MTR was a reshuffle and rationalization of the individual projects under the CTU-IUC and this rationalization to a large extent was successfully executed.
- \* Factors negatively affecting projects / sub-programmes efficiency in either the first or the second five year CTU-IUC programme period include the following:
  - Frequent re-organisations and re-orientations: The frequent re-organisations of CTU and the re-orientations of the higher education policy and strategies in the Mekong Delta in genera (especially in the first five-year cycle, with the repercussions they entailed for VLIR-IUC programme strategies and concrete sub-programmes / projects, have put a burden on VLIR programme efficiency. Some projects needed to be revamped / re-oriented not for project intrinsic quality or technical reasons, but for reasons beyond the scope of the project.
  - Teaching at the Satellite Centres: The substantive teaching by CTU staff at the Satellite Centres is highly time-consuming and has a high visiting staff / students ratio. Moreover, it substantially reduces staff availability for core tasks at CTU campus in relation to both teaching and research. This situation ultimately results in lower productivity and efficiency of the academic staff concerned. This problem particularly pertains to the first 5-year programme period. Gradually more focus was given back to campus training
  - Staff development abroad: As illustrated in the discussion on human resources development of staff<sup>33</sup>, the CTU entities involved in the VLIR-IUC programme have quite some core staff abroad for considerable periods of time, affecting operations in their respective home entities. In cases as the E-2 and initially R.2.3 projects / sub-programmes, this situation puts serious constraints on the operations of the entities concerned. This is particularly the case for full-time PhDs, with core staff abroad for several years. On the other hand staff development, as proven by that same R.2.3 project, is an essential investment for the future and the above situation of core staff shortage for HRD reasons is expected to affect a relatively short transition period only.
  - Salaries, emoluments and incentives of CTU staff: Despite the high commitment and enthusiasm of CTU staff, the generally restricted remuneration packages oblige staff in many cases to look for alternative, second sources of income. Also, with employment opportunities in the private sector raising and conditions at private universities not seldom more attractive, the danger of substantive staff turn-over is not imaginary.
  - Delays in fund transfers: Delays in receipt by Can Tho University of programme resources seriously hamper smooth (sub-)programme implementation, thus having important negative repercussions on (sub-) programme

- performance and efficiency. This problem, noted with regard to the first five year cycle, persisted in the second five-year cycle, particularly in the last one year or so, and urged CTU to pre-finance from its own resources.
- Centralized financial management: Financial management of the projects / sub-programmes is not decentralised to the level of the respective projects, bringing with it a situation not always conducive to efficiency. For example, the projects / sub-programmes are not availed of authenticated statements of expenditures, so in case of budgetary surpluses no recommendations can be made by the projects / sub-programmes concerned for necessary re-allocations needed in the pursuit of the stated objectives. Also, as reported earlier, the total expenditures in the North as reflected in the self-assessment reports and tables, are calculated as the mathematical balance between the approved budget and the total expenditures in the South.
- *ICT networks and internet access*: While the quality of the ICT net-works at the Can Tho University campus has greatly improved in the second programme cycle, access to the internet problems (amongst others) have still persisted somehow, ultimately hampered efficiency of programme implementation.

The scheduled end of the MHO programme brought with it additional opportunities for the VLIR-IUC programme, while at the same time posing challenges to avoid that the productivity and efficiency of the IUC programme (particularly of E1) will be negatively affected by this termination of the MHO programme.

In short, the still rather limited number of graduates of the scholarship programme (particularly in relation to PhD graduates), the underutilization so far of (specialized) intermediary organisations for extension and outreach work, amongst others are just but a few of concrete symptoms of a still rather limited programme and individual projects efficiency, however with steadily improving performance on this criterion.

## **Impact**

## Some Methodological Remarks

Impact concerns the (sub-)programme results at the highest level of the VLIR-IUC programme vertical intervention logic, thus at the level of the (sub-)programme goals. Impact therefore relates to the results in terms of institutional strengthening of CTU and of socio-economic development of the Mekong Delta Region.

Even at this final evaluation of VLIR IUC programme implementation with CTU at the end of the ten year cycle, impact assessment is rather premature, since impact is only manifested with a time lag at best towards the end of a programme cycle only (end-of-programme impact evaluation), if not basically after the programme has already terminated (ex-post impact evaluation). For this reason, impact assessment at this end stage of the programme basically relates to *impact potentials*.

Another difficulty related to impact assessment is known as the "attribution problem": the fact that there is a correlation between two phenomena does not necessarily imply a causal relationship between these facts / processes occurring at the same time. This particularly pertains to capacity building and socio-economic development, which are

dependent on and influenced by so many factors other than those directly related to an international co-operation programme as the VLIR-IUC programme. To isolate and measure the impact directly attributable to the VLIR-IUC programme requires a more sophisticated multivariate analysis, which goes far beyond the intentions and means of the current review exercise. Presented below therefore are a number of general observations and feedback impressions only.

## Impact Assessment Scores

The assessment of the VLIR-IUC programme with CTU on the higher level performance criterion of impact got an average score of 67 %, together with efficiency (64%) the lowest criterion score. This summary figure gives an indication of the challenges still to be met by the programme as far as ultimate impact generation with regard to CTU institutional strengthening and contribution to socio-economic development of the Mekong Delta are concerned. At the time of the Mid-Term Review, programme impact potentials were rated at 62% only, hence the second five year cycle brought with it a considerably enhanced programme impact performance

Based on reported performance and on direct feedback from the stakeholder interviews, best scores on (potential) impact generation are realized by projects / sub-programmes E.I, E.2, R.I.I and R.2.I. Average<sup>54</sup> performance is registered with the bulk of projects. Lowest scores are with the R.I.2 project.

## Strengths

A summary overview of the main VLIR-CTU IUC programme strengths in terms of (potential) impact generation, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:

- \* Strong regional and local development impact of teaching at satellite universities / community colleges;
- \* Curricula and courses in principle are developed from the viewpoint of / taking into consideration their facilitation of regional and local development;
- \* The knowledge and skills of graduated students is well adapted to the needs of the Mekong Delta economy in general and of the industrial sector in particular;
- \* High short-term absorption of graduates into the labour market. By way of illustration, 70 to 80% of the graduates from E.2 mechanical and environmental engineering reportedly is employed within six months after graduation;
- \* Internships within local companies or administrations are becoming standard integral part of a number of curricula;
- \* The general and relatively fast access to the internet on the campus signifies an opening to the global academic world to students and staff;
- \* For quite a number of research projects, fundamental research actually provides the basis for a wide variety of applied research;
- \* The increased demands for CTU research from both the public and private sectors based on recognized excellence is a strong indicator of effective impact;
- \* Autonomous and proactive application of knowledge and research skills to other (related or not) subject fields is another important indication of impact;
- \* Capacities of strengthened units by the IUC programme are spilling over to other units through interdisciplinary collaborations (multiplier effects proving impact beyond the strict boundaries of the IUC programme and projects);

- \* Some units with critical mass are capacitated to generate their own MSc and PhD graduates within CTU, thus ensuring impact and sustainability;
- \* Capacity strengthening of institutional extension stakeholders as indirect effect of the extension / outreach programme components of the research projects has been getting more systematic attention and is an important tool for enhancing outreach and extension multiplier effects and thus broadened (potential) impact at the level of the ultimate target groups of beneficiaries;
- \* Enhanced direct or indirect impact of an increasing number of researches and their applications through policy making and/or extension programmes on sustainable environment protection;
- \* Direct or indirect socio-economic impact of applied researches on farmers conditions of living, household incomes and poverty alleviation is being generated by an increasing number of projects, spearheaded by project R.1.2.
- \* The dynamic networking initiatives started up under different IUC projects (e.g. Vi-FINET, etc.) will further strengthen sustainable impact generation of the CTU-IUC programme beyond the strict boundaries of CTU.

Some further observations, findings and/or assessments on the above programme impact strengths:

- \* Overall policy framework of the programme: The VLIR-UOS mission statement and IUC declaration of principles explicitly refer to institutional strengthening of the partner universities and to their role as academic catalyst of regional socioeconomic development, thus highlighting development impact. This further strengthened development orientation of the IUC programme is also reflected in the updated format of the final self-evaluation reports established by the VLIR-UDC secretariat, with a clear differentiation of academic and development objectives.
- \* Rationale of CTU-IUC sub-programmes: In the background and justification information of the respective projects / sub-programmes under the VLIR-IUC programme with CTU (e.g. in the respective self-assessment reports for the final evaluation) explicit reference is made to the relevance and the potential impact of these projects with regard to CTU institutional strengthening and regional development of the Mekong Delta.
- \* Impact of HRD programme: The substantive IUC programme investments in human resources development of CTU staff, which towards the end of the programme were effectively bearing fruits with stronger intensity, can be reasonably expected to entail strong long-term effects and impact in terms of CTU institutional strengthening and capacity upgrading with regard to teaching, research and outreach services. In different projects for example, internationally trained CTU staff is already in the process of training other local staff (multiplier effect). Some colleges/institutes are already organizing their own PhD graduate degrees.
- \* Curricula: Continued care for the adaptation of curricula to make them better suit the development needs of the Mekong Delta region is resulting in knowledge and skills of the graduated students better fit for the opportunities and adapted to the requirements of the Mekong Delta economy in general and of the industrial sector in particular.
- \* Involvement of private sector and stakeholder groups: Empowerment of the evolving private sector and of stakeholder groups as farmers associations for example by including them in project steering committees or by inviting them to curriculum

development workshops, is strengthening their commitment to and ownership of the programme/project results and thus further strengthen potential impact and development relevance. Under projects E.2, R.I.I and the four fruit projects (R.2.I to R.2.4) industrial contacts are maintained with and services rendered to for example the Song Hau State Farm with regard to rice drying, and also with the fruit processing industry (grapefruit, oranges, ...). Extension services to farmers through farmers associations and extension services of the Ministry of Agriculture are being strengthened under for example R.I.I, R.I.2, R.2.I, R.2.3, R.2.4 and R.3.

- \* National policies: CTU policies and strategic plans are strongly embedded in the national policies regarding higher education and regional development. Moreover, CTU management is strongly involved in national and provincial policy making.
- \* Selection of research topics: There is increased attention for research topics with a high potential development impact. Decentralized research priority setting by the Ministry of Science and Technology (MOST) as present is expected to further strengthen development relevance orientation of the researches and thus of their ultimate (direct or indirect) impact.
- \* Use of media: CTU makes increased use of the local media (TV, radio) and participates in local PR and other events to make its programmes better known to the general public, to socio-economic organisations, to the business community etc. This multi-media Information, Education and Communication (IEC) got increasingly stronger support from the multi-media laboratory supported by project E.I (particularly during its first phase), and now is also decentralised to the different colleges and institutes (e.g. R.I.2 co-produced a documentary which was broadcasted on regional TV and beyond).

#### Main Findings and Observations: Challenges / Issues Needing Attention

A summary overview of the main VLIR-CTU IUC programme remaining challenges and issues needing attention in terms of (potential) impact generation, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:

- \* Further development of CTU into a national and international centre of excellence requiring enduring special managerial and academic attention in order to ensure lasting programme impact and sustainability;
- \* The further development of CTU as centre of excellence into a network hub for North-South-South (NSS) cooperation with Flemish and other universities and vice-versa;
- \* Further enhancement of development impact of applied research through extension in terms of income generation, poverty alleviation and environmental sustainability. This requires more intensive and qualitative tapping of specialized intermediate organisations for extension services, as such ensuring ownership, sustainability and multiplier effects, as well as enhanced cost-efficiency and cost-effectiveness with the CTU academic staff concerned concentrating on high value added research of which the findings may be developed efficiently and effectively into extension messages and programmes to the benefit of the Mekong Delta population;
- \* Exploration of means to ensure that CTU high quality researches create their own demand and thus ensuring lasting impact and guaranteed sustainability;

- \* More proactive pursuit of spin-offs, e.g. through social and commercial marketing, requiring such strategies and action plans;
- \* Further pursuit of international networks (e.g. modeled after ViFINET), in the South-East Asia region, but also beyond in the Asian context and internationally, for example in a North-South-South context;
- \* Enhanced marketing of / public relations for academic development in Belgian / Flemish Universities, already reported on in the MTR, remains an issue, although that major improvements are noted in the context of the CTU-IUC programme (as proven for example by the CTU-IUC programme closing event cum international workshops and symposium)

Some further, observations, findings and/or assessments on the challenges / issues needing special attention as far a programme impact is concerned include the following:

- \* Further strengthening of impact: Effective impact generation towards the end of the ten year CTU-IUC programme substantially improvedl, as becomes evident from a screening of the results reported on the respective key performance indicators of the programme's key result areas.<sup>55</sup> This is evidenced for example by:
  - Improved number off high quality human resources / staff, but substantive challenges still to be met in order to become sustainable Centre of Excellence;
  - Student centred teaching is still rather marginal;
  - Enhanced research outputs and results (both quantitatively and qualitatively) but important challenges still to be faced, particularly after PhD graduation;
  - Outside consultancy assignments and contract research firmly on the rise, but needing to be structured further, both organizationally (cfr. through the establishment of Research and Consultancy Centres see discussion under 2.1.2.3 here before) and procedurally;
  - Gradually expanding reach of extension services needs further institutionalization and networking (e.g. collaboration with specialized intermediate organisations).
- \* Inter-projects and multidisciplinary co-ordination: Inter-projects and multidisciplinary co-ordination in the pursuit of maximum impact generation has been strongly enhanced in the second five-year programme cycle. Most projects have an environment component integrated in their design as cross-cutting thematic concern. But there is still ample room for further improvements. There for example is still no systematic (or even explicit) economics component in the research projects, although that this has been strongly argued for in the MTR already.
- \* Impact generation as continued concern in the post-IUC era: Effective impact generation therefore will remain one of the most important challenges if not the single most important challenge in the post-IUC programme era. Effective impact generation is crucial for CTU in its pursuit of developing further into a regional academic centre of excellence. It also ensure continued interest from both the public and private sector in quality research by CTU, in turn contributing to CTU's sustainability.
- \* Rapidly changing environment: The rapidly changing socio-economic environment of CTU brings with it extra challenges with regard to CTU-IUC programme relevancy and impact generation. Flexibility and maximum alertness for research

- needs rooted in the Mekong Delta society and regional economy remain important success factors.
- \* Lack of impact data and provisions for impact assessments: No systematic (quantitative and qualitative) data collection has yet been taken place in the framework of the IUC programme regarding possible programme impact on the ultimate programme beneficiaries, neither within nor outside CTU. Moreover, no explicit budgetary provisions have been foreseen in the programme / sub-programmes for internal and/or external impact assessments at the level of the beneficiaries. If impact indicators have not been formulated, there has not been systematic data collection on these, and as such impact measurement has largely remained at the lip-service level only. No systematic initiatives from overall programme and individual projects management have been noted to further strengthen impact focus of the programme and its constituent sub-programmes.
- \* Quality of marketing of Flemish academic excellence: There no doubt are improvements lately but overall still limited marketing / public relations initiatives have been undertaken in Vietnam for academic development in Belgian / Flemish Universities, despite available Vietnamese national resources which can be tapped for promotion of international academic HRD. This no doubt need to be looked into in a more systematic and strategic manner. Networking (e.g. NSS), joint degrees, joint researches, continued exchanges and HRD programme, all need to have a stronger marketing dimension in Flemish perspective in order to maximize win-win cooperation modalities between Flanders and Vietnam.

## Development Relevance

In the Terms of Reference of the evaluation, development relevance is defined as "the extent to which the planned collaboration is addressing immediate and significant problems and needs of the concerned partners as well as regional and national policy makers." <sup>56</sup> As such, content wise the criterion is related to the outreach criterion under the programme progress key result areas (see earlier Chapter on page 69) and also to the effectiveness, impact and sustainability criteria discussed in this present chapter on higher level programme performance.

## Development Relevance Assessment: Strengths

A summary overview of the main VLIR-CTU IUC programme strengths in terms of development relevance, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:

- \* The VLIR-IUC programme with Can Tho University in line with the national ten-year socio-economic development strategy of Vietnam (2001-2010);
- \* The VLIR-IUC programme with CTU is in line with the national Comprehensive Poverty Reduction and Growth Strategy (2002)<sup>57</sup>;
- \* CTU accessibility to students from remote areas, further facilitated by the Satellite / Community Colleges in the thirteen Provinces of the Mekong Delta region;
- \* CTU as regional university strongly pursuing to contribute to regional and local development (as enshrined in its mandate and vision);
- \* Strong development relevance of the CTU-IUC programme and of its components, with for example development relevance at the basis of curriculum and course development, with development impact dimensions integrated in

**<sup>56</sup>** See Terms of Reference Chapters on pages 220 and 221. The ToR are attached as Annex 1 (page 207) to this report.

<sup>57</sup> Relevant excerpts of this Poverty Reduction and Growth Strategy are presented under Annex 5 (page 242) to this report.

- the research protocols, with an explicit and strong extension and outreach programme component, etc.;
- \* Substantive contribution to the academic uplifting of the Mekong Delta (30.000 students, CTU Satellites, and spin-offs as Mekong 1000);
- \* (Applied) researches have a strong regional and local development orientation (based on needs assessments);
- \* Sustainable environment concerns are integrated in projects design and execution (as duly integrated cross-cutting concern);
- \* Strong outreach to the poor (potentials or effectively);
- \* CTU research influences diversification of agriculture in Mekong Delta;
- \* Researches generating numerous spin offs, including industrial applications (effective or potential);
- \* In a number of cases and sectors, policy preparation and formulation is based on results from CTU research;
- \* Strong staff commitment of both CTU and Flemish partners in the IUC programme to sustainable development and environment.

Some further observations, findings and/or assessments on the above programme strengths in terms of development relevance:

- \* Conformity with national policies and plans: The VLIR-IUC programme with CTU is in line with the main national development policies, plans and programme of Vietnam, including:
  - The Ten-Year National Socio-Economic Development Strategy of Vietnam (2001 2010);
  - The national Comprehensive Poverty Reduction and Growth Strategy (as officially proclaimed);
  - The policies, plans and programmes on higher education of the Ministry of Education and Training (MoET) and of the Ministry of Science and Technology (MoST) with latest MoST research priorities solidly anchored in regional and local needs as surfacing from numerous consultations and internal discussions.
- \* Outreach to the poor: The programme has strong outreach potentials to the poor and in a number of cases also effectively reaches out to the poor segments of Mekong Delta society (e.g. project R.I.I). This pertains both to the education projects (e.g. the AI [now EI] Distant Education programme through the network of CTU Satellite Centres and Communal Colleges particularly during the first phase of the IUC programme, or E.2 with curricula developed in close consultation with key stakeholder groups of both the public and private sectors) and to the research projects (through their, often explicit and substantial, outreach and/or extension components).
- \* Easy accessibility for students from remote areas. The CTU campus has a large dormitory for students from remote areas in the Mekong Delta. Moreover, CTU actively reaches out to these areas through the cited network of CTU Satellite Centres at Provincial level and even below through Communal Colleges and/or people's organisations.
- \* Economic diversification: VLIR-IUC research at CTU facilitates diversification of agriculture in the Mekong Delta (e.g. diversification of rice mono-cropping into fruit production and aquaculture)

\* Environmental concerns and sustainable development: are common concerns in virtually all education and research projects, either explicit as for example E.2 with the strengthening of the Environmental Engineering department and programmes, or R.3 on soil fertility degradation, or indirectly as for example R.1.1 concerned with water and soil conditions of fish / shrimp ponds.

# Development Relevance Assessment: Challenges / Issues Needing Special Attention

A summary overview of the main VLIR-CTU IUC programme challenges / issues needing special attention in terms of development relevance, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:

- \* Ensuring a further and more solid integration of socio-economic aspects in research (including baseline surveys, impact assessments on a series of indicators) and utilization of effective impact findings and results in promotion campaigns, creating new, sustained demand for CTU research and other services;
- \* Social and cultural themes becoming new research priorities: These constitute I of the 7 new research priorities at CTU as determined by the Ministry / Department of Science and Technology (MOST/DOST) in consultation with regional and local authorities from the Mekong Delta Region. Any post-IUC project will need to give more explicit attention to these cross-cutting issues;
- \* Likewise, continued addressing of gender issues remains another challenging issue (e.g. gender differentiated disaggregation of economic statistics, gender balance in recruitment and HR strategies, etc.) in the post-IUC era;
- \* Maybe one of the biggest challenges is the further strengthening of north-south-south and of south-south cooperation and networking for staff development, teaching and research (cfr. ViFINET example) which may take the form of different modalities (institutional networking for HRD, joint researches, joint degrees based on complementary credit points courses, exchanges of staff and students, etc.);
- \* In the same context, further strengthening of networking with other institutes in the country and in the South-East Asia region (e.g. in the ASEAN context);
- \* Strengthening of links and complementarity of research initiatives in Vietnam supported by different international co-operation programmes to the benefit of CTU;
- More systematic ways of licensing and commercializing research results (spin-off strategies);
- \* Stronger mobilisation and active involvement of intermediary actors for extension and outreach (NGOs, local government, farmer organisations, etc.).

Some further observations, findings and/or assessments on the above programme challenges and issues needing special attention in terms of development relevance:

\* Didactic aspects in the education projects: Inadequate attention for the didactical requirements of courseware development under A.I (now E.I) during the first five year cycle of the IUC programme has resulted in limited usefulness and actual use of the produced materials and thus very limited development relevance from a sustainable distant education perspective. This has been successfully corrected in the second five year cycle by strategically reorienting the programme to campus based e-teaching and e-learning.

- \* Economic aspects in the research projects: Research protocols tend to contain in-adequate provisions for the results, effects and impact of the research for the overall socio-economic development of the Mekong Delta region, its communities and people. In the applied research projects with an important farmers extension component, the economic dimension in terms of sustainable positive effects on farmers household incomes is either not present or insufficiently highlighted. The same concerns pertain to the industry oriented research projects with regard to gainful employment generation or self-employment opportunities. More systematically addressing these crucial development relevance issues remains a main challenge for the post-IUC era.
- \* Gender issues: Gender sensitivity as cross-cutting programme concern is not prominently present in the CTU-IUC programme. No or limited attention is given to gender concerns with regard to for example: staffing of the IUC programme, human resources development of CTU staff, generation of gender differentiated statistics, gender concerns in curricula, etc. The observations and recommendations to that effect made on the occasion of the MTR remained largely unattended to.
- \* South-South and North-South-South Co-operation: While isolated initiatives had been introduced during the first five year phase of the VLIR-IUC programme (e.g. in projects / sub-programmes A.1 with SEBA, B1, B3 and B6 at that time), south-south co-operation remained largely the exception rather than the rule for all programme components (HRD, education and research alike). This issue has been more systematically addressed in the second five year cycle phase, amongst others in projects R.1.1, R.2.2 and R.2.3, but important challenges still remain in further institutionalizing this south-south cooperation. A special challenge for the post-IUC era remains the further strengthening of north-south-south cooperation to the benefit of all parties concerned in a win-win situation. As far a spin-offs are concerned, further promotion of fair trade initiatives in an international context remains an especially challenging undertaking with most substantive development relevance potentials (in line with the old UNCTAD dictum of "trade not aid").
- \* Links between research initiatives: Links and exchanges between researches within CTU and even more prominently so with researches conducted in other institutes / entities have been substantially strengthened in the second phase of the IUC programme, but still need to be strengthened further as a matter of priority in the post-IUC era. This particularly pertains to researches supported by different international donors. There is no use in reinventing the wheel and moreover such exchanges strengthen CTU as a learning organisation and enhance cost-effectiveness and cost-efficiency to maximize development relevance.
- \* Globalisation and economic vulnerability of regional and local economies: The dependence of local production on the global economy and international markets and thus its vulnerability in terms of contribution to sustainable development is maybe best illustrated by project B1. At the start of the VLIR-IUC programme, local production of artemia was realized at an average price of 40-50 \$ / kg for the final product. But at mid course of the CTU-IUC programme, artemia was imported from the United States for only 20-25 \$ / kg. During the second five year cycle of the CTU-IUC programme, R.1.1 project provided additional evidence of the economic viability of the artemia production, particularly by pointing at the substantive additional incomes generated by it for many poor households in the

Mekong Delta region. Nevertheless, the above again proves the capital importance of economic analyses and feasibility studies for the identification and formulation of international co-operation projects and programmes as for example CTU-IUC in this case. In the context of the current global financial and economic crisis, these arguments hold with even stronger validity and urgency. A more prominent attention for socio-economic aspects is required for all research projects / sub-programmes. Ways of strengthening the institutional co-operation with SEBA for this matter in the post-IUC era remain a priority issue needing to be explored further in a more systematic manner.

