Guide to the formulation of VLIR-UOS projects

Introduction

This basic guide translates the principles of the VLIR-UOS Monitoring and Evaluation (M&E) policy into a basic guide for the formulation of VLIR-UOS' supported projects. The formulation of a project is much more than writing a document. It is also a participative process in which partners co-create a project based on a shared vision of change, and a shared understanding of the current situation. VLIR-UOS uses an adapted version of the Theory of Change approach and the Logical Framework Approach. The present guide provides updates on and directions to how the Logical Framework needs to be developed and presented. Next to the Logical Framework, there will also be information on operational planning and risk management. This guide identifies 7 key steps in the formulation of projects. These steps are shown in the figure below:

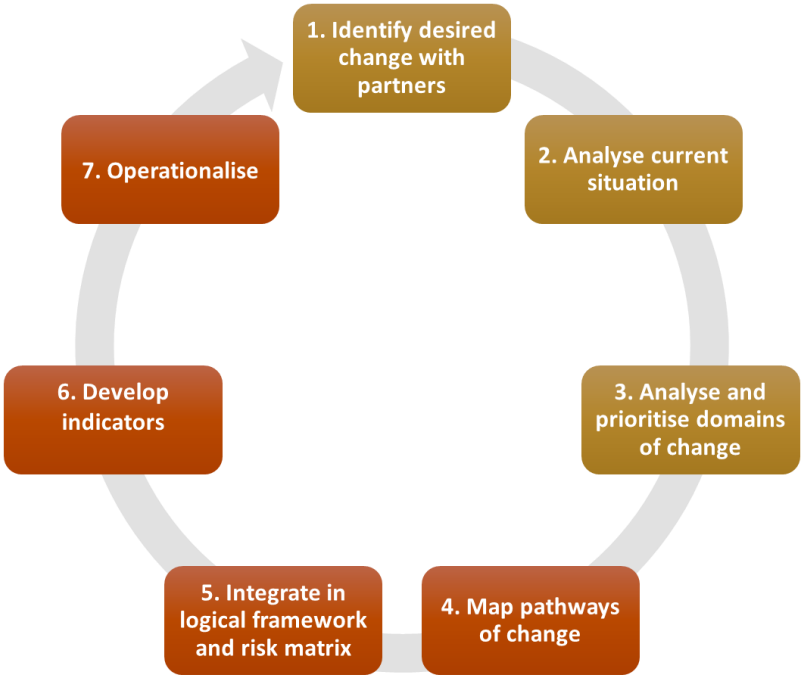

Figure 1 - Formulation process

This project formulation guide provides information on the different steps (cf. figure 1) that need to be taken to arrive at qualitative project proposal. These steps are explained in a chronological order. The guide is brief, outlining the basic idea of every step, and providing links to approaches/tools that can be used for every stage in the process. Each step corresponds to a chapter in this guide. This guide is not intended to be read from beginning to end but rather should be used as a reference guide. For a quick full overview of the whole document (and the formulation process): consult the brief summaries (blue boxes) at the beginning of every chapter.

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References to the integration of the transversal themes gender and environment are indicated in the document with following pictogram. More information can be found in annex 1.

This guide mainly draws from 2 documents: the European Commission's Project Cycle Management guidelines and the HIVOS Theory of Change handbook.

1. Starting point: desired change & partnering up

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- ✓ Find a partner(s) (higher education institute).
- ✓ Define a long-term, desired change to which you want to contribute.
- ✓ The desired change should be challenging and ambitious, but not impossible to achieve (reachable in 10-15 year time; the project only contributes)
- ✓ Try to link up with other (Belgian) development actors as much as possible.

KEY QUESTION

What is the desired change, why and for who?

Who can assist in reaching this desired change?

POSSIBLE TOOL/APPROACH

- ✓ Rich Picture

In this guide we assume that you have already identified a partner and a basic project idea: you know what the long-term desired change is, how you want to contribute to that change with a project, and what needs to be done/changed by the project. This desired change will be the General Objective of the project: a developmental change to which the project wants to contribute.

If this is not the case because you have not found a partner yet, we advise you to try to find partners through your academic/professional/alumni network. Alternatively: try to find partner institutions (higher education institute) through Belgian development actors already active in the targeted country. The Joint Strategic Framework (JSF) provides information on "who is doing what, where" and contact details of different organisations.[1] Belgian development actors already active in these countries often have extensive networks and know local universities and/or local university colleges. Moreover, these organisations may have ideas about potential projects in line with their own interventions (positive for synergy and complementarity). For more information: please consult VLIR-UOS website.

Figure 2 - example of desired change

Ownership & partnership

Developing a project proposal is not only about finding a partner in Flanders (or in a partner country) and asking him/her to join your project. Projects and their objectives need to be a joint undertaking with ownership on both sides. Project proposals should never be the product of "one side" of the partnership, but should be joint products. Ideally they are developed together in real live, on the location of the project.

[1] A summary with the most important details can be found on the country pages of our website

2. Analysing the current situation

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Develop a broad – and shared – understanding of the system in which the desired change is needed

KEY QUESTIONS

What is the current situation in relation to the problem(s) we wish to tackle? How are current problems causally linked to each other? Who are the stakeholders? What is their role in the current context? What stake do they have in the project? How will the project involve / engage them?

TOOLS/APPROACHES

- ✓ Problem Tree / hierarchy of problems
- ✓ Rich picture
- ✓ Stakeholder analysis matrix
- ✓ SWOT analysis
- ✓ Venn diagrams
- ✓ Spider diagrams

WHERE IN THE PROJECT PROPOSAL CAN YOU USE THIS?