# Sustainability

## Some Methodological Remarks

Under this sixth programme high level performance criterion, particular attention is paid to financial and institutional sustainability aspects. In the evaluation ToR sustainability is also described in terms of mutual interest in the programme at both Flemish and Vietnamese sides. One of the possible indicators of mutual interest, namely the quality of the follow-up plan for implementation after the 10 year period of partnership with earmarked funding is discussed separately hereafter under chapter 2.6, in view of its special importance for the post-IUC programme period.

Closely related to the sustainability criterion is (sub-)programme **ownership**. As argued before<sup>58</sup>, with the exception of financial management and reporting, the programme and its sub-programmes / projects are well owned indeed by the respective CTU stakeholders concerned. This may be illustrated by the standard process of curriculum development at CTU, involving many parties in an intense consultation and validation process: (1) the draft curriculum is prepared by the Department concerned, (2) followed by an internal consultation process in the College / School. (3) It then is submitted to the rector who has his/her own objectives and orientations from the perspective of the university as a whole. (4) Only then it in principle is forwarded to the Belgium co-promoter for comments. (5) Next step is the submission to the Training Department of CTU for necessary updates if so required, and also (6) to lecturers, to alumni plus to a special training committee, consisting of members of CTU and of the Provinces of the Mekong Delta, set up to decide on final updates if so required. Hence, curriculum development is a continuing, participatory process, guaranteeing stakeholder ownership and thus sustainability. It should be noted that the above is the ideal participatory process and that not all curriculum de-velopment processes follow the same participatory process rigour.

Another criterion related to sustainability is **replicability**. There indeed is strong empirical evidence of replication of what has been learned under the VLIR-IUC programme outside the CTU entities covered by the programme. This for example pertains to the various research initiatives where research techniques and findings are also applied in related fields (e.g. project R.I.I on artemia with also applications in the fields of shrimp, mudcrab, seabass and related researches; or project R.2.4 on enzyme chemistry, originally focused on pineapple, but gradually expanded to papaya, citrus and further to fish proteins, earthworms, etc; or project R.2.2 with microbiology studies and techniques related to citrus greening disease expanding to cover gene transformation protocols for selected rice varieties with constructed vectors (RIP project on "Rice

breeding tolerant to brown plant hoppers". E-courses development for example is not only limited to the pilot entities covered by the A.I/ E.I sub-programme (AFSI/CAF SoE and SEBA, and spearheaded by STIC-CIT), but e-teaching / e-learning software is also produced in other departments, colleges and schools. Laboratory teaching and research has much wider applications than aimed for by the individual projects, with applications in many other fields than originally planned.

## Findings on Financial Sustainability

Paucity of financial data and information: A first general observation relates to the relative scarcity of financial data and information made available to the Evaluation Commission, fewer than on the occasion of the Mid-Term Review. The financial sheets included in the Self-Assessment Reports (both collective and individual) are fragmented and incomplete, with moreover some inconsistencies. Explanations in the footnotes of the MTR reports on the general programme mention with regard to the lacking data: "These data will be made available at the moment of the evaluation." On the other hand, the self-assessment reports on the individual projects / sub-programmes mention in the footnotes: "In the general information report, information on the division of the budget per project and per budget line is to be given. This information should not be repeated here." Hence, the reader stays empty handed as far as financial information is concerned.

Despite different follow-ups, no summary financial data were provided to the Evaluation Commission in the formats requested. No or incomplete information was provided with regard to:

- Breakdown of project / sub-programme budgets by main budget line;
- Real expenditures (e.g. Expenditures in the North are reflected in the financial sheets as the result of a formula detracting expenditures in the South from the approved budget);
- Timing and amounts of actual fund transfers;
- CTU counterpart funding / inputs value of the VLIR-IUC programme;
- CTU financial resources from other donors or other sources of income.

The majority of the set of financial tables included under Annex 7 to this report is based on the base financial data provided by the VLIR-UOS Secretariat. These in first instance relate to approved (realigned) budgets and reported expenditures per financial year broken down by main IUC programme budget lines and presented by CTU-IUC project / sub-programme. The first two sets of tables presented under Annexes 7.1 and 7.2 are based on the data provided to the Evaluation Commission on 30 October. The summary table under Annex 7.4 is based on the information provided in the course of the feedback process of comments on the first draft final evaluation report. The CTU overall budget figures originate from the CTU-PCO on the occasion of the Mid-Term Evaluation and concern the first five year cycle of the IUC programme.

Needless to point out that the relative scarcity of financial base information does not make possible a more in-depth financial analysis of the programme, and thus also not an assessment of the financial sustainability of the programme. As pointed out earlier, some additional information was collected by the Evaluation Commission from other sources, e.g. the CTU Mid-Term Plan in relation to the CTU overall budget and financing but these figures relate to the years directly preceding the IUC programme and to the early years of the programme only (see table below covering the years 1996–2000)

Table 14: Trends in CTU Financial Sustainability over the period 1996 - 2000, measured by Main Sources of Funding (in % of CTU Total Budgetary Resources)

Main Funding Source	1996	1997	1998	1999	2000	Change 1997-2000	Average 1997-2000
Ministry of Education & Training	7.63%	41.03%	30.35%	28.90%	33.78%	-7.25%	32.87%
2. CTU Tuition Fees and Others	1.74%	16.25%	19.33%	18.30%	17.66%	1.41%	17.98%
3. Training Contracts, Scientific Research Contracts & Services	2.96%	4.10%	12.20%	16.95%	22.90%	18.80%	15.36%
Total Own Resources Generation (2+3)	4.69%	20.35%	31.53%	35.25%	40.56%	20.21%	33.34%
Total National Re- sources (1+2+3)	12.33 %	61.38%	61.88%	64.15%	74.34%	12.96%	66.21%
4. From International Aid and Donations	87.67%	38.62%	38.12%	35.85%	25.66%	-12.96%	33.79%
Overall Total (1+2+3+4)	100.00%	100.00%	100.00%	100.00%	100.00%		100.00%

Source: Base data from Annex 7 of the CTU mid-term plan "Building and Developing Can Tho University to the Year 2005" – calculations by the Evaluation Commission

Funding sources of Can Tho University: The above table shows the overall income of Can Tho University by main sources of income / funding. Over the period 1997-2000, the Ministry of Education and Training (MoET) was the largest financing source with about one third (32.87 %) of all financial resources. Tuition fees and other related income amounted to an average of 17.98 %, while training contracts, scientific research contracts and services represented 15.36 % of all income in the period concerned.<sup>59</sup> The average total of own resources generated by CTU itself thus amounts to 33.34 % of the total income (about one third), while the total of national resources amounts to 66.21 % (about two third of the overall budget). An average of 33.79 % (about one third) of total income originates from international aid and donations.

Trends in CTU funding from the perspective of financial sustainability: Even more interesting for assessing financial sustainability are the trends and relative changes in funding sources over the years, e.g. the period 1997-2000. It appears that the percentage of financing originating from international aid and donations has diminished over that period with 12.96 % (from 38.62 % to 25.66 %) pointing in the direction of an increased financial sustainability of the University and improved independence from international sources. Moreover, in the same period the own resources generated by CTU (from tuition and related fees and from training and scientific research contracts and services) increased by 20.21%, which is a further prove of a positive trend with regard to financial sustainability.

CTU summary budgetary figures by financial year provided in the VLIR-IUC General Information Report, integrated in the Self-Assessment Report<sup>60</sup> as Format No 1, show a dependence from external donors in the four year period 1999 – 2002 of respectively 17%, 26%, 20% and 16% providing less evidence of a strong positive trend

<sup>59</sup> The four year period 1997 – 2000 is taken for analysis only, since 1966 was a truly exceptional year with not less than 87.67% of all budgetary resources originating from international aid and donations in that year.
60 Reflected in this evaluation report under Chapter 2.3 on the overall added value of the IUC programme vis-à-vis other donor supported programmes. Financial management tables including summary budget, transfer and expenditures figures are attached under Annex 7 to this report.

in financial sustainability, at least in terms of independence from international donor sources.

It should be stressed again that the above figures and analysis pertain to the 1996-2000 period, hence to the early years of the programme. No information was obtained on the later years despite different follow-ups.

It should be noted that at the beginning of the 10 year cycle, the VLIR programme was a second fully-blown support programme to Can Tho University together with the MHO programme sponsored by the Dutch Government through NUFFIC. For the remainder of the 10 year support programme, the VLIR programme was the only multi-faceted institutional support programme to CTU. However, all along CTU has remained very successful in tapping additional ad hoc support for specific inputs, activities and projects from different bilateral and multilateral donors (AusAid, GTZ, French Cooperation, DANIDA, SIDA, AusAid, etc) in addition to the national and regional/local resources.

In addition to the VLIR-IUC programme, additional resources where provided from other Belgian sources, including BTC-CTB, Belgian Embassy in Vietnam, the Province of East-Flanders, individual universities under the VLIR umbrella (UGent, KU Leuven, Vrije Universiteit Brussel, UA, University of Hasselt). The fact that individual VLIR universities invested from their own resources in the cooperation with Can Tho University not only should be seen as an academic investment and institutional commitment to continued quality cooperation with Can Tho University as a priority international partner but also as a guarantee for in principle sustained and sustainable relations.

CTU counterpart funding of the VLIR-IUC programme: No figures are (made) available of the CTU counterpart funding or value of CTU inputs for the VLIR-IUC programme, nor for any of its constituting individual projects / sub-programmes.

Resources mobilisation from contracted research and commercial spin-offs: Only scattered and incomplete information is provided on the number, type and money value of consultancies and contract researches acquired as a result of outreach capacity strengthening under the respective VLIR-IUC projects / sub-programmes. Such income generation is reported by projects / sub-programmes E.2, R.1.1, R.2.1, R.2.2, R.2.3 and R.2.4. It may be reasonably expected that resources generation from the teaching, research and outreach services will increase over time, especially since the basis thereto has been laid in the first VLIR-IUC programme phase in terms of Human Resources Development and of teaching, research and outreach services capacity building. This has been further evidenced in the 2<sup>nd</sup> five year cycle of the institutional cooperation programme, which was characterized by a successful initiation and expansion of contract research, by starting commercial spin-offs, contracted policy advice, national and international networking etc. in a number of projects.

International donors and financing agencies: As indicated earlier, CTU is very dynamic and successful indeed in generating resources from a variety of international donors and financing agencies (including Japanese, Dutch, German, French, Australian, Asian Development Bank, World Bank, ...). Unfortunately, no details are provided on other national and international sources of income. In a meeting with the International

Department, it was indicated that the second largest internationally support projects is a World Bank Project (soft loan through MoET) focusing on infra development as well as on HRD.

VLIR special concerns and efforts to ensure financial sustainability of the international partnership: As will be further illustrated in Chapter 2.6 hereafter entitled "The Follow-Up Plan of the Programme", throughout and particularly during the last years of the ten year institutional cooperation programme, VLIR not only has persistently expressed its concerns about ensuring sustainability of the international cooperation between CTU and the Flemish Universities, but also has worked out concrete proposals and tools to that effect and coordinated closely with CTU to operationalize these. Some of the concrete initiatives and actions which should be mentioned in this regard include the following:

- Gradual reduction of VLIR-IUC financing in the last 3 years of the programme to ensure financial sustainability of the programme by the partner university progressively taking over financing of programme needs;
- Provisions for a phase-out year after the 10 year programme cycle;
- The VLIR post-IUC tool box consisting of various modalities of ad hoc financing of projects on a competitive basis, including for example: (i) Research Initiative Programme (RIP), before under the name IUC Research Fund; (ii) Close-the-Gap (CTG) ICT related proposals; (iii) North-South-South (NSS) proposals; (iv) South Initiatives (Sis), (v) Own Initiatives (OIs); etc. More information on the VLIR Post-IUC toolbox in incorporated under Annex 4 on page 242 to this report;
- Special provisions in the Terms of Reference of the Final Evaluation and in the Final Evaluation Self-Assessment Reports for "IUC Project Follow-up Planning" (Item IV);
- Special provisions in the Final Evaluation Self-Assessment Reports for "Sustainability and Overall Outlook" (Item III);
- Special questionnaire developed by the Evaluation Commission on post-IUC strategic directions, priorities, plans and concrete initiatives and proposals (see Annex 4, page 242);
- Special attention during the CTU-IUC programme closing events for follow-up and sustainability issues;
- Introduction of VLIR partners programmes and partners institutions specialized in post-IUC collaboration financing, including for example The Research Foundation Flanders (FWO-Vlaanderen) and the International Foundation of Science (IFS);
- Support to North-South networking initiatives and events (e.g. ViFINET, etc.)

To conclude: CTU and the VLIR-IUC programme have given special attention to processes of guaranteeing financial sustainability of the IUC programme, including a broad number of post-IUC initiatives and tools Also at the level of the individual constituent projects / sub-programmes of the VLIR-IUC programme, strengthening of own income generation from teaching, research and particularly outreach services has been especially attended to. There are initial success stories, however the road to full financial sustainability still remains rocky as this process cannot be considered as accomplished and thus still requiring special attention and continued collaboration between

the VLIR-IUC programme partners in the strategic perspective of guaranteeing full programme sustainability over time.

## Findings on Institutional Sustainability

Importance of CTU: Can Tho University is a very well established comprehensive university. It is by far the biggest university of the Mekong Delta region in terms of students, of staffing, of infrastructure and of budgets. It is getting increasing recognition as a regional academic centre of excellence, finding itself at increasingly important knots of regional, national and international networks.

Personnel changes and re-organisations: At the same time, CTU as institute is characterized by substantive changes in personnel and management (e.g. not less than 4 different rectors in the ten years of VLIR-IUC programme implementation). Also institutionally, CTU is not a "settled" academic institute but is characterized by frequent and sometimes drastic re-organisations. But no doubt also on the institutional level things are firmly settling down. For example, whereas on the occasion of the Mid-|Term Review, despite different follow-ups, the Evaluation Commission was not been able to get an official organisational chart of CTU, the organisational chart is now integrated in a presentation publication "Can Tho University 2008" and also published on the web ( www.ctu.edu.vn ), including a presentation of the different Colleges and Schools, Institutes and Centres, Departments and Offices. Moreover, changing institutional structures does not necessarily have to be a negative phenomenon, since this allows an open organisation as a university to maximally adapt and respond to changing demands and expectations from the stakeholders and the broader socio-economic environment (cfr. the recently updated determination of research priorities based on demand from society and the regional economy).

CTU in the national and regional education plans: CTU's overall structure and its position in the national and particularly Mekong Delta regional academic landscape is not uniformly defined. There remains a certain degree of uncertainty as for example caused by the plans for possibly a second large, comprehensive university at Can Tho catering to the needs of the Mekong Delta Region (in the framework of the "Vietnam 100" plan). At the time of the Mid-Term Review there were the plans to split Can Tho University as one of the only five comprehensive universities in the country at that time into eight mono-disciplinary universities, thus eight separate colleges / faculties. This splitting allegedly would be advantageous to CTU in budgetary terms. On the other hand there is Decree 10 of the Prime Minister providing more autonomy to the Universities, but as transpired from the interviews with quite some grey zones.

CTU as regional university: At the time of the Mid-Term Review, the reform programme envisioned Can Tho University to get the status of a regional university, which would be advantageous in budgetary terms. At that moment there are only 3 regional universities: one in the North and two in the Centre. At the present moment of the Final Evaluation it is not clear what the status of this discussion is neither if there has been any decision making to that effect.

Upgrading of CTU Satellite Centres at provincial level: At the moment of the Mid-Term Review CTU envisioned to further strengthen its outreach programmes through its Satellite Centres at provincial level. Of the 12 provinces of the Mekong Delta region,

14.6

five at that time received direct support through CTU's network of Satellites (Kien Giang, Tra Vinh, Tien Giang, Dong Thrap and Vinh Long). It has been argued earlier in this report, as was also done in the MTR report, that CTU teaching tasks in these Satellites are very labour intensive in terms CTU staff time and put a heavy burden on teaching and research at the central Campus itself. In national plans for higher education at the time fo the MTR, an upgrading of the status of these Satellite Centres is foreseen so that they can have their own staff and resources. CTU's role would than be focused on HRD of staff (training of trainers concept) and facilitation of distance education. In the meantime, in the course of implementation of the 2<sup>nd</sup> five year phase of the IUC programme, this policy and strategy of priority strengthening the CTU Satellite Centres has been largely abandoned with renewed focus on strengthening of e-network at the main campuses themselves.

# Sustainability: Main Assets / Strengths

A summary overview of the main VLIR-CTU IUC programme assets and strengths in terms of programme sustainability, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:

- \* First and foremost, there is the commitment, enthusiasm, dynamism and qualities of CTU staff;
- \* The practice of strategic planning at CTU (both medium-term and long-term plans) during the first five year period of the CTU-IUC programme cycle and the renewed interest to take this on in a more systematic manner again now at the end of the CTU-IUC programme as transpired from the interviews with CTU executive management;
- \* Different Colleges/Schools and Institutes/Centres have reached critical mass in terms of academic human resources to sustain academic excellence;
- \* Different Colleges/Schools and Institutes/Centres are at / are about at the capacity level of nurturing their own PhD graduates within CTU (possibly with support tutoring by Flemish or other international universities);
- \* The link-up and networking with local authorities for education and research priority setting guaranteeing their active support, both programme wise and financially;
- \* Steadily growing and pro-active interest of local stakeholders (from both public and private sectors) in CTU research and extension / outreach services (with demand creating / enhancing quality supply);
- \* Spin-offs from research are taking off and are gradually getting more proactively pursued by CTU staff and CTU Colleges/Schools and Institutes/Centres;
- \* In general, the positive achievement level of VLIR-IUC programme results at the end of this ten year institutional cooperation cycle;
- \* The strengthened international networking;
- \* The perspective of continued cooperation between VLIR Flemish Universities and CTU in the post-IUC programme period (cfr. post-IUC toolbox and related initiatives discussed earlier.

Selective additional CTU-IUC programme assets / strengths with regard to programme sustainability include the following:

\* The high retention rates of staff, including the formal commitment of staff who benefited from HRD opportunities abroad (e.g. in Flanders) to return to CTU

- and assume duties and responsibilities in their respective Colleges/Schools and Institutes/Centres;
- \* Base salaries and emoluments of programme staff basically / entirely on the counterpart account of CTU;
- \* Operation and maintenance strategies of infrastructure and equipment are in place, are budgeted on CTU account and are fully operational;
- \* (Joint) Research projects supported under the VLIR-IUC programme are mutually beneficial to both CTU and the Flemish partner universities concerned in a win-win situation appreciated by both;
- \* In case of delays in transfer of programme funds, pre-financing is ensured by either Can Tho University and/or the respective Flemish partner universities concerned through the overall programme co-ordination by RU Ghent;
- \* In a number of cases, the Flemish partner universities have financed and continue financing human resources development of CTU staff out of their own resources (e.g. at UGent, KU Leuven and Vrije Universiteit Brussel).
- \* The active interest of private sector stakeholders (socio-economic organisations and business) in CTU teaching, research and outreach products;
- \* The popularity of CTU among donors;
- \* The overall commitment of the Government of Vietnam to further strengthening and qualitative improvement of higher education;

Sustainability: Main Challenges / Issues Needing Priority Attention
A summary overview of the main VLIR-CTU IUC programme challenges / issues
needing special attention in relation to programme sustainability, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting
at the end of the mission, include the following:

- \* Updating of the strategic plan of Can Tho University;
- \* Development / updating of strategic plans of the Colleges/Schools and Institutes/Centres, including (rolling) business plans where appropriate;
- \* More productive writing of proposals for local, national and international funding;
- \* CTU position taking and strategy development regarding the plans for a possible second big multidisciplinary university in the Mekong Delta under the "Vietnam 100" programme;
- \* Decentralisation and effective access to the substantive provincial research funds under the Ministry of Science and Technology (MOST) through the respective DOSTs;
- More proactive and assertive pursuit by CTU of financing available under MOET, MOST, MOANR and other public organisations;
- \* Enhanced networking with other institutions in Vietnam to maximize complementarities and reduce costs (e.g. shared labs and equipment use, exchanges or sharing of staff, visiting professors, etc.);
- \* Strategizing spin-offs of (applied) research, including issues as social and commercial marketing, commercialisation, patenting/licensing, etc.;
- \* Possible creation of relatively independent / autonomous "Research and Consultancy Units" or so, central and/or attached to Colleges/Schools and Institutes/Centres with critical mass (functioning along principles of business units, adapted to fit the needs of an academic institute as CTU;
- \* Development of a long-term human resources policy and strategy to squarely

face intensified competition from industry and upcoming new (especially private) universities;

\* Revisiting staff remuneration and incentives packages to make them more performance / results based.

Selective additional CTU-IUC programme challenges and issues needing attention with regard to the sustainability of the VLIR-IUC programme and the respective projects / subprogrammes therein include the following:

- \* More transparency and detailed figures about CTU counterpart funding of the VLIR-IUC programme (both in terms of budgets and actual expenditures) and about resources generated from third parties which are the direct or indirect result from the VLIR-IUC programme (other donors, research contracts, consultancies, outreach services, etc.) in order to be able to better assess progress in financial sustainability and to plan accordingly.
- \* Assurance of quality research (and the concomitant need for quality control, assurance and support) remains an important area of attention as it is a prerequisite for further / enduring external funding, but more importantly even it also is a basic requirement if not precondition for attracting contract research and ditto out-reach/extension services.
- \* Assurance of continued attractiveness for Belgian universities and academic staff to continue engaging in institutional university co-operation programmes with partners in the south in a mutually beneficial way (win-win situation, with for the Belgian / Flemish parties particularly advantages in terms of international networking, presence on the international scene, joint international research, joint publications, HRD through international exposure, broader societal responsibilities and global mindset of academic institutions, etc).
- \* Stronger involvement of and more responsibilities for younger academic staff in the VLIR-IUC programme, at both Vietnamese and Flemish sides in order to ensure programme continuity and sustainability.
- \* Further strengthening of inter-disciplinary work and of complementarity and co-operation between the individual projects / sub-programmes under the VLIR-IUC programme with the partner universities (amongst which CTU) in order to maximize programme impact, development relevance, effectiveness and efficiency.

# The Programme as a Whole

The higher level performance final assessment of the CTU-IUC programme as a whole has already been covered to a large extent in the preceding discussions on the projects / sub-programmes. Obviously, a programme is more than the sum of its components and just herein lies the surplus added value of the programme approach as compared to the more traditional international development co-operation model based on individual projects. Nevertheless, most programme issues have already been covered in the discussions of the constituent projects / sub-programmes in the preceding chapter. The analysis has been done and presented in such way as to transcend the particularities of the individual projects and to focus on generic issues at the programme level.

Moreover, the Terms of Reference refer to four main OECD-DAC evaluation criteria for the assessment of overall programme performance / quality, namely: efficiency, impact, development relevance and sustainability. And these have been discussed in

detail already in the preceding chapter 2.2.1. In order to avoid duplications, the reader therefore is referred to this chapter concerned for more details.

#### Some General Methodological Remarks and Evaluation Limitations

The evaluation on the higher level performance criteria of impact and development relevance, basically referring to the higher levels of the vertical intervention logic in Logical Framework parlance (goals and purpose), is hampered by the absence of operationally defined objectives and of objectively verifiable indicators with concrete target setting (both interim and final). This particularly pertains to *effectiveness, impact, development relevance and sustainability* (and to a lesser extent also efficiency), since target setting is the very basis for the measurement of achievements and concomitant analysis of performance. This observation with concrete recommendations was shared on the occasion of the Mid-Term Review, way back in 2002. Actions have been taken accordingly by the VLIR-UOS Secretariat with the mandatory introduction of Project/ Programme Cycle Management (PCM) and its tools as for example LogFrames in the IUC Programme down to the levels of the individual IUC Projects in the respective umbrella programme with partner universities.

However, despite good efforts in a number of projects to include LogFrames and actively use them to enhance the results orientation of the programme, projects and individual activities therein, there are still quite some challenges to effectively use these as management and monitoring instruments.

The suggested additional socio-economic component for many projects, exactly focusing on these higher performance levels, has not realized, as was to learn from the Self-Assessment Reports and the evaluation interviews. All this has as consequence that the available data on the higher performance levels are rather limited, if available at all for a number of projects, thus seriously hampering the higher level performance assessment of the programme and projects. This particularly pertains to the overall programme levels, and as such the evaluation findings and observations to a large extent are limited to mainly qualitative assessments as made by the main stakeholders concerned, for example in the self-assessment review of the ten years IUC cooperation.

# Overall Added Value of the IUC Programme vis-à-vis Other Donor Supported Programmes

# Summary Evaluation Scores of the IUC Programme

The summary scores of the VLIR-IUC programme with Can Tho University on the programme key result areas and on the higher level performance criteria are presented in the below sheets. Criterion summary scores are calculated as the mathematical average of the criterion scores of the individual projects / sub-programmes. Equal weighting of the respective projects / sub-programmes has been applied for the calculation of programme averages. These summary scores are presented for both the 2002 Mid-Term Review and the present 2008 Final Evaluation while also the differences between the two scores are presented for easy chronological comparison and analysis.

Table 15 : Comparison of 2002 and 2008 Evaluation Scores for CTU-IUC Key Result Areas

Key Result Area	Review / Evaluation and Year	KRA 1 Research	KRA 2 Teaching	KRA 3 Outreach	KRA 4 Management	KRA 5 HRD	KRA 6 Infrastructure	KRA 7 Resources Mobilisation	Average All KRAs
Summarya verage programmes core	Mid-Term Review 2002	71 %	66 %	60 %	64 %	71 %	80 %	N.A.	69%
(in %)	Final Evaluation 2008	73 %	66 %	76 %	67 %	73 %	80 %	73 %	73%
Difference 2002 – 2008 Evaluation Sco	ores	2 %	0 %	16 %	3 %	2 %	0 %	N.A.	4 %

In descending order, highest scores are realized by the CTU-IUC programme for the Key Result Areas infrastructure, outreach, research, human resources development and resources mobilisation. What immediately strikes the eye is the marked improvement in scoring for KRA 3 "Outreach" (by not less than 16%) between the 2002 MTR and the 2008 Final Evaluation. Strongest challenges remain with KRA teaching and KRA management. Overall there is an average 4% increase in scoring for all 7 KRAs compared to the Mid-Term Review in 2002.

Table 16: Comparison of 2002 and 2008 Evaluation Scores for CTU-IUC Higher level Performance Criteria

Higher Level Performance Criterion	Review / Evaluation and Year	Criterion 1 Quality	Criterion 2 Effective- ness	Criterion 3 Efficiency	Criterion 4 Impact	Criterion 5 Develop- ment Relevance	Criterion 6 Sustain- ability	Average Al Higher Level Per- formance Criteria
Summary a verage programmes core	Mid-Term Review 2002	67 %	N.I	67 %	62 %	73 %	62 %	66,2 %
(in %)	Final Evaluation 2008	76 %	69 %	64 %	67 %	84 %	76 %	72,7 %
Difference 2002 – 2008 Evaluation Sco	ores	9 %	N.A	-3 %	5 %	11 %	14 %	6,5 %

With regard to the programme's higher level performance criteria <sup>61</sup>, highest scores are for development relevance, overall quality and sustainability. Efficiency and impact are the criteria posing the biggest challenges still for the future. On the occasion of the MTR, the effectiveness criterion could not be assessed in a satisfactory manner in view of the absence of baseline data and of concrete target setting. The biggest scoring jump in the higher level performance criteria is with sustainability (a jump by 14 % from 62% in 2002 to 76% in 2008). The second highest improvement is on the criterion of development relevance (plus 11%), followed by quality and sustainability (both with 76%) . For only one criterion a reduction in scoring was noted, namely for the criterion on efficiency. The average programme scoring for these 6 criteria increased by 6.5% from 66.2% in 2002 to 72.7% in 2008.

#### Added Value of the Programme: Volume

In the period 1998 - 2001, the annual budget of the VLIR-IUC programme with Can Tho University reportedly amounted to between 19 and 49 % of the total CTU external donors annual budget (see column 5 of the table on the next page). It goes

<sup>61</sup> Qualitative criteria in accordance with the terminology used in the evaluation ToR.

without saying that this budget provides substantive financial leverage for integrated programming in the pursuit of CTU's strategic objectives and also for effective impact generation along the base principles of the VLIR University Development Co-operation policy. Unfortunately, no data have been made available on the subsequent years so that it is not possible to make chronological / trend analyses covering the whole 10 year cycle of VLIR-CTU IUC cooperation.

Table 17: Summary Budgetary Figures by Financial Year of Can Tho University, with Special Focus on VLIR-IUC and Other Donor Assistance Budgets (first CTU-IUC five year cycle 1998 - 2002)

Financial Year	Total Annual CTU Budget in Euro (i)	Total Annual Resources from International Donors (ii)	External Donor Budget in Percent- age of the Total Annual CTU Budget (iii) = (ii) / (i) * 100	Total Annual IUC Budget in Euro (iv)	IUC Budget in Percentage of the External Donor Budget (v) = (iv) / (ii) * 100
1998	2,839,183	1,887.348	66 %	389,372	21 %
1999	4,842,602	813,178	17 %	374,953	49 %
2000	7,546,933	1,965,103	26 %	374,953	19 %
2001	7,397,789	1,456,635	20 %	416,242	29 %
2002	7,511,174	1,176,710	16 %	?	?

HRD as Sample Illustration of VLIR-IUC Programme Overall Value Added One of the major challenges Can Tho University persistently faced during the 10 year cycle of institutional cooperation was human resources development of its staff. This will continue to be so in the post-IUC period, if CTU is to maintain its status of Centre of Excellence for a number of fields / subjects. This is not only a necessity from the point of view of a strongly increasing student population (quantitative aspect) but also for reasons of continued assurance of academic excellence (qualitative aspect with regard to teaching, research and outreach functions alike). Moreover it is of vital importance for financial reasons for example in connection with the amount of funding / subsidies from the Vietnamese national government or for attracting additional resources from contracted research or policy advice.

The VLIR-IUC programme fulfils a vital role in the development of CTU's human resources. At the moment of the mid-term review, a total of 18 CTU doctoral students are either supported by the VLIR-IUC programme or are preparing their thesis on a scholarship programme by a Flemish university. This represents almost one fourth (23 %) of all PhD studies at CTU at that moment way back in 2002. At the moment of writing this final evaluation report (December 2008), a total of 12 PhDs have been successfully completed while 10 more are still in the pipeline. Moreover a total of 46 masters successfully graduated.

This VLIR-IUC programme support to human resources development is crucial for the sustainability and overall development relevance of Can Tho University in the successful pursuit of its goal of academic catalyst of socio-economic development of the Mekong Delta region.

Based on the forecasted number of students, the CTU Rectorate has made projections<sup>62</sup> of CTU staff requirements in the period 2000-2005 (unfortunate no data available for later years) for three staff categories: instructors, assistant-instructors and administrators. The results are shown in the next table.

Table 18 : Projection of CTU Staff Requirements up to 2005, by Main Category

Year	(Forecasted)	Estimated	Staff Require	ements, by Main	Category
	Number of Students	Instructors	Assistant Instructors	Administrators	Total
2000	14,002	933	233	187	1,354
2001	15,766	1,051	263	210	1,524
2002	17,457	1,164	291	233	1,688
2003	18,891	1,259	315	252	1,826
2004	20,499	1,367	342	273	1,982
2005	22,460	1,497	374	299	2,171
# growth 2000-2005	8,458	564	141	112	817
% growth 2000-2005	60.41 %	60.45 %	60.52 %	59.89 %	60.34 %

Notes: \* Applied ratio's: 1 instructor / 15 students; 1 assistant-instructor / 60 students; 1 administrator / 75 students

Source: CTU mid-term plan 2005

To meet these staffing requirements, CTU has set for itself the following staff develop-ment objectives by the year 2005, as further illustrated in the below table:

- \* 80 % of teaching staff obtain post-graduate degrees, more specifically:
- \* 20 % get a Ph.D. degree
- 60 % get a M.Sc. degree

In absolute figures, this means an additional 242 staff members with a PhD degree by 2005 or an increase of 425 % compared to the number of PhD's in the year 2000. For staff members with an MSc degree the forecasted need in staff growth by 857 academics represents an increase of 251 as compared to the situation in 2000. Unfortunately no figures are available for the most recent years.

Table 19 : Estimated CTU Post-Graduate Staff Requirements (2000-2005), by Academic Degree

Year	(Forecasted)	53.57	Estimated Pos	st-Graduate S	taff Requires	nents, by D	egree
	Number of Staff	I	h.D.	M	l.Sc.		Total
5.44	A CONTRACTOR	#	%	#	%	#	%
2000	933	57	6 %	284	30 %	341	36 %
2001	1,051	64	6 %	378	36 %	442	42 %
2002	1,164	116	10 %	489	42 %	605	52 %
2003	1,259	176	14 %	605	48 %	781	62 %
2004	1,367	246	18 %	738	54 %	984	72 %
2005	1,497	299	20 %	898	60 %	1,198	80 %
# growth 2000-2005	564	242		614		857	
% growth 2000-2005	60 %	425 %		216 %		251 %	

<sup>62</sup> Source: CTU 2002 mid-term plan "Building and Developing Can Tho University to the year 2005"

Added value of other CTU-IUC programme components: Also with regard to the other key result areas of the VLIR-IUC programme, the co-operation with CTU has a comparable added value. This particularly pertains to spill-over effects beyond the strict boundaries of the programme itself, pointing at programme impact and sustainability. For example: the ICT equipment provided, the networks installed and operationalised and the courseware / e-courses developed under E.I have a much broader effect than on the sub-programme proponent STIC and the pilots at CIT, SEBA and AFS only, but already encompass the whole university. The same holds for participatory curriculum development to be functional for student centered teaching, as developed under A2 and other sub-programmes, as well as for multiplier effects regarding research practice, management and outreach stemming from the series of CTU-IUC research projects (BI to B7).

# Added Value vis-à-vis Other Donor Supported Programmes

CTU has a well established reputation in the international donor community. Apart from Belgium / Flanders, the list of international donor countries includes, amongst others: Australia, Japan, the Netherlands, France, Germany, Denmark, etc. The different colleges, schools, institutes and departments are pro-actively scouting for international cooperation and funding programmes<sup>63</sup>.

With the exception of one progress report on one project under the Dutch funded MHO programme, the Evaluation Commission of the Mid-Term Review was not able to obtain reports on any of these other internationally assisted programmes. During the final evaluation, no such report could be get hold of by the Evaluation Commission. On the occasion of the MTR, a special meeting took place at the CTU International Relations Office for a briefing on the MHO Programme by the CTU General Secretary of the MHO Programme / Head of the CTU International Relations Office. During the final evaluation, the Evaluation Commission met with the International Department and was briefed on the other currently ongoing internationally assisted programmes / projects.

# The NUFFIC supported MHO Programme

In the early years of the VLIR-IUC programme with Can Tho University, closest related to the IUC programme was the institutional development programme supported by NUFFIC, the VLIR counterpart umbrella academic organisation in the Netherlands. The NUFFIC supported MHO programme was an eight years comprehensive programme, consisting of 2 phases of each 4 years: 1995–1998 and 1999–2003. The second phase of the programme therefore was about to end at the moment of the VLIR-IU Mid-Term Review in 2002. The MHO programme, implemented by Dutch universities as the Free University of Amsterdam, Wageningen Agricultural University, Groningen University, University of Utrecht, amongst others officially ended in 2003. The MHO programme was part of the Dutch overall Joint Financing Programme for Co-operation in Higher Education. Its general objective was to increase the efficiency (of management) of CTU. The programme consisted of 9 components (MHO-1 to MHO-9).

The Complementarity between VLIR and MHO programmes: The MHO programme concentrates on institutional strengthening of Can Tho University with the following main components: infrastructure, management development, staff HRD/development,

University; Progress Report VI – Period 01-01-2001 until 31-12-2001; April 2002.

<sup>63</sup> Asked by the Evaluation Commission about how a research theme / topic was chosen and selected, one of the interviewed staff members explained the participatory process to arrive at the stage of ToR preparation and finalisation, and then spontaneously added that once the topic defined staff immediately started browsing the internet for similar initiatives and to explore academic co-operation and funding/support opportunities over the Web.
64 MHO-CTU Project Number 2 – Upgrading Teaching and Research in Economics, Business and Law at Can Tho

curriculum development, promotion of student centered education. Component-wise, both the MHO and the VLIR programmes thus concentrated on the following three key result areas: (I) equipment, (2) staff / human resources development and (3) curriculum development. Whereas the VLIR programme additionally concentrates on research and outreach, the MHO programme additionally focused explicitly on management development and didactics.

The complementarity between both programmes was highly appreciated by CTU programme management. Although no concrete, formal details were provided to the Evaluation Commission it was found that this complementarity in first instance was related to the selection of CTU Departments / entities respectively assisted by both programmes. For those entities supported together by both programmes, internal complementarity between services offered / equipment provided by both was aimed at. This for example pertains to the Information and Communication Technology (ICT) components under respectively VLIR-IUC sub-programme E.I (then A.I) and NUFFIC-MHO sub-programme I. The MHO-I sub-programme basically concentrated on the provision of hardware and software, while the IUC-AI particularly focused on the human resources development / training of personnel on the effective use of the equipment, especially in relation to distant education. All along, the VLIR-IUC programme has been strongly appreciated by CTU management and staff alike for this overriding concern for staff development.

Despite this in principle complementarity between the IUC and MHO programmes, it was not possible to assess in detail to what extent this complementarity has been effectively realized in a mutually reinforcing manner to the ultimate benefit of CTU. Also, because of the lack of financial and operational data, it has not been possible to assess eventual overlaps between the two programmes or to make any analyses on eventual dual financing and related issues.

#### The World Bank and Asian Development Bank Programmes

The World Bank supported programmes on higher education in Vietnam obviously do not only concern Can Tho University but the whole tertiary education sector in Vietnam.

At the moment of the CTU-IUC Mid-Term Review in 2002: In the period coinciding with the first five year CTU-IUC programme cycle, the World Bank support to higher education in Vietnam consisted of a soft loan in the amount of 100 million US dollars. The programme classified Vietnamese tertiary education institutes in three categories depending on the level of performance and accomplishments, with A as lowest level and C as highest. Depending on the level, the tertiary education institutes have access to funding under the programme. Can Tho University at the moment of the Mid-Term Review in 2002 was still in the A rating level. At this level, CTU had access to 80,000 US dollars. CTU management allocated this amount to biotechnology on a priority basis.

At the moment of the CTU-IUC Final Evaluation in 2008: At the moment of its final evaluation in December 2008, the VLIR-IUC institutional cooperation programme with CTU was still the largest comprehensive support programme as indicated by the International Department. The largest ongoing World Bank programme is the national

Training and Research Innovation Grant (TRIG) coordinated by MoET and covering 22 tertiary institutes in the country. The planned outcome is 18 PhD graduates over the four year period March 2008 – 2011, with funding of 4.5 million USD, of which 90% provided by Central Government and 10% CTU counterpart. The other World Bank funded programme benefited from is the second phase of the Higher Education Programme concentrating on research and education equipment and facilities upgrading.

#### Other Ad Hoc Projects

CTU kept on benefiting from numerous internationally supported ad hoc projects and cooperation programmes spread over the different Colleges and Schools, Institutes and Centers. In 2006, the modern multi-media Learning Resource Center (LRC) was put in operation. It was constructed with financing assistance provided by AusAid. The Government supported 322 project is a comprehensive HRD programme aimed at sending staff abroad for PhD and MSc degree studies. The Mekong 1000 also has academic HRD objectives but is in first instance geared toward local and regional government officials. CTU serves as coordinator / network centre with international academic institutes all over the world and as quality assurance body.

# Programme Management

#### Overall Assessment

KRA 6 "management" at projects / sub-programmes level: Project / sub-programme management has been discussed as the fourth Key Result Area (KRA 4) of the CTU-IUC programme. The average score of the CTU projects / Sub-Programmes on KRA 4 "management" was calculated as 67% or 3% higher compared to the MTR score in 2002. This is, just before KRA 2 "teaching" with 66 %, the second to the lowest average score of the seven key result areas.

Marginal attention for management development within the VLIR-IUC programme: This relative low score is in first instance due to the marginal attention management development has got in the comprehensive VLIR-IUC programme with CTU. This is rather remarkable for a programme which ultimate goal is the strengthening of CTU as institution. In contrast to the predecessor NUFFIC supported MHO programme, in the VLIR-IUC programme with CTU there is no explicit component on management in the form of a special, separate project / sub-programme. In the first five-year cycle, only one structured training exercise as a joint initiative of VLIR and PCO is reported (on the Logical Framework / Project Cycle Management). No follow-up sessions were organised, neither has there been systematic on-the-job coaching at the projects / sub-programmes level.

Further feedback has been received on this issue in reaction to the draft final report, indicating for example that KRA management in first instance applies to the individual projects and to a possible institutional component (which is not available in the CTU-IUC programme). This reportedly is one of the main explanations for the marginal attention for management development. In view of the absence of a cross-cutting, transversal institutional programme component, management development should have been attended to individually on a project to project basis. The PCO is indicated not to

have this function and basically only assumes administrative tasks and responsibilities. The institutional component of the IUC programme has never been defined as a priority in the CTU-IUC programme.

In the second five year cycle of the CTU-IUC no substantive management training (if any at all, apart from the workshop for programme managers in 2006) has taken place, despite the strong recommendation of the MTR to more explicitly address management training needs as prioritized by the different interviewed parties concerned. The decision of VLIR-UOS and the relentless efforts of its Secretariat to introduce PCM techniques and tools across-the-board in all its IUC programmes and beyond was not matched by concrete training and concomitant capacity strengthening activities in the CTU-IUC programme. It therefore should also not come as a surprise that management assessment consistently scores lowest (among the lowest) in all final evaluation self-assessment reports.

In conclusion, at the overall programme level but also within the respective nine VLIR-IUC projects / sub-programmes, the activities and initiatives on management develop-ment have been very few only, if any at all. At the same time on the other hand, the knowledge and skills acquired by the CTU staff involved in the programme in terms of management of an international co-operation programme through a learning-by-doing process are very much appreciated. This also pertains to the exposure to modern academic management practices while abroad on fellowship in Flemish Universities. Most staff interviewed by the Evaluation Commission expressed a desire of further upgrading of their management skills. At a wider scale, this appears to remain an important challenge to be met in the VLIR-IUC programmes in general.

# Assessment of Specific Management Aspects

The assessment of programme management by the Evaluation Commission consisted of five main dimensions in accordance with the Terms of Reference:

- \* System development with special focus on planning and programming tools
- \* Actual implementation management with special focus on pro-gress and results reporting
- \* Financial management
- \* Public relations and visibility
- \* Institutional strengthening, with special focus on synergies, or-ganisational development and networking

The assessment covers programme management aspects at both the Flemish and the CTU Vietnamese sides.

# System Development: Planning and Programming

Original programme document: The VLIR Institutional University Co-operation programme with CTU, which has a duration of ten years (split in two periods of five years each) and a total budget of about 7.5 million Euro, is not based on a comprehensive programme document as umbrella framework. The reason for this is related to the profound re-organisation of the Belgian international co-operation, including the university co-operation, at that time, with new programming instruments (as IUC) and procedures in the process of being conceptualized and operationalized.<sup>66</sup>

**<sup>66</sup>** The VLIR programme for Institutional University Co-operation (IUC) emanates from the Specific Agreement signed by the Belgian State Secretary for Development Co-operation and the VLIR on 16 May 1997. This agreement foresees a system of programme funding whereby, based on a Global Programme (1998-2002), the Belgian government provides each year funding for the implementation of an annual programme submitted by the VLIR.

The initial basis of the institutional co-operation programme with Can Tho University is a rather sketchy document<sup>67</sup> presented as a compilation of individual projects, clustered in two "programme components": (1) educational capacity building, and; (2) research capacity building. The educational capacity building component originally consisted of four sub-components (distant education, business administration, environmental engineering and mechanical engineering). In the process, the business administration sub-component was abandoned, with the co-operation with SEBA limited to distant education aspects only, integrated in the distant education project / sub-programme (A1). Environmental engineering and mechanical engineering in the process were grouped together under the heading curriculum development (A2), while the two kept reporting separately as A2 sub-components. The research capacity building component from the onset consisted of seven separate projects (of which two were abandoned in the process and replaced by others), which were presented as "research topics".

Comprehensive Document at the Basis of the Second Five Year Programme Cycle:

Strategic planning and programming: Initially, the CTU-IUC programme was not formulated in a logically coherent manner in the pursuit of long-term development objectives. Henceforth, the individual projects / sub-programmes were not conceptualized and formulated from the perspective of their contribution to the overall programme goals. Expected results are either not defined or defined at the level of programme activities only. Indicators are either absent, not defined in an objectively verifiable manner or defined at the level of inputs and activities only.

Corrective actions taken: On the other hand, the VLIR University Development Co-operation (UDC) secretariat has exerted very substantive efforts to rectify this situation already during the first five year phase of the programme. In the year before the MTR of 2002, it had strongly concentrated on standardization of procedures and methodological strengthening. In the same venue, the Secretariat had been promoting the active use of Project Cycle Management tools, including Logical Frameworks and launched a comprehensive human resources drive for all its partners. Can Tho University has been one of the beneficiaries of such training.

For the second phase of the Institutional University Co-operation (IUC) programme, VLIR-UOS worked out a full operationalisation of Programme Cycle Management (PCM) principles and practice. It was strengthened in this determination by the feedback it had obtained from partner universities through regular monitoring and from the findings of the mid-term evaluations conducted. Obviously, without performance planning, performance management, measurement and monitoring & evaluation are simply not possible.

At the basis of the second phase of the IUC Partnership Programme with Can Tho University covering the period 2003 – 2007 (and the one year extension into 2008) is a very comprehensive programme document dated 20 January 2003 covering both the overall programme and its constituent individual projects. The overall programme design, the sustainability of the results at that time and as envisioned by the end of the programme as well as the general management set-up are especially focused on in special chapters of the document.



Sub-programmes complementarity and programme integration: Whereas initially, the VLIR-IUC programme with CTU was merely a compilation of a series of individual projects, in the course of programme implementation a stronger integration of constituent projects / sub-programmes got more explicit attention. In fact, this further integration (e.g. by clustering) of the constituent projects into one integrated institutional development programme of complementary and mutually reinforcing sub-programmes remained one of the biggest managerial challenges during the second five year period. The clustering of projects / sub-programmes was one of the main issues in the review and planning discussions between the stakeholders on the occasion of the mid-term review. It results in the re-design of the programme with two main components: The first one focusing on education and the second one focusing on research. The revised education component consists of two sub-components: (i) Distance education, in the process refocused on campus based e-learning and e-teaching with special attention for Learning Management System (LMS), and (ii) Curriculum development, with special focus on environmental and mechanical engineering as pilots. The research component in turn was redesigned to cover three sub-components of related projects: (i) Aquaculture; (ii) Fruit trees, and, (iii) Soil dynamics

Proposals were made on the occasion of the mid-term review / joint steering committee meeting for a more integrated programme geared towards sustainable institutional development. These were centered around a number of issues as:

- Programme management by a Central Unit in the Rectorate as CTU think tank with a long-term strategic perspective and consisting of core people of the university;
- Strengthening of programme/project (cycle) management;
- Incorporation of common subjects / concerns (e.g. quality control);
- Strong focus on the (socio-)economics dimension;
- More explicit attention for didactical aspects;
- Cross-fertilization of education and research projects.

Explicit provisions for cross-cutting programme aspects in each sub-programme to en-sure quality and development impact were also made on the occasion of the MTR, in-cluding: (i) Internal quality control; (ii) Project/sub-programme management / perform-ance management; (iii) Gender issues; (iv) Didactics especially for, but not limited to, the education projects / sub-programmes, and (v) Economics (agro-economics, marketing, etc.) especially for the research projects / sub-programmes in relation to outreach, extension and products marketing.

During the second five year phase of the CTU-IUC programme the above issues were largely attended to, be it with varying degrees of intensity and ultimate success. Overall, as reported earlier, the South Team Leaders in general regretted that the programme / project management component was not given more explicit attention. PCM matters and the results orientation of the programme were attended to, programme design wise as reflected in the VLIR-IOS planning documents and in the reporting templates. However, the necessary training and related human resources development / capacity strengthening initiatives have not pushed through to the regret of project leaders and other parties concerned, resulting in a lack of ownership and sub-optimal effective mastering of these tools by the stakeholders concerned as shared by the interviewees to the Evaluation Commission.

# Actual Implementation Management and Reporting The VLIR-IUC Monitoring and Evaluation Reporting Framework:

Annual Reporting: In accordance with the VLIR guidelines concerning reporting in the Institutional University Co-operation programme, the annual reports are the main type of monitoring reporting foreseen. These basically are reports on the activities that have been carried out in the framework of the implementation of an activity programme and consist of an activity report and a financial report. Reporting is the joint responsibility of the two co-ordinators who are co-signatory parties.

These annual reports in first instance are *progress monitoring* reports on the delivery rate and quality of the implementation of activities planned under the annual activity programmes. Programme annual monitoring reporting is basically a compilation of the individual reports drafted by the constituent individual projects / sub-programmes. Results orientation and higher level performance assessment are only marginally touched upon, as these are reserved for the mid-term review and final evaluation. In the process, the annual reports got more structured as VLIR-UOS Secretariat prescribed a more standardized format. Items 7 and 8 of the annual reports relate to higher level programme / projects performance. Item 7 explicitly focuses on institutional impact and sustainability, while item 8 concentrates on education quality.

Annual reporting requirements have been *largely complied* with by the individual projects, with programme annual reporting, "the Annual Activity Reports", consisting of a compilation of these annual reports by the individual projects, prepared by the PCO / Programme Team Leaders. Such reports have been submitted for the subsequent years of the two five year cycles. The 2007 Annual Activity Report was submitted in October 2008 and was made at the disposal of the Evaluation Commission during the evaluation briefing interviews.

Apart from these comprehensive year reports, the IUSes are requested through the Steering Committee consultations to regularly monitor project activities. The North Steering Committees are also participated in by VLIR-UOS and sometimes also by DGOS.

Mid-Term and Final Evaluation Reporting: The VLIR-IUC guidelines furthermore foresee that every three to five years the co-operation with a partner will be evaluated. The evaluations are succeeded by a follow-up of the evaluation results in the subsequent year, as has been explicitly the case The prescribed contents and methodology of an evaluation as the current one are described in standard Terms of Reference (see attached under Annex 1 to this report).

The Mid-Term Evaluation / Review of the VLIR Institutional University Co-operation with Can Tho University resulted in a comprehensive final report, which was published by VLIR in June 2002 and made available to all parties concerned in both printed and electronic versions.

#### CTU-IUC Annual and Final Reporting Practices

Although this final evaluation exercise did not include a systematic analysis of work plans and progress reports on the actual implementation of these plans, a number of

issues transpired from the numerous discussions with the respective stakeholders with regard to progress monitoring reporting practice in the CTU-IUC programme, largely confirming early observations on the occasion of the MTR:

- \* Compilation of reports: The actual practice of compilation of the respective progress reports from the different projects / sub-programmes by CPO as coordinating central management unit is a very positive element from the perspective of higher level programme integration, for consistency and control purposes and for assurance of compliance with reporting requirements, including timeliness. Consolidation of reporting at programme level however remained posing challenges.
- \* Reporting compliance: Generally, progress reporting requirements are complied with by the respective projects / sub-programmes in terms of number of reports to be submitted mandatory;
- \* Variations amongst projects / sub-programmes: Quality, extent and relevance of reporting vary considerably from project to project. However, substantive improvements are noted in the second five year period as a result of the standard VLIR-IUC programme / projects monitoring reporting formats;
- \* Objective performance measurement: Major improvements are recorded in the use of quantified objectives and the use of key objectively verifiable indicators. However, challenges remain with regard to target setting on these OVIs and the reporting of actual accomplishment on these OVIs and in relation to the set targets, keeping it difficult to assess/measure performance in an objective way
- \* Completeness: Comprehensive reporting is engaged in and largely complied with by the different responsible parties concerned. Important challenges in this respect however still remain. This is especially the case for the reporting on the higher level performance criteria, which in many instances remains rather sketchy, if reported on at all. This particularly pertains to the sections in the final self-assessment reports on sustainability and overall outlook and on the IUC Project Follow-Up Plan. Also the SWOT analysis summary table is not completed by all projects. In order to compensate for this important issue of post-IUC planning and prioritization (as prominently included in the ToR for the Final Evaluation), the Evaluation Commission designed a special standard questionnaire. A copy of this questionnaire is included under Annex 4.1 to this report for easy reference.
- \* Timeliness of reporting in accordance with the standard time tables remained a challenge, which is basically due to the long reporting flows involving (too) many parties before the final report reaches VLIR-UOS Secretariat. The Evaluation Commission was able to receive the 2007 Annual report as well as the respective Self-Assessment Reports just ahead of / or during the evaluation interviews. To address this lack of formal basis for the evaluation interviews, the Evaluation Commission had prepared its own comprehensive interview questionnaire based on the items included in the Terms of Reference. A copy of this structured questionnaire format is attached as Annex 3.1 to this report as far as the briefing meetings with the Flemish Programme Leader and Project Leaders are concerned and as Annex 3.2 to this report as far as the evaluation interviews with the CTU-IUC key stakeholders (CTU Programme Leader, Project Leaders and Other Parties) are concerned.
- \* Reporting structure: On the occasion of the Mid-Term Review needed to be reported that the structure of reporting was not always based on the actual programme set-up in CTU. This issue was largely attended to in the second five year

- cycle through the actual use by the project co-leaders of the standardized reporting formats prescribed by the VLIR-UOS Secretariat.
- \* End-Responsibility and ownership of reporting: Major positive development have been noted in actual end-responsibility and ownership of reporting by the CTU stakeholders concerned. While on the occasion of the MTR major challenges to be met still were reported in this respected, these were successfully attended to during the second five year cycle. For example, strong ownership of the final self-assessment reports was claimed by the respective CTU parties concerned. No doubt a major achievement and also an important factor in ensuring programme and projects sustainability.
- \* Procedures manual: While generally satisfied with the VLIR management and reporting formats and processes, on different occasions the interviewed stakeholders expressed the need for a user-friendly IUC procedures manual. This suggestion made by different stakeholders during the mid-term review was confirmed on the occasion of the final evaluation.

#### Financial Management

The economy dimension of a full 3E's performance evaluation has not been explicitly integrated in the Terms of Reference of the present final evaluation exercise, henceforth no in-depth financial analysis has been made by the Evaluation Commission. A series of summary financial Tables 7.1 to 7.3 is presented under Annex 7 however to facilitate analysis of broad lines and trends from a more strategic perspective. As will be noted from the tables some crucial base information (e.g. related to expenditures at project / sub-programme level, to fund disbursements or to financing sources) has not been made available despite different follow ups by the Evaluation Commission. 68

Summary CTU-IUC annual programme financial tables have been additionally provided by VLIR-UOS Secretariat on the occasion of the sharing of the comments on the draft evaluation report. These annual financial figures are summarily presented in Table 7.4.

Some general findings regarding strengths and challenges of financial management of the CTU-IUC programme include the following:

- \* Central co-ordination: Central consolidation, processing and analysis of IUC programme financial information at CTU by the Programme Co-ordination Office (PCO) facilitates both internal control and overall programme management. The same pertains to the work done at the secretariat of the Flemish Programme Leader.
- \* Transparency of financial management: It was shared with the Evaluation Commission that financial data are not systematically fed back to the individual projects / subprogrammes. There for example are no consolidated data available of expenditures made (only budgets are reported by main standard budget line). Also, only limited financial data are available at that level regarding the Flemish component of the budget. Expenditures in the North are reflected in the financial tables provided to the Evaluation Commission as the difference between the budgeted costs and the expenditures in the South. Hardly any information is present at the level of the individual projects / sub-programmes regarding funding from other national and international sources, other than VLIR, although in some cases these third party resources are quite substantial.

**<sup>68</sup>** Main source of information are the financial self-assessment reports by the respective projects compiled by the VLIR-UOS Secretariat and forwarded to the Evaluation Commission on 30 October 2009, based on the base financial data provided by the CTU-IUC Programme Coordination Office (PCO).

- \* Performance budgeting: The strengthening of performance budgeting based on / directly derived from the overall and annual work plans has remained another important challenge. Performance budgeting guarantees that resources are allocated to those activities and initiatives which generate the maximum of quality outputs, effects and impact in a cost-effective and cost-efficient manner.
- \* Delays in fund transfers: The successful implementation of programme / project activities to a large extent depends on the timely availability of programme resources, especially as far as financial means are concerned. Therefore, on time receipt of VLIR-IUC fund transfers by Can Tho University (PCO level) and further instant channeling to the respective constituent projects / sub-programmes is essential to ensure that programme operations can be executed as planned. Both PCO and the individual projects reported that considerable delays in the money transfers to CTU have been encountered and especially the last year and a half or so. One of the major reasons cited was the turnover in administrative management / secretariat of the programme. On different occasions, delays in actual fund transfers reportedly required CTU to pre-finance from its own resources.
- \* Standardization of financial reporting: All financial reporting by the respective projects / sub-programmes in principle is computerized. Obviously, automation facilitates easy consolidation at programme level, trend analyses, etc. This computerization of budgeting and accounting has been facilitated by the MHO programme. Under project E.I, the integration of administrative and financial management into the overall CTU intranet system has been studied.
- \* Personnel costs: As a matter of principle, all local personnel / staff costs are on the account of the partner university. In the first five year cycle of the CTU-IUC programme, the issue of CTU staff salary topping ups had affected programme operations in a negative manner. In the light of effectively ensuring institutional and financial sustainability of the CTU-IUC programme, this issue was addressed as a matter of priority and urgency in the second phase of the programme. No issues were brought to the attention of the Evaluation Commission anymore in this regard on the occasion of the final evaluation. The January 2003 programme document for the second five year cycle included a special section on "Strategies to cushion the gradual reduction of topping-up" under chapter IV "The sustainability of the results of the IUC co-operation at programme level at present and in future". As main strategy components were mentioned: (i) Increase salaries and incomes, and; (ii) Reducing of project workloads by shifting paper work and administration to project staff, who will receive the salaries from CTU".
- \* Training and HRD on financial management: The CTU secretaries and team leaders of the individual projects / sub-programmes very much appreciated the exposure to international co-operation practices as a consequence of their involvement in the VLIR-IUC programme. In addition to the practical on-the-job exposures and learning-by-doing financial management experiences, they would have welcomed more in-depth training on financial management and particularly on financial management of internationally assisted programmes as the VLIR-IUC.

#### Public Relations and Visibility

\* It was brought to the attention of the Evaluation Commission by senior executives of Can Tho University that VLIR should more proactively promote the quality of its international cooperation activities and services, and this also pertains to the individual Flemish Universities.

- \* The very well organised closing programme and ceremonies of the ten year CTU-IUC programme, including international symposia and workshops at the same time proved a very important PR and visibility tool to share the results of the programme with the wider national and international community.
- \* Different projects under the CTU-IUC programme pro-actively engaged in outreach and networking campaigns. Some projects, in first instance R.I.I<sup>69</sup> (for example with ViFINET), proved very successful in this, but also to a certain extent the four projects under R.2 registered important initial successes.
- \* A very successful networking event on the VLIR-IUC programme with especially the CTU-IUC highlighted as example in case, took place in the Flemish Parliament on 19 January 2009.
- \* More proactively and systematically pursuing PR and visibility of its quality prod-ucts and services remains an important challenge for the IUC programme and by extension for all VLIR-UOS programmes and projects.

## Synergy, Organisational Development and Networking

Solid institutional provisions for programme management obviously are a major factor for ensuring programme efficiency and effectiveness. Main findings related to organisational development (OD), including synergies, and institutional strengthening (IS), including networking, being the fifth dimension discussed under the heading "programme management", include the following:

- \* No explicit provisions for organisational development and institutional strengthening in the CTU-IUC programme: In the initial CTU-IUC programme document no explicit provisions are foreseen for institutional strengthening of Can Tho University. Despite IUC being an institutional co-operation programme, it is quite remarkable that there is no special component or even sub-component on institutional strengthening as such in the programme formulation documents. This was noted in the Mid-Term Review report with recommendations accordingly, but it appears that no special action has been taken during the second five year cycle to remedy this oversight.
- \* CTU-IUC budget only for programme secretarial functions: In the summary table of expected results by the end of the first five year CTU-IUC cycle in 2002 in the above base programme document, besides educational capacity building (component A) and research capacity building (component B) only a minimalist component C "Programme Coordination Office" is incorporated. The functions and authority of this PCO however are strictly limited to IUC programme matters only, and within the IUC programme are basically of an administrative and financial secretarial nature. Moreover, budgetary provisions for this component "C" have been made only for the purchase of office equipment and a vehicle. Also, the Objectively Verifiable Indicators (OVIs) for this component only include "equipment purchased & operational" and "vehicle purchased". So no provisions for training and sustainable capacity building.

The programme document for the second five year cycle included an explicit chapter V on IUC programme management issues under the title "The General Set-Up and the Management of the IUC Phase II Partner Programme". It provides concrete information on programme management arrangements both at the side of the CTU partner university and of the Flemish partners. In this chapter the local IUC co-ordination unit (the so-called PCO-CTU) is defined as " ... an official body working for the co-operation programme, which will disap-

**<sup>69</sup>** A detailed account of R.1.1 and related networking and outreach initiatives and concrete activities is presented under Annex 6 on page 254 to this report

**<sup>70</sup>** Chapter 8 (page 269) of VLIR document "Institutionele Universitaire Samenwerking met Can Tho University – Partner Programma"; 24 August 1998

pear when the programme is terminated. PCO-CTU is administratively supported by the other Departments involved within the university. A division of tasks amongst PCO-CTU staff is provided in the document. However, no provisions are included for capacity strengthening or related HRD activities regarding management of the programme nor on PCM and related management tools in general.

\* CTU organisational set-up: At the moment of the Mid-Term Review in 2002, Can Tho University was not yet settled as a solid academic organisation. Despite different follow-ups, the Evaluation Commission for example was not able to get an updated organisational chart of CTU. With the installation of a new Rector, new revamps were expected in the not too distance future. A CTU organisational chart was compiled by the Evaluation Commission from different sources and included in the MTR report for ready reference.

This picture has dramatically improved over the last five years of the programme, with an updated organisational chart and a detailed presentations of each entity (colleges, schools, institutes, centers, departments and office) included in a general information and presentation brochure. Nevertheless, organisational revamps and personnel matters kept impacting on programme performance in general (e.g. changes in executive management) and/or its individual projects (e.g. project E.I was strongly affected by a functional reorganization leaving the project for more than a year without lead entity. Personnel issues also seriously affected the R.I.2 project.

Enhanced Synergies: While only very sporadic during the first five-year programme cycle, the second cycle saw a systematic strengthening of synergies between the individual projects in an overall programme context promoting multi-disciplinary project designs and implementation modalities. Examples in case include: (i) Distance education project E.I with collaboration between STIC, CAF, SoE and SEBA; (ii) Aquaculture project R.I.2 working together with E.I on e-learning aspects, with R.3 regarding ecological and environmental issues and soil dynamics, with R.2.2 on biotechnology aspects, and; (iii) the growing intense collaboration amongst the fruit (trees) related research projects under research cluster R.2.

A renewed fundamental discussion on the future of CTU was opened as a result of the recent launching of the Vietnam 100 programme by the national authorities, which may fundamentally affect CTU as it reportedly would possibly envision a second main, comprehensive university at Can Tho catering to the Mekong Delta region, alongside CTU.

- \* CTU institutional framework: Institutionally, CTU is not yet settled in the overall framework of tertiary, post-graduate education in Vietnam. Its statute as comprehensive university is presently being reviewed, as are its relations with the so-called Satellite Centres at provincial level and the Communal Colleges at Community level.
- \* Successful networking: On different earlier occasions it was illustrated already how Colleges, Institutes etc. supported by VLIR-IUC have successfully engaged in local, national, regional and international networking. An example in case is project R.I.I<sup>71</sup>

**<sup>71</sup>** See for example under the previous chapter 4 on PR and Visibility and for more details on page 69 "Evaluation of programme key result areas – Extension and outreach". Full details on the successful networking initiatives under R.1.1 are provided on page 254.

## Encountered Challenges Regarding Programme Management

- \* Necessary capacity strengthening of CTU-IUC overall programme management: The Mid-Term Review of the VLIR-IUC programme with CTU was to conclude to a further strengthening of overall management and co-ordination of the CTU-IUC programme as of highest priority for the second phase of the programme. To a large extent, the observations and recommendations made at that time remained valid until the end of the programme and even beyond in the post-IUC era, as attested to by this Final Evaluation of December 2008:
  - More solid anchoring of the VLIR programme in the CTU strategic plans and programmes (and by absence of the latter, necessary effective support under the IUC programme to the actual production of these documents);
  - Flexible adaptation of the CTU-IUC programme to the changing needs and priorities following the re-organisation of higher education in Vietnam and, maybe even more importantly, following the rapidly growing and concomitant changing academic requirements of the national and regional economy;
  - Further enhanced co-ordination of the different (re-)clustered sub-programmes of the VLIR CTU programme to maximize their complementarity and mutually reinforcing character in the pursuit of overall programme goals;
  - Human resources development and training of CTU-IUC programme leader / co-ordinator and individual project leaders on performance management in accordance with the principles of programme / project cycle management;
  - Further strengthening and optimal co-ordination of cross-cutting programme aspects, including:
    - Quality control
    - Performance management
    - Socio-economics and poverty alleviation
    - Education and didactics
    - Outreach and extension
    - Gender
    - Environmental aspects
    - Local, regional, national and international networking
  - Strengthened CTU-IUC financial, administrative and personnel management.
- \* Termination of MHO project: The necessary management capacity strengthen-ing component under CTU-IUC programme became an even more important need in view of the termination of the Dutch funded MHO programme, which had an explicit management development component, at about the end of the first five year CTU-IUC programme cycle.
- \* Necessary resources: Obviously, the successful pursuit of the above manage-ment development objectives was only possible if the necessary resources, both human and financial, had been explicitly foreseen in the budget for the second phase, which was not the case.
- \* Institutional strengthening actions in the North: Not only the institutional provi-sions for programme management in the South at the level of CTU deserved to be revisited but also in the North with the Flemish stakeholders (as transpired from the interviews). The following diagnosis was made on the occasion of the Mid-

Term Review, with attached to each a short state-of-play picture by the end of the programme as assessed on the occasion of the Final Evaluation:

- A programme institutional set-up based on individuals (overall co-ordinator and promoters) rather than on teams (departmental, interdisciplinary and/or inter-university)
   largely mitigated by the introduction of the concept of project teams coordinated by a team leader;
- Separation of the function of overall programme co-ordination from responsibilities for individual projects / sub-programmes to avoid potential conflicts of interest – effectively realised;
- More prominent and balanced interdisciplinary team work with a more prominent integration of disciplines not or only marginally represented so far: socio-economics, didactics, extension, etc. to a large extent realized with regard to interdisciplinary work (see earlier above), outreach and extension, but to a lesser extent with regard to the socio-economic dimensions of applied research, the didactical aspects of distance education / e-teaching, amongst others;
- A more balanced team composition in terms of age (more qualified young academics) and gender (more qualified female academics) – gradual evolution, in progress;
- Consideration of admittance of non-university tertiary education institutes
  to the VLIR-UDC programme and the IUC programme in particular,
  especially in view of the stronger emphasis on outreach and extension
  work with the targeted beneficiaries and intermediate organisations in the
  second phase of the IUC programme not systematically addressed, if any
  at all.

Programme Management: Summary Strengths and Challenges/Issues *In conclusion*: Management development and institutional strengthening issues needed to be focused on in the second phase of the CTU-IUC programme as a matter of priority and prime importance, however the attention actually given and particularly the resources especially and effectively allocated for this purpose remained relatively marginal.

A summary account of the main VLIR-CTU IUC programme strengths in terms of overall programme management, as presented and discussed during the evaluation debriefing session cum Joint Steering Committee meeting at the end of the mission, include the following:

#### Strengths:

- \* Further clustering of the originally scattered IUC programme components / projects following the Mid-Term Review (MTR);
- \* Further strengthened vertical coordination between overall programme management and management of the individual projects (both at CTU and Flemish sides);
- \* Further strengthened horizontal coordination between the individual projects (e.g. through substantially enhanced multi-disciplinarity);
- \* Considerable improvement of the quality of VLIR IUC programme and project management tools:

- Overall and annual work plans
- Progress and annual reporting
- Reporting on Key Result Areas along Performance Indicators
- Budgeting along standard budget lines aligned with main programme activities
- Use of summary analytical financial sheets
- Final evaluation self-assessment reporting
- Sustainability assessment sheets
- Follow-up strategy sheets
- \* Open, cordial relations of mutual trust and confidence between the CTU and Flemish partners;
- \* Continuity in CTU-IUC overall programme management;
- \* General satisfaction with management of the programme and projects at both sides;
- \* Open and intense communications between the CTU and Flemish partners (also continuing after IUC programme termination).

#### Challenges / Issues

- \* Changes in overall management and turnover of staff in CTU during the programme;
- \* Re-organisations at CTU during the programme affecting individual projects (e.g. E1);
- \* Reduced visits and inputs from Flemish partners in the last year (last two years) of the programme;
- \* Late availability of self-assessment reports and of 2007 annual reports;
- \* In some cases, partial completion only of self-assessment reports;
- \* Requested additional PCM training to enhance use of LogFrames as active management tools and for results reporting purposes (enhancement of logframes quality);
- \* (Substantive) delays in financial transfers, however offset by CTU pre-financing arrangements from own budgetary resources;
- \* Improved balances between expenditures incurred by Flemish Universities (North) and by CTU (South), however with substantive differences between the individual projects;
- \* IUC Project Follow-up Plans in the self-assessment reports only slightly worked
- \* Hence initiative by the Evaluation Commission to introduce ex-post questionnaire for completion by concerned Colleges, Institutes, Departments and Centres; (questionnaire to be sent to the PCO – IUC Programme Secretary for compilation and dispatch to the Evaluation Commission).

# Co-operation between the Different Parties Involved

# General Appreciation by the CTU Stakeholders

Throughout the ten year CTU-IUC programme cycle, the co-operation between the main North (Flemish Universities) and South (CTU) stakeholders has been very well appreciated by all parties concerned. This pertains to both general programme co-ordination and individual constituent projects / sub-programmes. It relates to both managerial and academic aspects.

This very positive appreciation is formally reflected in the self-assessment reports and was confirmed during the many consultations and meetings the Evaluation Commission had with the different stakeholders, both in Flanders and at Can Tho University.

Just by way of illustration, then B-3 project on the occasion of the Mid-Term Review in this connection reported: "We are very satisfied with the co-operation in the project. This project is among our best international collaboration programmes in terms of positive effects on our teaching and research capability... We are fortunate to collaborate with one of the top teams of biologists in the world."<sup>72</sup> Also at general management level, this appreciation of the co-operation is very outspoken.

On the occasion of the final evaluation at the end of the ten year IUC cycle, project R.2.2 reported: "IUC programme is a good activity of Belgian government. This programme is very useful for the research & development of sciences in a developing country, especially for Vietnam. The policy of IUC is very humanely expressed in the strategies of training and transfer of technology. The human way is also expressed in budgetary coverage not only of equipment but also of scholarships, family allowances etc... After finishing the IUC programme, the South partner can independently continue develop its activities based on the available strategy. When transferring biotechnological techniques, the Belgian scientist always paid attention to the sustainability, and the bio-safety of the procedures. The procedures can now be done without the direct guidance of the Belgian experts. The waste materials cannot affect the health of the researcher and the environment. The developed technology is now being transferred from BiRDI to research institutes and extension services in different provinces in the Mekong Delta with the same policy."

Asked about the three most important attributes that support the concept of the IUC programme being built on partnership, the group of Flemish project leaders listed the following three:

- \* Joint steering committee meetings are essential to make it a partnership. The south has requests, but the north partner can negotiate the associated benefits and steer in the direction of a win-win situation.
- \* The partnership is successful if administration is highly transparent thanks to the oiled and professional cooperation between the administrative support in south and north.
- \* Copying models/concepts as experienced from a northern point of view to the southern institutions (e.g. research publication pressure,)

If existing, please list the three most important attributes that contradict the concept of IUC being built on partnership:

The group also observed a lack of flexible thinking towards the way the partner university runs / is advised to run administrative and financial matters: "We force them to adopt ours. This is of course a dominant position: we never negotiated this matter."

# Challenges Addressed in the Second Five Year Programme Cycle

Despite this overall positive appreciation of the co-operation, on the occasion of the Mid-Term Review a number of issues were raised inviting for further improvements. As illustrated in different sections of this report, most of these have been well attended to in the second five year cycle, while others still left room for further improvements:

- Relations between the individual constituent projects and overall programme co-ordination improved further, with overall day-to-day management (including administrative and financial matters) vested in the PCO as central programme body;
- Enhanced transparency of financial management (expenditures reporting, feedback to respective constituent projects, budget part spent and managed in Flanders, other sources of income) has been worked on methodologically and procedurally, but some challenges are still there regarding structuring and sharing of feedback information to the different reporting projects / sub-programmes and in ensuring more timely transfer of funds;
- Responsibilities for final reporting (reports submission) have been effectively / successfully vested with the CTU stakeholders, which is a strong indication if not ultimate proof of IUC programme and projects ownership;
- Inter-disciplinary co-ordination amongst CTU Colleges, Schools, Institutes and Centres for more efficient and effective programme implementation has been given explicit attention in 2<sup>nd</sup> phase of the programme, has been successfully piloted and further mainstreamed. Remaining challenges include the more systematic and solid incorporation of socio-economic aspects in the (applied) research projects and a further qualitative improvement of the didactical aspects in the education projects (and particularly in the e-teaching and e-learning tools and systems);
- The need for stronger inter-disciplinary co-ordination also applied to the co-ordination in the North, between the Flemish Universities and also there positive developments took place, as testified by key stakeholders concerned;
- The need for further structuring and intensification of the co-operation between North and South stakeholders with regard to planning and programming has also been well attended to, especially thanks to the introduction by VLIR-UOS Secretariat of standard tools and processes to facilitate this process.

## Strengthened Co-ordination between Flemish Universities

Both during the Mid-Term and the Final Evaluations, also the North stakeholders interviewed / contacted by the Evaluation Commission expressed the same appreciation of the very positive co-operation with their counterparts at CTU. Moreover, also in the other direction the co-operation between the Belgian Universities got strengthened indirectly through the CTU-IUC programme itself. This is considered by the North stakeholders as a most important positive side-effect and spin-off of the VLIR programme, of which the impact goes (far) beyond the boundaries of the VLIR-IUC programme stricto sensu.

#### Institutional Provisions for Co-operation

Despite the very positive assessment of the co-operation in general by the main parties concerned, the institutional and procedural provisions under the CTU-IUC programme to facilitate this co-operation between CTU and the Flemish stakeholders are rather limited. This makes the very positive atmosphere of mutual appreciation and trust between the CTU and Flemish partners even more special and enduring.

The Programme Co-ordination Office (PCO): Main programme institutional set-up is the Programme Co-ordination Office (PCO) set-up in the CTU Rectorate with the explicit mandate of facilitating co-ordination between the North and South stakeholders and also between the different constituent projects and sub-programmes. This PCO mainly fulfils administrative and financial co-ordination functions and is not a proactive entity for programme steering or even operational management. This responsibility in first instance is vested in the programme Steering Committee and the two programme leaders (before called "co-ordinators"). At the level of the individual projects, the functions of the PCO as far as the overall programme are concerned, are entrusted to the respective project secretaries, with overall responsibilities for the respective projects/sub-programmes vested in the project (sub-programme) Team Leaders.

This absence of pro-active steering of programme integration by the PCO to a large extent also explains CTU-IUC programme having remained largely a sum of different, individual projects rather than an effectively integrated programme consisting of mutually reinforcing projects. This observation does not diminish the very laudable and successful efforts done at the level of the individual projects/sub-programmes to strengthen interdisciplinary coordination and effective collaboration. Such collaborations however are largely the result of ad hoc, bottom-up initiatives rather than the exponent of a deliberate overall programme strategy (e.g. promoted by PCO).

A more prominent Institutional Strengthening (IS) role for the VLIR programme: On the occasion of the MTR, the then CTU Rector shared his vision about the creation of a sort of Think Tank, a central unit directly reporting to him, which sets out the broad strategic lines for the future of Can Tho University. The VLIR-IUC programme was envisioned to fulfill a major role in the capacity strengthening of this central strategic unit. No doubt, such active involvement of the VLIR-IUC programme in strengthening of strategic planning, programming and management at CTU also would have had important implications for an effective integration of the different individual IUC projects into one comprehensive and integrated VLIR Institutional University Co-operation programme with Can Tho University. Unfortunately this path was not pursued for a number of reasons.

Provision of international expertise: In view of the crucial importance for sustainable in-stitutional strengthening of Can Tho University, the many challenges and the extent of the tasks ahead, on the occasion of the MTR the recommendation was made for VLIR to consider supporting the provision of international expertise to this central unit, either on a long-term or short-term basis, especially during the first three years of the second phase. Although standard provisions were made by VLIR-UOS in its IUC programme in general for such positions, this did not materialize in the case of CTU. In the IUC Partner Programme (PP) document of 20 January 2003 for the IUC partnerships entering Phase II of IUC co-operation (2003–2007) for Can Tho University is mentioned in this regard: "The Belgian expatriate expert is not applicable in the VLIR-IUC with CTU. Centralized management is used under the body unit in the university so-called as PCO-CTU."<sup>73</sup>

#### Communication and Visits

Day-to-day management and technical co-ordination: Co-ordination between the North and South stakeholders on programme operational matters is usually through exchanges

of e-mails to the general satisfaction of both parties. An intense consultation process through e-mail exchanges is reported by most stakeholders.

Tactical and strategic management co-ordination and technical inputs: Main instrument are the semi-annual meetings of the programme co-ordinators and the project promoters / spokesperson on the occasion of exchange visits: an average of once a year in respectively Can Tho and Flanders. During these semi-annual meetings, programme progress is reviewed and work plans and programmes are developed / updated. In order to increase the efficiency and effectiveness of these visits, it may be advisable to give them a more formal and structured procedural basis. The visits of the Flemish academics are taken advantage of by the constituent projects to also tap them at the same time for staff development and other academic purposes in the framework of their respective projects / sub-programmes (both teaching and research).

## Students Involvement and Participation

While the co-ordination between the main North and South parties is highly appreciated, both in terms of intensity and quality, during the first five year cycle of the IUC co-operation this positive assessment was basically limited to management and staff only. In the second five year period of programme consolidation, more systematic efforts have been noted to more actively engage also students in the IUC programme. This for example has taken the format of not only CTU fellows getting their PhD or MSc degrees at Universities in Flanders, but also Flemish students doing (part of) their thesis research at CTU. Because of the many positive effects of this exchange of students, such internship programmes have been given extra attention within VLIR-UOS for replication / more widespread application in the context of IUC or other programmes. This particularly also holds for NSS cooperation (just by way of example an African student at a Flemish University doing thesis research at CTU).

Also the guided introduction of new scientific research techniques and laboratory equipment may provide opportunities for more active engagement of Flemish students in capacity building projects as IUC, mutually beneficial to both North and South partners.

Furthermore, the consideration of joint degrees (based on complementary credit courses) provides most interesting and challenging perspectives for more active student involvement and participation in VLIR-IUC and related programmes.

Another instrument for promoting more direct and active involvement of students in the IUC programme may be to broaden the participation in the annual programme review exercises (workshops) by including representatives of students. This has the benefit of getting direct feedback from the most important ultimate target group of the VLIR-IUC programme and has the additional positive effect that it at the same time strengthens their enthusiasm for the programme, if not their sense of ownership.

#### South-South Co-operation

The strengthening of South-South co-operation is one of the main objectives of the VLIR Institutional University Co-operation. As far as the IUC programme with Can Tho University is concerned, the intensification of South-South co-operation (particularly in an ASEAN context) has been prioritized by CTU general management as one of

the main policy directions in the pursuit of the CTU's medium-term goal of becoming a regional centre of academic excellence.

While in the first five year period, the promotion of south-south co-operation within the VLIR-IUC programme with CTA has been rather marginal, this issue became a priority concern in the second IUC programme consolidation phase. Successful initiatives within the context of the CTU-IUC programme were launched particularly in the context of the the R.I.I project, resulting in substantially expanded institutional academic networking, in contract research and consultancies in S-S perspective, in international conferences/workshops etc. Initial successes were also noted by the fruit tree and biotechnology projects under R.2 and also by soil dynamics project under R.3

# Expanded Possibilities for International Co-operation and Links with Broader Society

As reported before in detail under for example Chapter 2.1.2.3 on programme progress in Key Result Area 2.1.2.3 "Extension and Outreach", under Chapter 2.2.1.5 on higher level programme performance on development relevance and under 2.2.1.6 on sustainability, the second five year cycle saw substantially improved programme performance in terms of outreach and extension, of national and international networking. In fact, of all Key Results Areas, KRA-3 "Outreach" saw by far the highest increase of performance scoring of all KRA's, with an increase of 16% at the time of the final evaluation compared to the mid-term evaluation. For the higher level performance indicators it was criterion 6 on development relevance which saw the highest increase with 14%.

A wide range of opportunities to further strengthen co-operation between the different stakeholders and especially between the North and South partners has been further explored. This pertains to a broad spectrum of joint initiatives and projects including for example: joint researches, joint conferences, development into NSS and NNS academic networking hubs for each other, joint credit courses based degrees, exchange of academic staff, student internships, fair trade promotion and concrete initiatives, industrial / commercial spin-offs of applied research, etc. Initial successes have been booked but there appear to be ample opportunities and mutual interest to further structure and pursue these expanded possibilities for co-operation. Needless to point out also that these are all elements positively contributing to an enhanced overall sustainability of the programme.

As illustrated both with regard to the programme's key result area of outreach and its higher level performance in terms of effectiveness, impact, development relevance and sustainability, Can Tho University has strong links with both the public and private sector stakeholders of the Mekong Delta region. CTU aims at further strengthening its role as academic catalyst of socio-economic development in the Mekong Delta Region. Important initial initiatives have been undertaken and the groundwork has been laid in the first five year programme phase. Supporting the ambitions and goals of CTU as academic catalyst of socio-economic development in the Mekong Delta Region in a more structured, systematic and comprehensive manner became one of the main programme challenges in the second phase of the VLIR-IUC programme which was successfully pursued (be it to a varying degrees in the different individual projects). Under the extension and outreach chapter 2.1.2.3 is widely reported on successes and challenges in this respect, for example in connection with: contract research, social and commer-

cial marketing of research, intellectual property rights and patenting, academic support services to local and regional development policies and programmes, extension services to farmers and support to intermediary organisations specialized in extension (NGOs, socio-economic organisations, business organisations, etc.)

The further structuring of these spin-offs, outreach and extension services to broader society and of the international networking opportunities no doubt is one of the major challenges for the post-IUC programme era of VLIR / Flemish Universities cooperation with CTU, and maybe even for the VLIR-IUC programme as a whole.

# The Follow-Up Plan of the Programme

# The Follow-Up Plans in the Self-Assessment Reports

As part of the prime VLIR-IUC programme concern of guaranteeing programme sustainability and continued cooperation between the partner universities after IUC funding phases out, all projects / sub-programmes were requested to prepare / make proposals for post-IUC projects and initiatives. The Self-Assessment Reports to that effect include a special provision under Section IV for IUC Project Follow-Up Plans, meant to assess the interest for further cooperation and indicate ways and means to do so.

The standard structure of the Follow-up Plan includes the following main elements: (i) Communication, with sub-themes: At the level of the project teams (local and in Flanders), and; In between the teams; (ii) Mobility and/or exchanges; (iii) Interest and activities, with sub-themes: Interests, both from Northern and Southern teams; Opportunities, in the format of a SWOT diagram, and; Intended activities; (iv) Other initiatives to sustain the collaboration. Two standard annexes are foreseen; (i) Funding table, and; (ii) SWOT analysis.

A summary presentation of the main components of the action plans prepared by the respective CTU-IUC projects / sub-programmes as included in their respective final evaluation self-assessment reports is provided in the table on the next pages.

Common Features: As the table is self-explanatory as with regard to expectations, interests and concrete proposals, it does not need further clarifications. It however may be good to summarize some common main elements:

- \* Generally there is strong interest to continue the collaboration between the parties after the termination of the IUC programme, and this interest in general is expressed by both the South (=CTU) and the North (= Flemish Universities) partners;
- \* Remarkable is that only the research projects have completed the Post-IUC Follow-Up Plan template. On the other hand, two research projects (R.2.1 and R.2.2) emphasize that besides research activities they would also be interested in / and will actually pursue education improvement dimensions as well (e.g. BSc and MSc curricula, textbooks, student centred teaching, practica, etc.);
- \* Continued communication between the CTU and Flemish partners is mainly pursued through electronic means, basically e-mails. Other means include for example: (i) joint education programmes; (ii) international workshops and scientific meetings; (iii) conferences; (iv) through special programmes as for example ICP; (v) short visits, exchange visits; (vi) joint North-South-South projects; (vii) PhD or MSc fellowships;

- \* As far as mobility and/or exchanges are concerned, exchanges of staff and students are considered the most appropriate ways to enhance learning experiences and transfer of knowledge and skills. This does also include Flemish students coming to CTU for short training or for preparation of their thesis. In second instance are mentioned scientific meetings and related special initiatives;
- \* All research projects expressed strong interest in continued cooperation (see the summary table on interest in post-IUC follow-up on page 184), and this in most cases by both the Northern and Southern teams (the latter though more systematically and explicitly so);
- \* A feature worth mentioning is that inter-disciplinary concerns are explicitly brought forward as integral part of continued joint researches (e.g. environment in projects R.I.I, R.I.2 and, expectedly, R.3);
- \* Apart from the specific technical research fields, are also mentioned generic interest in enhancing consultancy programmes (e.g. R.1.1);
- \* Consistent with its base philosophy, project R.2.3 keeps stressing the continued upgrading of human capacity (MSc and PhD) and concomitant degree programmes at CTU as basis for joint researches (on innovative topics) in a second phase. Also other projects stress the necessary upgrading of staff (e.g. R.2.4) as precondition for quality research;
- \* Information on intended activities are provided with strongly varying degrees of detail amongst the different projects. Also, one of the estimated budgets for these activities, as integral part of the template, could be found. Some make explicit references to concrete research proposals (e.g. a RIP under R.1.1. or under R.2.2
- \* In some cases, explicit reference is made to international networking and to North-South-South (NSS) as modalities for future collaboration (e.g. under R.I.I and R.2.4), other provide priority research topics (e.g. under R.2.I), while still others limit themselves to general principles (e.g. under R.2.4: "continuation and extending the collaboration).

Attached Proposals: Some project teams provided the Evaluation Commission with copies of concrete project proposals and/or research protocols. This e.g. pertains to:

- \* Project R.I.I: N-S-S proposal entitled "Artemia Biomass: Strain selection / manipulation culture system application in aquaculture"
- \* Project R.I.I: ARC-CTU joint research proposal "Recyclage of Nutriënten in Geëutrofieerde Coastal Waters of Mekong-Delta, Vietnam, Artemia Production",; Particular Research Fund; Status: Approved
- \* Project R.2.2: IUC RIP Proposal (2009 Call) entitled "Study on rice breeding for brown plant hopper resistance" with a duration of four years (April 1, 2009 to March 31, 2013) Status: approved

Table 20: Summary of the SWOT Analysis Tables Included in the IUC Project Follow-Up Plans

CTU-IUC Project			Post-IUC Follow-Up Plan	an	
	1. Communication	2. Mobility and/or Exchanges	3.1. Interest	3.3 Intended Activities	4. Other
E.1 - Distance Education	Z.I.	N.I.	N.I.	N.I.	N.I.
E.2 - Curriculum Development	Z.I.	N.I.	Z.I.	N.I.	N.I.
R.1.1 – Aquaculture: Artemia	South: Through setting up new bilateral projects, e-mail, education programme, workshops, conferences,		South: Extending or continuation of collaboration with the North is our priority, and fields of interest should be (with or without Artemia as a core): Genetic, environment, culture system, education, consultancy programme	Bridging year: a RIP proposal has been circulated with Flemish counterparts (i.e."Artemia as a bio-filter") and ESPOL counterpart, the overall lump sum of budget is 180,000 EUR for 3 year programme.	
R.1.2— Aquaculture— Mud crab larviculture	North: Lab of Aquaculture and Artemia Reference Center (ARC), Gent University. Development of research on water quality and disease management on Artemia and shrimp culture areas	Exchange of staff and student between both sides is the best way to enhance experiences and communication capacity of staff (e.g. through training courses, workshops)	Southern Team: Water quality in culture ponds and effluents; assessment of environmental impact from intensive aquaculture		
	South: ESPOL, Ecuador. Development of research on shrimp culture and discase management				
	Project secretary will be responsible for communication between both sides. Regular e-mailing is best way to exchange and discuss ideas.				
R.2.1 — Fruit tree varieties	South Team: We intend to maintain the contact with the Flemish partners not only for research but also for teaching cooperation. The research activity in the future will focus on the plant cell isolation, cell and protoplast cultures. If possible, we would like to conduct studies on protoplast fusion and molecular biological techniques.	If our IUC R.IP Proposal is selected we expect to send 1 student for a long training and 2 for a short training. Through this post VLIR project we expect at least 2-3 exchanges of team member both sides.	South Team: - Continue to do research on plant tissue culture, especially micro-propagation techniques Study on protoplast isolation, cell culture and/or protoplast fusion Mutation breeding and biological researches by the uses of gamma ray irradiation.	-The seedlessness of fruits -Production of triploid hybrids in citrus improvement programmes -Fusion of protoplasts by either chemical or physical methods -Establishment and development of cell fusion technique in citrus -Protoplast culture in genetic engineering	Besides the research activities, willing to develop the Bsc and MSc programmes at CoAAB, especially Horticulture Science, which is new and promising alternative for students in Mekong delta. Collaboration with Belgian professors to update curricula and enrich content of textbooks and practical lectures for BSc an MSc programmes are necessary.
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	1. Communication	2. Mobility and/or Exchanges	3.1. Interest	3.3 Intended Activities	4. Other
R.2.2 – Biotechnology	North: Continue cooperate with Vietnamese side on a plant breeding programme for a good quality rice resistant to insects and diseases.  South: We intend to maintain the contact with the Flemish partner not only for research but also for teaching cooperation. The research activity in the future will concentrate on the short-day crops resistant to pests and the diagnostic kits done in-situ.	Besides the Flemish members of R22 sub-project, we also are in contact with Flemish members of R24 sub-project because in the mear future we will work together in the "Rice Breeding Programme".	Northern team:  The group of G. Gheysen has recentaly started a project on the molecular analysis of rice diseases, focused on nematode problems. Therefore it will be highly interesting to have contacts with Vietnamese rice breeders and scientists to exchange material and information. The transformation protocol could be optimised in collaboration because it will be useful for both parties.  Southern team:  Plant breeding programme based on the molecular biotechnology for selecting cultivars resistant to insects ann diseases.  Study on "Rice genetic transformation"  Development of diagnostic kit for detecting pathogen in vitro and in-situ.	Study on rice breeding programme resistant to brown plant hopper to decrease the expenses of rice culture for improvement the living condition of rice grower in the Mekong Delta.  Main intented activities:  -Rice genetic resources in different agrocological and social-cultural conditions are collected in order to enrich the gene bant; phontype analysis and evaluation from the diverse rice gene pool will be carried out.  -The preliminary evaluation of insect resistant varieties from rice genetic resources.  -Identification of the resistant BPH rice.  The candidate genes and favourable alleles identified for BPH tolerance.  -Using these identified genes and favourable alleles in genetic resources for breeding new BPH resistant cultivars bases on MAS and micro-array.	Besides the research activities, we are also developing the BSc and BSc programmes at BiR.DI. Colloboration with Belgian professors to update curricula and enrich content of textbooks and practicum for BSc and MSc programmes are necessary.
R.2.3 – Fruit preservation & processing	North. Yes, we will keep contact with out partners through e-mail and, if possible, visits. In addition a continuous interaction can be maintained through the selection of candidates for the VLIR supported ICP programme in Food Technology, a programme in Food Technology, a programme jointly organised by KU Leuveneuven and UGent). We can consider (through different channels) recruiting top level MSc students from CanTho in our PhD programme.  South: Yes, we will keep in contact with our partners via e-mailing and by visiting.  In-between the Teams: The south project leader and staff members who have chances to work with the north partners will keep regular communication via e-mailing.	- As a co-promoter for a sandwich PhD study program (for Drs Huynh Nguyen Bao Loan, and later for other students) with UGent, Dr. Ly Nguyen Binh has planned to visit Flemish partners in the near future to discuss future collaborations.  - We expect to receive Flemish students to come for their short training at CTU.	Northern team:  - Main field of interest: food technology. Vehicles that can be used:  - MSc training through ICP Course IUPFOOD (based on fellowships from different sources including VLIR, Vietnamese government,)  - PhD training of top students (through different funding channels including running projects and scholarships such as VLIR, Vietnamese government, institutional fellowships etc)  - International research programmes (e.g. European funding channels)  Southern team:  - To train staff members at MSc and PhD levels  - To build up international BSc and MSc programmes in Food Technology at local institute  - To jointly conduct research in fields of innovative technologies, namely food safety, food mutrition, food enzymology, food fermentation, process control, process modelling  - To seek for new fund for investment		

CTU-IUC Project			Post-IUC Follow-Up Plan	an	
	1. Communication	2. Mobility and/or Exchanges	3.1. Interest	3.3 Intended Activities	4. Other
R.2.4 — Enzymology	North: Yes, team members are coworkers of the Laboratory of Protein Chemistry, Vrije Universiteit Brussel, are willing to continue collaboration with BiRDI and other departments of CTU through assisting in training of staff in MSc of Molecular Biology and Biotechnology, internet commications, short visits, joined North-South Project.  South: Yes, team members are staff of the Laboratory of Enzymology, BiRDI, CTU. The contact can be maintained by organizing international workshops, seminars, Joined North-South-South project, other reliable funds for collaboration research projects.  In between the teams:  - Responsible people:: in the North: Prof. E. Van Driessche and in the South: Mrs. Duong Thi Huong Giang.  - Manner (personal mails, general mailing etc), frequency of communication etc.: e-mail, mutual visits	One visit North-South and one South-North per year	Northern team: - Protein isolation and characterisation tion - Fish lectins - Fish pathogenic bacteria - Teaching.  Southern team: - Purification and characterization of Fish lectins and other proteins of the immune system of fish as diagnostic tools Studying pathogenic bacteria in. farming fish for disease prevention Publication of papers in the inter- national journals Upgrading of staff in teaching and doing research.	Continuation and extending the collaboration.	Development of North-South-South projects
R.3 – Soil dynamics	North: One of my former PhD students (Chau Minh Khoi) acquired an IFS grant to build on the concepts generated during his PhD. Intend to continue exchanging ideas and information with him on this research subject which is of common interest. Also Prof. Dirk Springael from my division intends to continue collaborating with his PhD student and other staff members in the area of soil microbal diversity. How to fund this is not obvious though but by linking the work with ongoing activities in Belgum, its may be possible to organise exchange visits and/or have students under cosupervision.  South: Maintaining communication with the Flemish academic staffs and other team members is crucial to share knowledge, experiences and to foster further collaboration.  In hetween the teams:  Communication can be implemented via emails, international workshops and scientific meetings.	Academic exchange can be raised and more collaboration in both teaching and research can be enhanced throughout scientific meetings, staff and student exchange and visiting scholars.	Northern team:  - Phosphorus availability in aquatic systems  - Soil fertility changes in continuous rice cropping systems  - Soil microbial diversity in flooded/non-flooded soils in relation to functionality.  Southern team:  - Mitigating pollution from agricultural sources.  - Integrated management for some typically degraded soils.  - Soil organic matter turnover under different soil management.		

#### The Summary Questionnaire by the Evaluation Commission

With a few exceptions, the Post-IUC Follow-Up plans generally lack crispy concrete activities or proposals. As the Evaluation Commission was asked to give special attention to future modalities of cooperation in the Post-IUC era, as is also confirmed in its Terms of Reference, the Evaluation Commission drafted a "Summary Questionnaire on Post-IUC Strategic Directions, Priorities, Plans and Concrete Initiatives and Proposals, per Involved CTU Institutional Partner Entity. The questionnaire consists of four parts as follows: (i) Identification of the CTU institutional partner entity and responsible person; (ii) Listing of key priorities / key strategic directions of the entity for the next five years in descending order of priority (highest priority first), and with for each an indication of the main IUC Key Result Area (KRA) related to; (iii) List of concrete recommendations / plans in the entity as a follow-up to the ending VLIR-IUC Programme, and; (iv) Concrete proposals under preparation / prepared by the entity for submission to VLIR, classified by main VLIR Post-IUC toolbox categories.

The questionnaire was intended to serve the dual purpose of (i) an attempt to a more systematic generation of ideas and concrete proposals for continued post-IUC collaboration between CTU and the VLIR Flemish partner universities, and (ii) ensuring that these proposals are solidly anchored in the long and medium term strategies and priorities of the respective CTU entities concerned and of CTU in general. As agreed with the CTU-IUC Programme Secretary, responsibilities for both the distribution and retrieval of these questionnaire to the different entities concerned would be with the CTU Programme Coordination Office (PCO). The Evaluation Commission however has not been able to receive back any completed questionnaire through this channel. It however was directly provided with completed copies on the occasion of the interview sessions with the respective project teams and on other occasions during its mission stay in Can Tho.<sup>74</sup> Copies are incorporated under Annex 4.3 to this report.

### Summary of the SWOT Analysis Tables Annexed to the IUC Project Follow-Up Plans of the Self-Assessment Reports

The questioning of the CTU-IUC projects partners about their interests in and concrete proposals for continued collaboration in the post-IUC era in the IUC Project Follow-Up Plan as integral part of the self-assessment reports takes the format of a Strengths, Weaknesses, Opportunities and Threats (SWOT) matrix. On the next pages is a summary overview of the replies by the respective projects for each of these four SWOT categories.

As this table speaks for itself, the analysis here is limited to a summary of the main and/or common elements in the replies from the stakeholders (both North and South):

Table 21: Summary of the SWOT Analysis Tables Included in the IUC Project Follow-Up Plans

CTU-IUC		SWOT Analys	SWOT Analysis Components	
Project	1. Strengths	2. Weaknesses	3. Opportunities	4. Threats
E.1 - Distance Education	N.I.	N.I.	N.I.	N.I.
E.2 - Curriculum Development	N.I.	N.I.	N.I.	N.I.
R.1.1 - Aquaculture: Artemia	- Hard / devoted workers, eager to learn	- Publications (slowly, but more are expected)	- Built-up capacity (quality and quantity) - Working groups / teams created - Enhancement N-S collaboration - Occasion for S-S collaboration sustainability	- Less / loss opportunity to absorb new project - Fierce competition in application for new projects
R.1.2 - Aquaculture Mud crab larviculture	- Young and enthusiastic staff members - Existing equipped laboratories of water quality analysis - Well trained and experienced staff - Traditional cooperation between two sides - Focus on relevant issues that are of major concern to government and farmers in the Mekong Delta	- Limitations of staff with regard to drafting and publishing of papers	- Long time relationship with the North team (Ghent University) - Focus on relevant issues of importance to the Mekong Delta - Ongoing networking / integration with many foreign countries	
R.2.1 – Fruit tree varieties	- Close cooperation between Flemish promoter and local members of the project - Members of the project are active - Autonomy in operation of the project	- Most Vietnamese collaborators in the project still have a limited knowledge in English communication (oral and written)  - The level of Vietnamese researchers was upgraded but they should be developed more	- We intensified more than eight research projects to enhance the scientific research activities at CTU - These scientific research activities did not only cover all provinces of the Mekong Delta, but also others in the South-Eastern of Viet Nam, which are promising places for the development of fruit tree production - Focusing on producing virus-free seedlings of valuable fruit trees and improving fruit quality, including the seedless fruits, are promising topics for investigation	- The number of scholarship for Vietnamese staff member should be increased.  - Through teaching/researching collaboration program with the Belgian professors/experts, the Vietnamese staff members will upgrade both education capacity and skills of research.

CTU-IUC		SWOT Analysis Components	s Components	
Project	1. Strengths	2. Weaknesses	3. Opportunities	4. Threats
R.2.2 – Biotechnology	- Flemish experts have experiences in plant biotechnology and plant-pest interactions. They have lots of experiences on plant genetics, extensive experience in transgene technology and nutritional improvement. The Vietnamese researchers have installed the modern laboratory through R22 sub-project. They can carry out a new programme on plant breeding with the advice of the Flemish scientists.	- The cost of reagent used in biotechnological research is very high.  - The level of Vietnamese researchers was upgraded but they should be developed more.	- The rice growers in the Mekong Delta are very poor because of the high expense of rice crops. The over use of pesticides is one of the reasons why the cost of rice productivity is high. A rice breeding programme for rice cultivars resistant to pests should be set up not only for improvement the living condition of farmers but also for solving the environmental pollution problem.	- The number of scholarship for Vietnamese staff member should be increased. Through the teaching collaboration programme with Belgian professors, updating the curricula and enrichment the content of textbooks and practicum for BSc and MSc students, the Vietnamese staff members will be upgraded to a new level.
R.2.3 – Fruit preservation & processing	- The excellent capacity building both on theoretical and practical/research basis through MSc, PhD and short-term training - The staff members joined in the sub-project gained the necessary knowledge and capability to better perform in teaching and research oriented activities The staff members have been trained in writing scientific publications in different media including peer reviewed journal.	- Due to lack of equipment at the local institute, the research of the PhD candidates could not be continued when they were back home  - The English language skills of the staff members was often insufficient to perform well in oral and written communications  - The (teaching) workload of the remaining staff members at the CTU Department of Food Technology (while others were abroad) was too high.	- Qualified staff members can better perform teaching, research and extension activities - Qualified staff members have more chances to be present and perform in an international environment (workshops, conferences, congresses,) - Qualified staff members have more chances to attract partners to work with - Qualified staff members will be involved more in decision making chains to deal with public issues	- Due to lack of continuous investments (research equipment and facilities), trained staff members can not implement/apply their expertise.
	- The department staff members and the students had extensive opportunities to learn and discuss new food processing technologies from Belgian experts  - The local farmers have obtained a better knowledge in fruit processing and preservation through the training courses in which the research results were presented			
R.2.4 – Enzymology	- Well equipped laboratories - Well trained and motivated staff	Poor communication in English of many Southern co-workers	- Expand research to other proteins that are of interest	Funding
	- Society oriented research - Research and teaching in line with strategic plan of BiR.DI - Support by Vietnamese Government		- Expand collaborations to other universities in Vietnam and the region - Expand collaboration with companies - Development of techniques that are of interest to farmers and society at large	
R.3 – Soil dynamics	<ul> <li>Having experiences in international and national collaboration.</li> <li>Academic staffs own higher education.</li> <li>Laboratories are well-equipped and have capacity to carry out specific studies.</li> </ul>	- Lack of funding sources. - English proficiency is not adequate. - Some staffs lack of international exposure.	- Collaboration in teaching and research on the emerging problems relating environmental and natural resource management for sustainable agricultural production in the Mekong Delta.	- Cost for maintaining and operating some highly valuable equipments.

#### \* Strengths:

- Long standing quality cooperation between the CTU and Flemish parties;
- Quality of project staff (dedicated, hard working, committed, enthusiastic, etc.)
- Extensive HRD / capacity building of staff (e.g. through MSc, PhD fellowships in Flanders and short-term training);
- Focus on relevant topics and issues for the development of the Mekong Delta region (in line with overall development plans and institutional plans);
- Upgraded laboratories and equipment;
- Autonomy in the operation of projects;

#### \* Weaknesses

- Relative limited publications so far;
- Relative weaknesses in project proposal / research protocol writing;
- Still limitation in mastering of the English language;
- Still insufficient HRD and capacity upgrading of academic staff;
- Costs of equipment maintenance and operation (e.g. cost of reagent used in biotechnological research);
- The workload of the staff members (e.g. with regard to teaching tasks) inhibiting sufficient time for research;
- Graduated PhDs in cutting edge research topics lacking appropriate laboratory equipment necessary to pursue their researches when back at CTU;
- Lacking of international exposure of some staff;
- Inadequate resources.

#### Opportunities

- Strengthened capacities (both quantitatively and qualitatively);
- Working groups / research teams created and operational;
- Enhancement of N-S, N-S-S and S-S collaborations;
- Strengthened international networking;
- Strong, enduring relationship with the North Teams (Flemish Universities);
- Research intrinsic features of special relevance for sustainable development
  of the Mekong Delta region and beyond (e.g. virus-free seedlings of valuable fruit trees, rice cultivars resistant to pests, sustainable agricultural production, etc.);
- Qualified staff members better perform teaching, research and extension services;
- Feasibility of expanding research applications to related fields;
- Rising demand for contract research (outreach services, consultancy assignment) from private sector companies and from local authorities
- Research applications impacting on poverty alleviation and households incomes

#### \* Threats

- Research capacity already stretched and limited additional absorption capacity;
- Stiff competition for new projects (contracting on competitive basis);
- Limited funding;
- Due to lack of continuous investments (in research equipment and facilities),

trained staff members cannot apply their expertise to the full;

- High maintenance and operation costs of highly valuable equipment.

Summary key information on the VLIR Post-IUC toolbox of possible modalities of cooperation assistance is incorporated under Annex 4.2 to this report for ready reference. More detailed information is provided on the overall framework of VLIR-IUC ex-post facilities, on ex-post in concreto, on timelines and the IUC toolbox, on the implied toolbox, on eligible costs, and on concrete post-IUC tools including Own Initiatives (OIs), South Initiatives (SIs) and International Conferences (ICs), amongst others.

A more detailed assessment of the higher programme performance criterion "Sustainability" as broader framework for this discussion on the VLIR post IUC toolbox and on the follow-up plan of the programme is provided under earlier Chapter 2.2.1.6.



### Summary Conclusions and Recommendations

#### General Conclusions and Recommendations

# General Observations and Conclusions on the CTU-IUC Programme Overall Implementation Status and Results Achievement

As reflected in the mid-term evaluation report of June 2002 at the end of the first five-year cycle of the CTU IUC programme a *solid basis has been laid* for ensuring the results and effects aspired for by the end of the programme period in terms of institutional strengthening of Can Tho University and its potential contribution to and impact on sustainable socio-economic development of the Mekong Delta region. With the IUC programme now having come to an end in 2008, these overall objectives have been basically achieved to the satisfaction of all stakeholders concerned.

Phase 2 of the IUC programme actually constituted a consolidation of what was achieved in the first phase, with making more optimal use of the enhanced infrastructure and equipment and in first instance of the strengthened human resources capacity for the successful achievement of the programme's objectives related to teaching and research performance, both qualitatively and quantitatively. Some of the supported Colleges/Schools and Institutes/Centres have successfully achieved the status of Centre of Excellence, and are recognized as such not only in the Mekong Delta region, but also at the national level and beyond. Major challenge will be to maintain this level of excellence (both quantitatively and qualitatively) as the competition for qualified human resources from both the booming private, commercial sector as well as from private academic institutions will become more fierce in the years to come, especially because of the demands posed by a booming economy. Programme sustainability therefore is more than a buzz word in this context, but on the contrary has become an increasingly more crucial requirement and concern needed and still needing to be given priority attention.

The programme also continued to successfully reach out to the wider Mekong Delta, as such attesting to its development relevance in addition to the academic relevance aspired for. This continued to support Can Tho University in its mission as catalyst of regional development in the Mekong Delta. The CTU-IUC programme proves a success story as it combines successes in both the academic and regional socioeconomic development fields. Most projects under the CTU-IUC programme have a strong regional development finality with contribution to regional development objectives explicitly incorporated in management plans, teaching programmes, research protocols, and the like. CTU has a long and recognized tradition of regional development centre and the VLIR supported IUC programme has further strengthened CTU in effectively realizing its commitments in this regard. This is proven by the multitude of outreach and extension activities, which in many if not most projects are integral

part of the project design and implementation strategy. The development relevance of the programme and projects is furthermore evidenced by the many requests the supported CTU units receive from both the public and private sector for specific advisory, productive and other sources. Many spin-offs have resulted from the initial programme investments. Impact concerns of the programme and its individual projects and initiatives at the level of the households of the Mekong Region are explicitly integrated in project documents and research protocols, in the broader perspective of contributions to poverty alleviation and upliftment of the socio-economic welfare and wellbeing of the Mekong Delta population. Extension programmes effectively reach out to the ultimate target beneficiaries, even if efficiency and effectiveness concerns in this may still need to be given more systematic attention.

Furthermore, the status of Centre of Excellence actually achieved by different supported units firmly encouraged them to further proactively strengthen their networks, not only within the Region, but also nationally and internationally. This provides major opportunities in terms of further structuring and strengthening of both South-South (S-S) and North-South-South (N-S-S) collaborations. It invites both the Flemish and CTU partners to further strengthen their network ties in a general win-win situation, beneficial for both sides. Both parties can become academic network hubs for each other, thus effectively materializing international network multiplier effects. The ViFINET network established in the aquaculture sector is an example in case.<sup>75</sup>

It is felt that one of the major challenge for VLIR-UOS with regard to the post-IUC phase in general is to explore the optimum conditions and to devise appropriate programme modalities and tools to promote and effectively support such network expansions. As such not only IUC programme accomplishments at the level of the IUC partner universities themselves individually are sustained, but programme impact goes beyond their boundaries by covering the initiated institutional networks as well. In this way institutional multiplier effects are generated and/or further strengthened if not maximized, and as such also IUC programmes' cost-efficiency and cost-effectiveness are strongly boasted, to the benefit of both the South and North stakeholders.

#### Overall Programme Performance and Quality

- \* Throughout the ten years VLIR Institutional University Co-operation (IUC) programme with Can Tho University has been characterized by an *intense collaboration of high quality*, based on mutual trust and respect, and very positively appreciated by both the North and South stakeholders. The substantive annual IUC budgets provided substantive financial leverage for integrated programming in the pursuit of CTU's strategic objectives and also for effective impact generation along the base principles of the VLIR University Development Co-operation policy.
- \* During the *first phase of the programme*, a solid basis was laid for the programme to effectively generate the expected outcomes in the pursuit of the programme's medium and long-term objectives with regard to academic human resources development, teaching, research, outreach and management development. In this first phase, the CTU-IUC programme basically concentrated on the delivery of quality programme inputs and the creation of the necessary enabling environment for institutional strengthening of CTU as academic catalyst of regional development of the Mekong Delta region. These quality inputs related to for

- example staff development, ICT, multi-media facilities, upgrading of laboratory facilities, curriculum development, development of learning resources, etc.
- \* In accordance with the programme's basic philosophy and strategic outline, the second five year CTU-IUC programme cycle was one of consolidation: making maximum use of the improved infrastructure and enhanced human capacities in the pursuit of the programme's long-term and more immediate objectives with regard to its three main components of teaching, research and services to society, and this in the most cost-effective and cost-efficient way and thus to ensure optimum programme quality in the broadest sense, impact, development relevance and sustainability.
- \* As far as CTU-IUC programme performance on its Key Result Areas is concerned, highest final programme evaluation scores<sup>76</sup> are realized by the KRAs infrastructure (80%), outreach (76%), research, human resources development and resources mobilization, all three with a score of 73%. What immediately strikes the eye is the marked improvement in scoring for KRA 3 "Outreach" (by not less than 16%) between the 2002 MTR and the 2008 Final Evaluation. Strongest challenges remain with KRA teaching and KRA Management. Overall there is an average 4% increase in scoring for all 7 KRAs compared to the Mid-Term Review in 2002.
- \* With regard to the programme's higher level performance criteria, highest scores are for development relevance, overall quality and sustainability. In view of their relative lowest scores, efficiency and impact are the criteria posing the biggest challenges still for the future. The biggest scoring jump in the higher level performance criteria is with sustainability (a jump by 14 % from 62% in 2002 to 76% in 2008). The second highest improvement is on the criterion of development relevance (plus 11%), followed by quality and sustainability (both with 76%). For only one criterion a reduction in scoring was noted, namely for the criterion on efficiency. The average programme scoring for these 6 criteria increased by 6.5% from 66.2% in 2002 to 72.7% in 2008.

#### Summary Presentation of the CTU-IUC Final Evaluation Conclusions and Recommendations by the Evaluation Commission

The summary findings, conclusions and recommendations on the CTU-IUC programme final evaluation presented by the Evaluation Commission to the North and South Stakeholders on the occasion of the evaluation debriefing session cum Joint Steering Committee Meeting at the end of the evaluation mission include the following:

- \* Human Resources Development (HRD) of CTU staff (the University's "software") is very much appreciated by all and is a major achievement of the VLIR IUC programme → Since there are still outstanding needs in this respect, these HRD processes need to be continued;
- \* Status of Centre of Excellence has been achieved effectively by certain Colleges/ Schools and Institutes/Centres as a result of the IUC programme →This needs to be sustained. Therefore, amongst others, staff retention issues need to be addressed on a strategic and systematic basis in order to ensure CTU's very sustainability as Centre of Excellence;
- \* Research capacity and outputs need to be further strengthened with particular focus on continued research publications production after PhD graduation (including monitoring, follow-up and support mechanisms);



- \* Necessity to find the right (optimal) balance between fundamental and applied re-search (both as mutually dependent and impacting on each other);
- \* Need for strategizing spin-offs of research (incl. market research, proactive marketing, commercialisation of applied research and its products, licensing, setting up of special Research and Consulting Units, etc.);
- \* Researches are / need to be firmly rooted in felt / identified development needs (preferably, if not necessarily, based on needs assessments at the level of the ultimate beneficiaries / clients, or at least with strong links to local and regional stakeholders);
- \* Need for applied researches to include socio-economic, poverty alleviation and sustainable environment impact dimensions (amongst others requiring poverty and development impact and outcomes baseline and targets setting on OVIs, plus actual measurements, monitoring and evaluation of these) ‡ provisions for development impact, or better development outcomes therefore preferably are to be integrated in research project proposals and research protocols in order to ensure genuine goal orientation beyond the conventional lip-service provisions;
- \* Translation of research findings in extension messages or policy preparation documents is essential and needs more systematic attention;
- \* Making more systematic use of suitable, specialized intermediaries to do the actual extension work with the ultimate beneficiaries based on the research findings and outcomes (and as such strengthening of multiplier effects, and enhancing extension efficiency and effectiveness);
- \* Management and organisational development components needing to be addressed more substantially and systematically at all levels, particularly in a programme as IUC which by its very nature is an institutional strengthening programme;
- \* Need for further strengthening of inter-disciplinarity and collaborations between Colleges & Schools, Institutes & Centres;
- \* Further developing and strengthening of institutional networks, locally, nationally and internationally;
- \* Flemish universities and CTU fulfilling roles of international networking hubs for each other (NSS and NNS);
- \* Continued / further strengthened post-IUC programme exchanges between Flemish Universities and CTU (e.g. in fields of HRD, teaching quality support and control, joint researches, staff exchanges, student internships, etc.);
- \* Pursuit of spin-offs to generate resources for laboratories and equipment upgrading, and as such ensuring sustainability;
- \* Identification and formulation of competitive project proposals stemming from CTU and Colleges'/ Institutes' strategic priorities;
- \* Continued pursuit of joint researches with Flemish and other international universities;
- \* Submission of eligible and competitive proposals to VLIR for funding (IUC expost toolbox) see Evaluation Commission questionnaire;
- \* Last but not least: Development of a CTU long-term human resources policy and strategy to squarely face increasingly intensified competition for highly qualified human resources from industry and upcoming new universities.

#### • The Sets of Operational Conclusions and Recommendations

The operational conclusions and recommendations derived from the above overall assessment are presented hereafter under four headings as per the Terms of Reference:

- I. The CTU-IUC programme and its projects / sub-programmes
- 2. Programme management and co-ordination between the different parties
- 3. The CTU follow-up plan for the post-IUC era
- 4. The VLIR-IUC programme in general

These conclusions and recommendations are presented in a succinct, bullet-style manner, since a detailed analysis on each can be found in the preceding chapters of the evaluation findings. Indeed, this detailed analysis of the programme and its constituent projects / sub-programmes covers the evaluation findings and conclusions for both the progress / achievements on the programme's Key Result Areas (research, teaching, outreach, management, HRD, infrastructure and resources mobilization) and the higher level programme performance assessment (e.g. on quality, effectiveness, efficiency, impact, development relevance and sustainability). For each of these criteria, both the identified strengths and challenges/issues needing attention are reflected. These identified challenges / issues in fact at the same time represent the corresponding recommendations, indirectly and in quite some cases even directly. In the summary conclusions and recommendations, these strengths and challenges as well as the higher end performance criteria assessments are presented in relation to all six Key Result Areas, in order to ensure their down-to-earth practical nature and thus to enhance the likelihood that they will be effectively considered and/or taken on board.

Whenever possible, these challenges / issues needing attention have been formulated from the broader perspective of Can Tho University in general and/or of VLIR-IUC programme challenges for the future, thus transcending the specific cooperation programme as such. Therefore, in order to avoid further duplications, only a summary selection of most relevant observations and recommendations is reflected in this concluding chapter. For more details, the reader is referred to the respective chapters concerned of the report.

Since now at the end of the IUC programme cycle, special attention is given in the rec-ommendations to the post-IUC programme era and possible modalities of continued collaboration between the north and south stakeholders concerned, in casu between the Flemish Universities and Can Tho University, and regarding the VLIR-IUC programme and its follow-up in general

# The CTU-IUC Programme Key Result Areas with Special Attention for Higher Level Programme Performance Criteria

#### Research

\* Strongly enhanced research capacities: Generally strongly enhanced research capacities are noted with regard to all research projects due to extensive HRD upgrading of staff under the IUC programme (both PhD and MSc levels). Capacities have been upgraded to such extent that some entities supported by the VLIR IUC programme have developed into Centres of Excellence, recognized as such not only nationally but also internationally. However, there are marked differences

- still in research capacities and excellence between the different entities supported by the VLIR programme.
- \* The enhanced research capacity has *triggered off important demands from regional development entities and from industry alike*. The VLIR-CTU IUC programme as such led to a multitude of spin-off activities and to very substantive local, national and international networking initiatives.
- \* Relevancy of research topics: In general, research is conducted on relevant topics, identified as priority by CTU. The sections on the background and rationale of the researches in the respective VLIR-IUC self-assessment reports make explicit references to their relevance and importance for the socio-economic development of the Mekong Delta region.
- \* Successful commencement of international networking: In the pursuit of CTU's active policy and strategy of becoming a regional academic centre of excellence, the intensity of national and international contacts gradually increases, particularly towards the end off the 10 years IUC programme.
- \* Interdisciplinary collaboration: The IUC VLIR programme considerably contributed to improved interdisciplinary contacts both within CTU and between Flemish Universities.
- \* The *intake and enhanced guidance of quality students* with high academic potentials remains a challenge, if not an absolute must in order to ensure sustained an sustainable academic research performance.
- \* Publications: While at the time of the Mid-Term Evaluation still needed to be reported that no or very limited international publications at A-level had been produced so far in the framework of the programme, this situation substantially approved in the second part of the institutional cooperation programme. Nevertheless, the continued and sustainable production of high quality academic research remains an element of major concern, which particularly applies to ensuring continued high quality, internal scientific publications by PhD's after their graduation.
- \* Joint Researches: More systematic exploration of opportunities for Joint Researches with Flemish and other universities abroad remains a major challenge in order to ensure sustainable excellence status of the research units and thus ensuring continued / improved high quality research. This may require the research units / departments to develop business plans or similar strategic plans and pursue their effective implementation, the consideration of establishing consultancy units, social and commercial marketing of research and research products, patenting, etc.
- \* Challenges to further enhance sustainable research capacity and performance: A series of concrete recommendations are made under Chapter 2.1.2.1 (pages 58-61) in relation to, amongst others: (i) The MOST fund for bilateral research cooperation; (ii) The DOST regional budget for research; (iii) The CTU Research Fund focusing on 7 research priorities; (iv) Joint researches; (v) Patenting / licensing; (vi) Social and commercial marketing strategy of researches; (vii) S-S and N-S-S international networks for joint researches; (viii) N-S-S internship / exchange programmes for MSc students to research for their thesis; (ix) Research strategic planning at the level of the Colleges / Institutes; (x) Improved access to updated literature on line; (xi) Balance between fundamental and applied research; (xii) Self-financing of research equipment; (xiii) Inclusion of impact dimensions in research protocols; (xiv) Enhancement of PCM and proposal writing skills; etc.

#### Teaching

- \* A Learning Management System (Dokeos in Vietnamese version) is available and functioning throughout the campus. Technical papers and manuals have been prepared for the effective use of Dokeos (both for end-users and system administrator), not only on technological aspects but also on pedagogic aspects of online courseware in an attempt to ensure optimum educational quality of the electronic teaching products.
- \* New methodologies and concepts of teaching are being introduced gradually to replace old ex-cathedra style of theory teaching (e.g. problem-based teaching, project work, team work, etc.) The exposure to new teaching techniques and didactical methods during scholarships in Flanders positively influenced the quality of teaching at CTU upon their return (cases studies, problem-based and problem-solving teaching, interactivity, group work, hands-on training sessions, etc.). However, in general there is still rather limited application still of the new, more student-centered, teaching methods.
- \* Successful development of new and/or updated curricula: It is a deliberate policy of CTU to maximally adapting its teaching offer to the requirements of a changing environment. To that effect, its feedback information network covering both the public and private sectors is particularly sensitive for signals from its alumni, job opportunities on the labour market and skills required in the industry.
- \* Laboratory based teaching has been substantially strengthened under virtually all research projects (R1 to R3). The upgraded laboratories and lab equipment and the trained technicians under the IUC programmes are directly benefiting the students in lab sessions as was as during thesis research in the labs.
- \* Sense of duty: Overall there is a keen interest in and a general sense of duty with CTU faculty vis-à-vis-à-vis teaching tasks and obligations. However, in their present form, outside teaching engagements substantially increase (if not overstretch) workload of CTU academic staff.
- \* The guest teaching by the Flemish professors generally has been highly appreciated throughout the IUC programme.
- \* Still rather limited involvement of Flemish students in the VLIR-IUC programme with CTU: Only exceptionally, Flemish students have visited CTU or have stayed in Can Tho for some longer time in connection with for example the preparation of their MSc or PhD thesis or any research or exchange assignment.
- \* Joint degree courses: Within the context of the degree courses credit system, applied by both the Flemish Universities (following the Bologna Agreement at overall EU level) and CTU alike, new opportunities arise for strengthened joint teaching programmes and joint degrees. This was one of the major topics during the evaluation debriefing and Joint Steering Committee Meeting discussions on the last day of the evaluation mission. It may be worth to have these opportunities analysed in a more systematic and in-depth manner as basis for policy decisions on this and related important issues.
- \* Challenges to further enhance the quality and performance of the IUC education programme component: A series of concrete recommendations are made under Chapter 2.1.2.2 (pages 69-72) in relation to, amongst others: (i) The (over-) stretched teaching workload affecting quality of both teaching and research tasks; (ii) CTU programme reorientation from distance education to e-teaching and e-learning; (iii) Strategizing complementarity of e-learning to traditional teaching; (iv) Effective use of e-learning tools; (v) English as standard course in all MSc curricula to

strengthen international language skills; (vi) Enhancing of effectiveness, efficiency and overall quality of teaching in Satellite entities; (vii) More widespread, effective application of new teaching methods; (viii) Translation of textbooks, syllabi in English and vice versa; (ix) Maximization of the opportunities provided by the Credits system in terms of the organisation of joint degrees and related issues; (x) Assurance of continued quality of teaching, for example through a system of international visitations involving Flemish and other partner universities, covering: a) curricula, courses, syllabi, e-learning courseware, b) Didactical aspects and teaching methods, and c) Tutoring and guidance of students; (xi) Enhanced involvement of students in the programme (including exchanges, internships, etc.); (xii) Enhancement of English language skills (especially scientific English).

#### Extension and Outreach

- \* Very substantive improvements on this Key Result Areas "Outreach and Extension" during the second five year cycle of the CTU Programme in virtually all projects, resulting in a relatively low overall score of 60% (lowest of all CTU-IUC KRAs) at the time of the Mid-Term Evaluation in 2002 to a high 76% now five years later, at the end of the ten years CTU-IUC programme cycle.
- \* Can Tho University is generally recognized as the most important academic institute in the Mekong Delta region with *strong commitments to regional and local development enshrined* in its vision and programmes.
- \* Policy framework: Provisions for outreach with regard to both teaching and research are explicitly integrated in the CTU overall policy, plans and strategies concerning its contribution to the overall socio-economic development of the Mekong Delta aspired for.
- \* Research outreach and extension to farmers: Outreach and extension to socio-economically deprived beneficiary / target groups are getting more prominent attention in the research protocols. Efforts are exerted to more systematically translate research findings in extension messages and services to small-scale farmers and other deprived beneficiary groups. Special workshops are organised to share research findings with extension workers and with farmers groups to ultimately reach out to the individual farmers.
- \* Outreach to economic groups and the business community: Major developments and strengthened achievements are noted during the phase II of the CTU-IUC programme with regard to contract research and other private sector spin-offs, just another prove that different entities within the university have grown into Centres of Excellence creating their own demands for services.
- \* Policy advice: Policy advice on specific topics to the provincial authorities is reported by the majority of CTU-IUC projects. Such advice is given on an ad hoc basis (on request in relation to specific issues) or on a more permanent, structure basis for example as member of a regional / provincial development committee or sub-committee.
- \* Research contracting and spin-offs: Strengthening of the relevancy and potentials of applied research for direct economic and industrial applications in the Mekong Delta in the pursuit of sustainable socio-economic development of the region is a concern of highest priority for CTU. Also this component under the CTU-IUC programme has been addressed with increasing success during the second (consolidation)phase of the programme. Consultancies, contract research and other spin-offs as a result of CTU research have been taking off and are expanding.

- \* Local, regional, national and international networking: Substantially strengthened international South-South (S-S) and North-South-South (N-S-S) networking (e.g. ViFINET) has been brought about by different projects under the IUC programme. It appears that the further quantitative expansion and qualitative strengthening of these networks constitutes one of the priority strategies and main challenges for the post-IUC period.
  - Challenges to further enhance the quality and performance of the IUC outreach programme component: A series of concrete recommendations are made under Chapter 2.1.2.3 (pages 80-83) in relation to, amongst others: (i) Research results distribution strategies and further qualitative enhancement of research and out-reach/extension linkages; (ii) The socio-economic dimensions of the research projects e.g. through the more explicit incorporation of outcome and impact indicators in research proposals and protocols, baseline surveys, impact monitoring and evaluation, etc.; (iii) Strengthening of the outreach and extension relevance of the ICT programmes and tools; (iv) Clear definition and delineation of the roles, responsibilities, rights and duties of both academic and business partners in commercial outreach spin-offs of research; (v) The need for an extension and spin-off policy and strategy of the University guiding the Colleges and Institutes; (vi) Exploration of feasibility and desirability of establishing Research and Consultancy Centres of capacitated Colleges / Institutes to enhance their financial and academic sustainability; (vii) More systematic attention for patenting and licensing of research and research products; (viii) Social and commercial marketing strategy of research; (ix) Impact in research protocols (e.g. households income, environment) more than a paper tiger. Necessity to complement with impact assessments on OVIs, incl. baseline surveys; (x) Further strengthening of multi-disciplinarity (socioeconomics, business); Maximizing use of intermediary organisations for extension and outreach work (multiplier effects and more effective and efficient), as for example: local government extension services, NGOs, farmers organisations, cooperatives, etc.); (xi) Maximizing complementarity between fundamental and applied research, with first facilitating second but also vice-versa (also in terms of income generation); (xii) Further strengthening of international networking with Flemish and other universities to maximize benefits of this fundamental research - applied research cycle; (xiii) Further strengthening of National, South-South, and North-South-South networks based on experiences and lessons learned from successful existing networks as for example ViFINET; (xiv) Maximizing learning from Flemish and other international universities' expertise in generating and managing spin-offs.

#### Management

- \* There generally is a strong, positive learning culture at both CTU and Flemish Universities' sides of the CTU-IUC programme. With few exceptions, conclusions and recommendations of the Mid-Term Review were effectively incorporated in programme design updates and operations.
- \* The demonstrated flexibility in adapting to changed circumstances is a strong programme feature of the CTU-IUC programme (e.g. under E.2 from distance education to campus based e-learning and research).
- \* The clear and standard tools and procedures of VLIR-UOS regarding programme / project cycle management are much appreciated by all parties concerned.
- \* PCM and Logical Frameworks have been introduced in all projects / sub-pro-

- grammes bringing with it a more strategic outlook and results orientation of the projects and the programme as a whole.
- \* Exposure to International Co-operation Practice: The very learning process of managing an international co-operation programme in accordance with the established procedures, standards, rules and regulations is highly appreciated by all CTU parties interviewed.
- \* Courses and other capacity building efforts to strengthen project cycle management and proposal writing skills were found most useful, relevant and necessary.
- \* Information management: The active use of ICT equipment for project management and for communication purposes has been substantially strengthened throughout CTU.
- \* Organisational development: Initiatives have been reported with regard to the organisation of regular management and/or staff meetings, the organisation of the ICT help desk function, etc.
- \* Enhanced ability to organise complex international conferences with multiple simultaneous sessions.
- Challenges to further enhance the quality and performance of the IUC management programme component: A series of concrete recommendations are made under Chapter 2.1.2.4 (pages 88 - 91) in relation to, amongst others: (i) Intensified training and capacity building on programme/project cycle management and its tools; (ii) Mitigation of negative impact of organisational restructuring on programme/project operations; (iii) Strategies to ensure sustainability and further expansion of the acquired status of Centre of Excellence of the CTU entities concerned; (iv) Transparency of financial management; (v) Quality of managerial reporting; (vi) Strengthening of institutional provisions for sub-programme / project level steering and management; (vii) More explicit provisions for management development in the VLIR IUC programmes; (ix) Organisational development, institutional networking, strategic and operational planning capacities and practices to be addressed more explicitly in the context of VLIR-IUC programmes; (x) Making of strategic choices in research and teaching in view of limited resources; (xi) Necessary consistency in academic policies, strategies and institutional set-up to ensure smooth IUC programme implementation and results; (xii) Integration of management and administrative concerns in overall ICT system platform; (xiii) Necessary skills upgrading on PCM and on both project and scientific proposals writing; (xiv) Need for leadership training, training on strategic management, results oriented management, team building, staff motivation, conflict resolution, and other management skills as integral part of IUC services package.

#### Human Resources Development

- \* Quantitative accomplishments: Very substantive human resources development / capacity upgrading of CTU staff took place under the VLIR-IUC programme as evidenced for example from the graduation statistics.
- \* Qualitative appreciation: Staff development abroad is highly appreciated by CTU staff and management alike and the substantive Human Resources Development ("strengthening of the university brains software") is unanimously acclaimed as the biggest accomplishment under the VLIR-IUC programme.
- \* Direct feedback from beneficiaries of HRD opportunities in Flanders learns that the following learning and related aspects were most appreciated: (i) Exposure

to a conducive research environment (incl. infrastructure, laboratory facilities, libraries, ICT equipment, etc.); (ii) introduction to new research and technical skills; (iii) familiarization with innovative teaching methods; (iv) interdisciplinary contacts and coordination; (v) regional contacts; (vi) personal (and family) wellbeing very well looked after; (vii) very cordial and friendly personal contacts and overall atmosphere; (vii) improvement of English language skills, and; (viii) continued contacts and networking after the end of the scholarship, amongst others.

- \* Re-integration policy: Even while almost half of the PhD studies are still ongoing, there is a guarantee that all students will return effectively to Vietnam and render services to Can Tho University for a minimum period of time (provision formally laid down in a contract issued by CTU with the staff member on a long-term HRD assignment abroad).
- \* Technical Staff Development: Technical staff development has been pursued basically through short-term courses either in Belgium or through lectures / seminars / short courses provided at the CTU campus by visiting Belgian professors
- \* Sandwich PhD: The sandwich PhD system keeps on getting mixed reactions basically depending on the type of doctoral research conducted. A series of special recommendations on the subject matter is included in the report chapter concerned (pp. 97 100).
- \* Critical Mass Achievement: Some Departments / Institutes now have achieved a critical mass of academic excellence to enable institutional tutoring of other academic institutes, in the Mekong Delta region, national and regional.
- \* HRD Programme Spin-Offs: As an indirect off-shoot of the substantive Human Resources Development results realized under the VLIR-CTU IUC programme, important spin-offs materialized for Can Tho University, including for example "Mekong 1000".
- Challenges to further enhance the quality and performance of the IUC human resources development (HRD) programme component: A series of concrete recommendations are made under Chapter 2.1.2.5 (pages 100-105) in relation to, amongst others: (i) Making English language requirements more stringent as a pre-condition for entering into an international HRD programme; (ii) Promotion of alternatives to the sandwich system, e.g. through regional networking for staff human resources development; (iii) More systematic exploration of the possibilities provided under the degrees credit system in place not only in Flanders for quite some time since the Bologna Agreement at EU level, but also at CTU<sup>77</sup>; (iv) Continued collaboration on HRD with the Flemish universities in view of the substantive outstanding needs still; (v) HRD as crucial basis for sustainable academic excellence as is learned from a special note by the Flemish Team Leader of R.2.3 to the Evaluation Commission<sup>78</sup>; (vi) Development of a staff performance rewarding and retention strategy to face the fierce competition for "brains" by the commercial private sector and also by the growing number of private universities in the Mekong Delta and in Vietnam as a whole; (vii) Further development of English language skills; (viii) Addressing temporary understaffing at CTU and possible brain drain as a result of HRD opportunities abroad; (viii) Necessary closer monitoring and follow-up of returning upgraded staff, particularly in relation to continued scientific research and publications; (ix) Selection of PhD subjects based on a participatory process of mutual consultations and optimum relevance for the specific academic needs of CTU and the Vietnamese

<sup>77</sup> The discussion on joint degrees between Flemish universities and CTU was one of the main points on the agenda of the VLIR-CTU IUC Joint Steering Committee Meeting following the debriefing by the Evaluation Commission.
78 More details under Annex 6.3.



socio-economic development context in balance with the opportunities and interests of the host partner university in Flanders; (x) More systematic incorporation of management training in the IUC programmes; (xi) More comprehensive PCM capacity development to match the PCM requirement of the IUC programme (e.g. LogFrame design and updating, reporting on indicators, etc.); (xii) Formal guarantees regarding reserved sufficient time allocation for PhD research at CTU in scholarship contracts; (xiii) Need for formal, agreed upon work plans for scholarships with close follow-up by promoter based on regular progress and results reporting by scholar (to ensure timely achievement of graduation); (xiv) More effective guidance of strong, promising MSc graduates towards PhD level; (xv) Use of videoconferencing or (free) skype conferencing as follow-up to stays abroad of sandwich scholars; (xvi) Age considerations for eligibility of scholarships in order to guarantee rate of return of investments; (xvii) Elaboration and effective implementation of transparent incentives system based on performance / merit (combination of research, education, extension and managerial criteria); (xviii) Consideration of establishment of Research and Consultancy Units or so; (xix) Strengthening of N-S-S human resources networks with both CTU and Flemish Universities functioning for each other as regional and international "hubs" for contacts and exchanges of personnel; (xx) Further strengthening of internship exchanges programme between Flemish Universities and CTU (and NSS) for MSc students doing their masters research; (xxi) Flemish academics better recognized for engagement in international development cooperation (e.g. for tutoring of PhD scholars, higher ratings for local development relevant research publications); (xxii) Encouragement of young Flemish academics to engage in international development cooperation.

#### Infrastructure

- \* Considerable upgrading of equipment at CTU: Avoiding substitution of national and local initiatives and responsibilities, the VLIR-IUC programme, being an institutional strengthening programme, has basically refrained from engagement in CTU infrastructure works. Nevertheless, its engagements under the infra component are very substantial (laboratory infrastructure, lab equipment, ICT equipment, libraries and books, greenhouses, etc.)
- \* Quality and client satisfaction: A high satisfaction with the types and quality of the equipment purchased under the VLIR-IUC programme is noted in basically all projects / sub-programmes
- \* Effective equipment use: The LMS e-network operationalized, the equipment purchased and the laboratories established and / or upgraded under the VLIR-IUC programme are effectively and extensively used and are easily accessible by the users, both staff and students, even beyond regular office / class hours and during the weekends.
- \* Training on equipment use: Equipment purchase has been routinely accompanied by training and human resources development;
- \* Maintenance: Maintenance of facilities and equipment items is given special attention to keep the equipment operational on a continuous basis and thus ensuring maximum productivity and cost-effectiveness.
- \* Challenges to further enhance the quality and performance of the IUC infrastructure programme component: A series of concrete recommendations are made under Chapter 2.1.2.6 (pages 111-112) in relation to, amongst others: (i) Effective use of equip-

ment for intended purposes; (ii) Enhancing the academic return on investments in laboratory infrastructure and equipment; (iii) Procurement coordination and avoidance of duplicate purchases; (iv) Guaranteeing of optimum relevance of laboratory purchases; (v) Replacement of worn-out and/or outdated equipment; (vi) Necessary development of strategic plans for facilities upgrading and equipment procurement priorities; (vii) Strategizing of shared and/or sub-contracted lab use with partner universities; (viii) Linking of Faculty libraries to the central Learning Resource Centre.

#### Mobilisation of Additional Resources and Opportunities

- \* Contract research for local and regional authorities has been initiated and is substantially gaining in importance in most Departments / Institutes under the VLIR-IUC programme. Research priorities are set in consultation with local and regional authorities.
- \* Commercial spin-offs of applied research taking off and proactively searched for.
- \* Important programmatic spin-offs for CTU as a whole have been realized, attesting to CTU's growing recognition as an academic centre of excellence: e.g. (i) Mekong 1000 (ii) CTU assigned by MOST as coordinator guardian of the repository of scientific publications for the Mekong Delta region
- \* The VLIR-IUC programme is effectively complemented by *ex-post toolbox financing by* VLIR to ensure continued coordination and collaboration with its Flemish partner universities in joint projects and exchanges (e.g. Research Initiative Programme, North-South-South Cooperation Programme, Own Initiatives Programme, South Initiatives Programme, VLIR Research Fund, Close the Gap ICT Programme, etc.) and more Departments / Institutes effectively getting access to these mostly highly competitive programmes.
- \* Complementary financing ensured by individual member Universities of VLIR, for example for PhD scholarships, MSc scholarships, joint researches, internships, etc.
- \* New venues of collaboration are being pro-actively explored by both CTU and its Flemish partner universities (e.g. joint degree courses based on a shared academic credits system, internships and exchanges of students for example in the framework of thesis work, creative and innovative joint research, etc.).
- \* Complementary financing from *other Flemish / Belgian sources* has materialized and is further expanding: BTC-CTB, Belgian Embassy, Provinces, etc.
- \* Challenges to further enhance the quality and performance of the IUC additional resources mobilisation programme component: A series of concrete recommendations<sup>79</sup> are made under Chapter 2.1.2.7 (pages 117-118) in relation to, amongst others: (i) Making sustainable mobilisation of additional resources integral part of CTU strategic plans, including the drafting of a CTU wide special business plan to that effect; (ii) Development of strategic and business plans necessary for those Institutes having achieved critical mass in order to maintain their academic excellence in a sustainable manner and retain highly qualified staff; (iii) More systematic attention for licensing, patenting and commercialisation of research and research products and strengthening of interdisciplinary coordination to that effect (e.g. involvement of SEBA, School of Law, etc.); (iv) Exploration of the desirability and feasibility of establishing special business units ("Research and Consultancy Centres" at the level of the capacitated, "critical mass" Departments / Institutes with the aim of enhancing their financial and academic sustainable; (v)

Effective tapping of the resources available from the IUC ex-post toolbox; (vi) Continuous preparation of high quality project proposals and pro-actively scouting for local, national and international funding sources, particularly since this is a highly competitive market; (vii) More systematic and pro-active tapping of the substantial resources available with MOST (apart from MOET), decentralised to the regions and below levels.

### Programme Management and Co-ordination between the Different Parties

#### General Assessment

- \* Overall, there has been marginal attention for management development within the VLIR-IUC programme: This is rather remarkable for a programme which ultimate goal is the strengthening of CTU as institution. In contrast to the predecessor NUFFIC supported MHO programme, in the VLIR-IUC programme with CTU there is no explicit component on management in the form of a special, separate project / sub-programme. In the first five-year cycle, only one structured training exercise as a joint initiative of VLIR and PCO is reported (on the Logical Frame-work / Project Cycle Management). No follow-up sessions were organised, neither has there been systematic on-the-job coaching at the projects / sub-programmes level.
- \* In the second five year cycle of the CTU-IUC, apart from selective participation in one PCM related capacity building activity no explicit management training at all has taken place, despite the strong recommendation of the MTR to more explicitly address management training needs as prioritized by the different interviewed parties concerned. The decision of VLIR-UOS and the relentless efforts of its Secretariat to introduce PCM techniques and tools across-the-board in all its IUC programmes and beyond was not matched by concrete training and concomitant capacity strengthening activities in the CTU-IUC programme. It therefore should also not come as a surprise that management assessment consistently scores lowest (among the lowest) in all final evaluation self-assessment reports.
- \* There is a strong need to highlight the strenghts of *PCM* as a powerful proactive programme/project management tool in order to overcome the still widespread negative perception of it being in first instance an external accountability instrument or simply a necessary administrative (pre-)condition to be complied at the onset of the cycle for a positive appraisal and approval of the programme/project proposal.

#### Assessment and Recommendations regarding Specific Management Aspects

\* System Development - Planning and Programming: (i) No comprehensive original programme document at the basis of the ten year CTU-IUC programme; (ii) Strategic planning and programming effectively at the basis of the second five year programme cycle as reflected in a comprehensive programme document; (iii) The second five year cycle effectively based on the principles of integrated programme / project cycle management (including the use of Logical Frameworks and indicators); (iv) Strengthened sub-programmes complementarity and overall programme integration effectively pursued in the process; (v) Explicit provisions for cross-cutting programme aspects in each sub-programme to ensure quality

- and development impact during the second phase pursuant to the recommendations made during the Mid-Term Review pertaining to: internal quality control; Project/sub-programme management / performance management; Gender issues; Didactics especially for, but not limited to, the education projects / sub-programmes, and; Economics (agro-economics, marketing, etc.) especially for the research projects / sub-programmes in relation to outreach, extension and products marketing; (vi) The necessary training and related human resources development / capacity strengthening initiatives on PCM and other management issues have not pushed through to the regret of project leaders and other parties concerned, resulting in a lack of ownership and sub-optimal effective mastering of these tools by the stakeholders concerned.
- Actual Implementation Management and Reporting: (i) In accordance with the VLIR guidelines concerning reporting in the Institutional University Co-operation programme, semi-annual and annual reports are the two main types of monitoring reporting foreseen and complied with; (ii) Results orientation and higher level performance assessment are only marginally touched upon, as these are reserved for the mid-term review and final evaluation reporting; (iii) The actual practice of compilation of the respective progress reports from the different projects / sub-programmes by CPO as co-ordinating central management unit is a very positive element from the perspective of higher level programme integration, for consistency and control purposes and for assurance of compliance with reporting requirements; (iv) Generally, progress reporting requirements are complied with by the respective projects / sub-programmes in terms of number of reports to be submitted mandatory; (v) Quality, extent and relevance of reporting vary considerably from project to project. However, substantive improvements are noted in the second five year period as a result of the standard VLIR-IUC programme / projects monitoring reporting formats; (vi) Challenges remain with regard to target setting on the indicators (OVIs - Objectively Verifiable Indicators) and the reporting of actual accomplishment on these OVIs and in relation to the set targets, keeping it difficult to assess/measure performance in an objective way; (vii) Timeliness of reporting in accordance with the standard time tables remained a challenge, which is basically due to the long reporting flows involving (too) many parties before the final report reaches VLIR-UOS Secretariat; (viii) Major positive development have been noted in actual end-responsibility and ownership of reporting by the CTU stakeholders concerned; (ix) While generally satisfied with the VLIR management and reporting formats and processes, on different occasions the interviewed stakeholders expressed the need for a user-friendly IUC procedures manual; (x) It is recommended to have the final self-assessment reports and post-IUC plans prepared and finalised at an earlier stage, for example by the Steering Committee / Group in year 10 of the programme, rather than in year 11.
- \* Financial Management: (i) Central consolidation, processing and analysis of IUC programme financial information at CTU by the Programme Co-ordination Office (PCO) facilitates both internal control and overall programme management. The same pertains to the work done at the secretariat of the Flemish Programme Leader; (ii) Financial data are not systematically fed back to the individual projects / sub-programmes, affecting transparency of financial management; (iii) The strengthening of performance budgeting based on / directly derived from the overall and annual work plans has remained another important

challenge; (iv) Both PCO and the individual projects reported considerable delays in the money transfers to CTU. On different occasions, delays in actual fund transfers reportedly required CTU to pre-finance from its own resources; (v) All financial reporting by the respective projects / sub-programmes in principle is computerized; (vi) As a matter of principle, all local personnel / staff costs are on the account of the partner university. In the first five year cycle of the CTU-IUC programme, the issue of CTU staff salary topping ups had affected programme operations in a negative manner. (vii) The CTU secretaries and team leaders of the individual projects / sub-programmes very much appreciated the exposure to international co-operation practices as a consequence of their involvement in the VLIR-IUC programme. They would have welcomed more in-depth training on financial management and particularly on financial management of internationally assisted programmes as the VLIR-IUC.

- \* Public Relations and Visibility: (i) VLIR may consider more proactively promoting the quality of its international cooperation activities and services, and this also pertains to the individual Flemish Universities; (ii) The very well organised and attended closing programme and ceremonies of the ten year CTU-IUC programme, including international symposia and workshops at the same time proved a very important PR and visibility tool to share the results of the programme with the wider national and international community; (ii) Different projects under the CTU-IUC programme pro-actively engaged in outreach and networking campaigns; (iii) A very successful networking event on the VLIR-IUC programme with especially the CTU-IUC highlighted as example in case, took place in the Flemish Parliament on 19 January 2009; (iv) More proactively and systematically pursuing PR and visibility of its quality products and services remains an important challenge for the IUC programme and by extension for all VLIR-UOS programmes and projects.
- Synergy, Organisational Development and Networking: (i) There have been no explicit provisions for organisational development and institutional strengthening in the CTU-IUC programme, remarkable indeed for a by its very nature institutional development programme; (ii) CTU-IUC budgetary provisions for programme secretarial functions only and not for capacity strengthening or related HRD activities regarding management of the programme, neither for PCM or related management tools in general; (iii) At the moment of the Mid-Term Review in 2002, Can Tho University was not yet settled as a solid academic organisation. This picture has drastically improved over the last five years of the programme, with an updated organisational chart and detailed presentations of each entity therein (colleges, schools, institutes, centres, departments and offices); (iv) Nevertheless, organisational revamps and personnel matters kept impacting on programme performance in general and on the individual projects. (v) The second five year programme cycle saw a systematic strengthening of synergies between the individual projects in an overall programme context promoting multi-disciplinary project designs and implementation modalities; (vi) A renewed fundamental discussion on the future of CTU was opened as a result of the recent launching of the Vietnam 100 programme by the national authorities, which may fundamentally affect CTU as it reportedly would possibly envision a second main, comprehensive university at Can Tho catering to the Mekong Delta region, alongside CTU; (vii) Colleges, Schools and Institutes supported by VLIR-IUC have successfully engaged in local, national, regional and international network-

ing. An example in case is the College of Aquaculture and Fisheries supported by IUC project R.1.1.

### Assessment and Recommendations regarding Cooperation between the Stakeholders

- \* General Appreciation: Throughout the ten year CTU-IUC programme cycle, the co-operation between the main North (Flemish Universities) and South (CTU) stakeholders has been very well appreciated by all parties concerned. This pertains to both general programme co-ordination and individual constituent projects / sub-programmes. It relates to both managerial and academic aspects.
- \* Issued raised during the Mid-Term Review: Despite this overall positive appreciation of the co-operation, on the occasion of the Mid-Term Review a number of issues were raised inviting for further improvements. As illustrated in different sections of this report, most of these have been well attended to in the second five year cycle, while others still left room for further improvements
- \* Strengthened Co-ordination between Flemish Universities: Both during the Mid-Term and the Final Evaluations, also the North stakeholders expressed the same appreciation of the very positive co-operation with their counterparts at CTU. Moreover, also in the other direction the co-operation between the Belgian Universities got strengthened indirectly through the CTU-IUC programme itself. This is considered by the North stakeholders as a most important positive side-effect and spin-off of the VLIR programme, of which the impact goes (far) beyond the boundaries of the VLIR-IUC programme stricto sensu.
- Institutional Provisions for Co-operation: (i) Despite the very positive assessment of the co-operation in general by the main parties concerned, the institutional and procedural provisions under the CTU-IUC programme to facilitate this cooperation between CTU and the Flemish stakeholders are rather limited. This makes the very positive atmosphere of mutual appreciation and trust between the CTU and Flemish partners even more special and enduring; (ii) The Programme Coordination Office (PCO) mainly fulfils administrative and financial coordination functions and is not a proactive entity for programme steering or even operational management; (iii) This absence of pro-active steering of programme integration to a large extent also explains CTU-IUC programme having remained largely a sum of different, individual projects rather than an effectively integrated programme consisting of mutually reinforcing projects; (iv) Although standard provisions were made by VLIR-UOS in its IUC programme in general for international expertise to strengthen programme coordination and overall management, this did not materialize in the case of CTU; (v) Co-ordination between the North and South stakeholders on programme operational matters is usually through exchanges of e-mails to the general satisfaction of both parties; (vi) Tactical and strategic management co-ordination and technical inputs are mainly ensured through the semi-annual meetings of the programme team leaders and projects leaders on the occasion of exchange visits; (vii) Since the second five year programme cycle, more systematic efforts are noted to more actively engage also students in the IUC programme, e.g. in connection with joint researches and thesis preparation, introduction of new scientific research techniques and laboratory equipment. Moreover, the consideration of joint degrees (based on complementary credit courses) provides most interesting and challenging perspectives for more active student involvement and participation in VLIR-

IUC and related programmes; (viii) CTU aims at further strengthening its role as academic catalyst of socio-economic development in the Mekong Delta Region. In that context it has established strong links with both the public and private sector stakeholders of the Mekong Delta region and intends to more proactively engage in amongst others: contract research, social and commercial marketing of research, intellectual property rights and patenting, academic support services to local and regional development policies and programmes, extension services to farmers and support to intermediary organisations specialized in extension (NGOs, socio-economic organisations, business organisations, etc.); (ix) The strengthening of South-South co-operation became a priority concern in the second IUC programme consolidation period.; (x) A wide range of opportunities to further strengthen co-operation between the different stakeholders and especially between the North and South partners has been further explored. This pertains to a broad spectrum of joint initiatives and projects including for example: joint researches, joint conferences, development into NSS and NNS academic networking hubs for each other, joint credit courses based degrees, exchange of academic staff, student internships, fair trade promotion and concrete initiatives, industrial / commercial spin-offs of applied research, etc. Initial successes have been booked but there appear to be ample opportunities and mutual interest to further structure and pursue these expanded possibilities for co-operation.

Future Role in Building upon the IUC Partner Programme: Asked about their further role in terms of building upon the IUC partner programme, the group of Flemish project leaders observations and suggestions included the following, amongst others: (i) The phase out strategy that the VLIR suggests is not conducive to self-sustainability. It is wrongly perceived by the South (and even in part by the North) as an unofficial continuation of the programme without significant budget. It against this background has been suggested to withdraw this aspect and allow former IUC partners full but competitive access to all VLIR funding schemes. (ii) VLIR post docs and several open call project promoters consider the contacts with Flemish professors still very important for collaboration, guidance and support. They actively seek financial means and opportunities to keep up the operation (e.g. response to RIP). Flemish professors are certainly willing to keep the close link with researchers in Vietnam and they are trying to involve other academics and students from universities and institutes for higher education, in order not to lose momentum. (iii) VLIR project leaders would favour establishing a screening procedure for Vietnamese scholarship applicants (and possibly from other regional institutes). A prominent role is suggested here for VLIR UOS, possibly in cooperation with the local BTC office.

#### The CTU Follow-Up Plan for the Post-IUC Era

Mean Features of the Follow-Up Plans in the Self-Assessment Reports and Priorities / Raised Expectations during the Evaluation Interviews

- \* Generally there is strong interest to continue the collaboration between the parties after the termination of the IUC programme, both at the side of the South (=CTU) and the North (= Flemish Universities) partners;
- \* Remarkably, only the research projects have completed the Post-IUC Follow-Up Plan template. On the other hand, two research projects emphasize that besides research activities they would also be interested in / and will actually pursue edu-

- cation improvement dimensions as well (e.g. BSc and MSc curricula, textbooks, student centered teaching, practica, etc.);
- \* Continued communication between the CTU and Flemish partners will be mainly pursued through electronic means, basically e-mails. Other means include for example: (i) joint education programmes; (ii) international workshops and scientific meetings; (iii) conferences; (iv) through special programmes as for example ICP; (v) short visits, exchange visits; (vi) joint North-South-South projects; (vii) PhD or MSc fellowships;
- \* As far as mobility and/or exchanges are concerned, exchanges of staff and students are considered the most appropriate ways to enhance learning experiences and transfer of knowledge and skills. This does also include Flemish students coming to CTU for short training or for preparation of their thesis. In second instance are mentioned scientific meetings and related special initiatives;
- \* All research projects expressed strong interest in continued cooperation on concrete initiatives, and this in most cases by both the Northern and Southern teams (the latter though more systematically and explicitly so);
- \* A feature worth mentioning is that inter-disciplinary concerns are explicitly brought forward as integral part of continued joint researches (e.g. environmental aspects);
- \* Apart from the specific technical research fields, generic interest in enhancing consultancy programmes in also noted.

### Main Opportunities for Post-IUC Continued Cooperation Reflected in the SWOT Analyses Incorporated in the Follow-Up Plans

- \* Strengthened capacities (both quantitatively and qualitatively), to a large extent thanks to the VLIR-IUC programme;
- \* Working groups / research teams have been created and are operational;
- \* Enhancement of N-S, N-S-S and S-S collaborations as prime priority;
- \* Strengthened international networking as core objective;
- \* Strong, enduring relationship with the North Teams (Flemish Universities);
- \* Research intrinsic features of special relevance for sustainable development of the Mekong Delta region and beyond;
- \* Qualified staff members better perform teaching, research and extension services;
- \* Feasibility and capacity of expanding research applications to related fields;
- \* Rising demand for contract research (outreach services, consultancy assignments) from private sector companies and from local public authorities;
- \* Research applications effectively impacting on poverty alleviation and households incomes.

# Summary of Post-IUC Continued Cooperation Modalities of Special Interest to and/or Pro-Actively Pursued by the CTU and/or Flemish Stakeholders:

- \* Strengthening of networking (local, regional, national, international);
- \* N-S-S international networking with both CTU and Flemish Universities serving as networking hubs for each other;
- \* Joint researches, optimizing win-win situations for both parties;
- \* Joint degrees based on complementary credit courses;
- \* Education quality support facilities (visitation commissions, curricula and courses development and QC, guest teaching, etc.);

- Continued HRD of staff (PhD and MSc levels);
- Staff exchanges;
- Students exchanges / internships;
- \* Development of sustainable outreach, spin-off strategies with concrete initiatives;
- \* Optimizing research-extension links and strategies to maximize development outcomes and impact to the benefit of the Mekong Delta population and the regional economy.

The main recommendations proposed to VLIR-UOS by the Flemish Project Leaders with regard to a further improvement of the effectiveness of the IUC programme included the following"

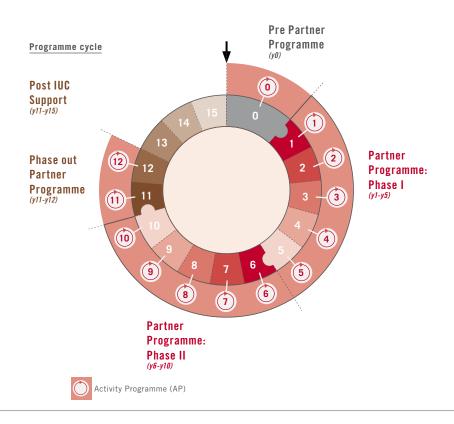
- 1. Some more flexibility in financial and budgetary management: Including for example transfer from one to an other budget year, a.o. motivated because of continued difficulties in aligning the start of research projects (post doc and open call) to VLIR's financial year schedule;
- 2. The salary structure of Vietnamese academics is completely related to all (and particularly other) activities: Therefore it is deemed necessary to provide incentives to staff so as to make it possible for them to effectively spend time on research projects by a salary compensation (basically against the rule of VLIR). The project leaders appreciated that a good compromise could be negotiated, ensuring sustainability.
- 3. VLIR-UOS hopefully able to convince Flemish university management to validate the efforts of academic staff in cooperation and development. This particularly pertains to the administration of a programme by the coordinator and project leaders, which is very time consuming.
- 4. Minimisation of the administrative work could release more time for contents related work. Especially excessive and duplicate reporting should be avoided.

#### The VLIR-IUC Programme in General

Confirmation of IUC programme design validity: The current final evaluation of the IUC programme with Can Tho University (to a large extent) confirmed the validity of the VLIR-IUC programme design for the successful pursuit of its stated objectives.

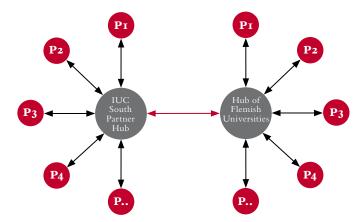
- \* Specific characteristics, good/best practices and lessons learned: In case of suboptimal performance or results in certain areas, this is largely if not uniquely due to specific characteristics and/or circumstances at either the CTU side or the Flemish side of the programme, or at both sides. These have been largely described in the respective sections concerned of this evaluation report in relation to the Key Result Areas, the high level performance criteria, the management of the programme and projects, and the coordination between the different parties concerned. The descriptions of the strengths (of selective strengths) might be found useful as examples of good / best practices, while the challenges / issues needing attention may serve as lessons learned or as recommendations for further generic improvements of the VLIR-IUC programme in general.
- \* Management and organisational development as intrinsic IUC components: Both the Mid-Term Review and the present Final Evaluation of the CTU-IUC confirmed management development, organisational development and institutional strength-

- ening necessarily to be explicit cross-cutting components of any comprehensive IUC programme design (so apart from the E-education and R-research projects/sub-programmes also a M-management project/sub-programme);
- \* Updating of outreach and extension KRA: The outreach and extension Key Result Area may need to be updated in the perspective of stronger responsibilities for sustainable (regional) development and as such further substantiating the second main overarching IUC objective. This would require a more systematic and proactive pursuit of academic outreach and extension spin-offs in terms of for example: contract research (for both public and private sectors); consultancies; policy advice; translation of research findings into extension messages for extension services via intermediary organisations to the ultimate target groups, with the ultimate objective of poverty alleviation, increased households incomes, enhanced welfare and wellbeing, and sustainable socio-economic development.
- \* Networking as new KRA: As far as the key result areas are concerned, it is suggested to add a new KRA "Networking" covering both local, national and international networking. This would further uplift this most important sub-dimension of KRA Outreach to a full-blown KRA on its own, of special importance also for the preparation / facilitation of third cycle, post-IUC collaboration centred around networking.
- \* The IUC third collaboration cycle: This final evaluation report includes a broad set of recommendations for post-IUC continued cooperation between the south and north stakeholders, with a broad array of opportunities to be facilitated possibly through the VLIR post-IUC tool box or by other means. A sort of structured third cycle of collaboration (after the first five year capacity building and second five year consolidation phases) appears imperative to sustain the preferential relationships rooted in successful IUC programme achievements. Initiatives under this third cycle of collaboration in principle necessarily need to be on a



competitive basis to ensure quality, sustainability and mutual win-win benefits. This suggestion provides for a further development and broadening of the present third cycle of the IUC programme consisting of five years, of which the first two years with "earmarked phase out funding" and with possibility of participation in the post-IUC toolbox for the entire five years, as depicted in the figure on the preceding page.

- \* Networking as central feature of the third cycle: Networking may be considered by VLIR-UOS to become the central feature and backbone of such third cycle, with both North and South partners envisioned to become international (sub-)regional network hubs for each other, as centres of excellence facilitating both institutional and individual networking in the regions and as such aiming at multiplier effects of the IUC programme in a cost-effective and cost-efficient manner.
- \* Combination of physical and e-networking: In this perspective, the envisioned networking would consist to a large extent of the more traditional initiatives, activities and processes as staff exchanges, regional workshops, conferences and other physical exchanges and contacts, but for an increasingly important part will make use of Information and Communication Technology (ICT) facilities and processes, including for example: videoconferencing and teleconferencing, e-discussion fora, chat boxes, web workspaces, e-document repositories, etc.
- \* Alternative networking scenarios: Ultimately two main alternative scenarios to effectively materialize such networking transpired as a result of the different brainstorming discussions on the post-IUC collaboration outlook: (i) the earlier men-



tioned mutual hub networks, and (ii) a sort of twinning partnership, whereby the IUC south partner, with the assistance of the Flemish partners, assumes a sort of institutional strengthening parenting, nurturing role for one or two partner institutes with promising potentials. The Evaluation Commission would recommend the first "hub" alternative for it being more flexible and with stronger potentials for (cost-)effective networking (especially when with a substantive e-networking component) and maximization of multiplier effects.

\* VLIR-UOS Think Tanks / Working Groups: In case the institutional networking option is principally approved, VLIR may want to consider creating a special Networking Think Tank / Working Group to prepare a policy and strategic framework and concrete programming accordingly. It may consider creating a similar second such Think Tank / Working group for the above-mentioned Outreach and Extension Spin-Offs strategy.

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