1. Context analysis

Every project takes place in a context that determines the conditions and the opportunities for a successful project. That is why every project needs to have a good understanding of the context in order to make informed strategic choices when formulating the project, increasing the chances of success. This context analysis includes a thorough analysis of the problem the intervention wants to tackle and a stakeholder analysis.

2.1 Problem analysis

A problem analysis identifies the challenges of an existing situation and analyses the 'cause and effect' relationships between the identified problems. These 'problems' occur in a context which is shaped by historical, social, political, economic, cultural, ecological and geographical parameters. The problem analysis involves two main steps: (i) Definition of the framework and subject of analysis (**scope**); and (ii) Identification of the major problems faced by target groups and beneficiaries (What is/are the problem/s? Why is it a problem?), and the broader context in which these problems occur.

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The problem analysis needs to give due attention to the general context, environmental issues (analysing the environmental context and its links with socio-economic issues) and gender issues (analysing the way in which the situations/needs/challenges of men and women differ in relationship to the problem).

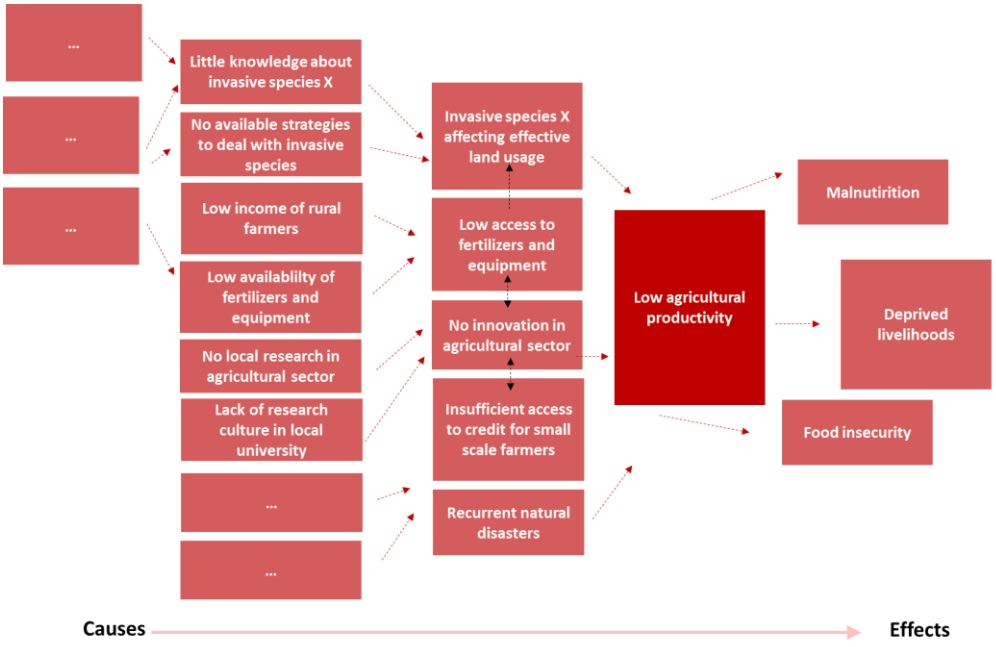

Figure 3 - example of a basic problem analysis using a problem tree

2.2 Analysing the stakeholders

The project stakeholders are individuals, groups of people or organisations who have an interest (a stake) in the (proposed) project and hence can influence or contribute to the project. Stakeholders consist of direct beneficiaries (the group that will be benefiting from the services of the project at the outcome level), potential indirect beneficiaries (those who will be benefiting from the project in the long run, e.g. farmers, local governments, etc. (impact level)) and any other actor with a stake in the project. If a project wants to be successful, it is not only important to identify stakeholders, but it is equally important to study their interests and potential influence, and to formulate approaches to engage with these stakeholders and/or involve them in the project.

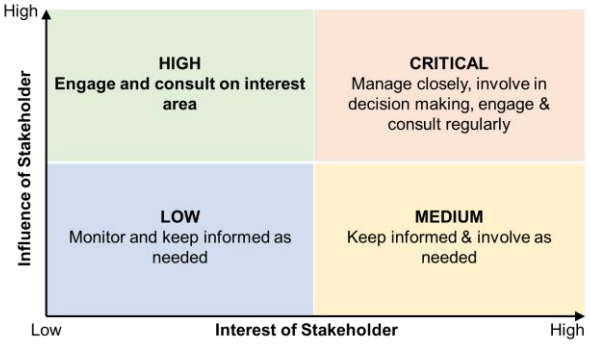

Figure 4 - Stakeholder management matrix

A well-developed stakeholder engagement strategy is critical for the success of the project in terms of potential impact, sustainability, efficiency, etc.

For example: If the project seeks to have an effect on policy makers, then the project needs to engage with local government during the whole duration of the project in order to raise interest in order to make sure the project can actually have a significant impact. The project can consult policy makers throughout the process, or could even involve them in decision making.

The stakeholder analysis needs to look at these elements taking into account the potential differences for men and women. By studying this in a gender-sensitive way, the intervention can unravel possible gender inequalities.

3. Analysing and prioritising domains of change

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Based on the analysis of the current situation, different domains where change is needed are identified in order to achieve the desired change. Decide on the strategic priorities (what domain(s) will the project work on, what domains not?) of the project without forgetting the complexity of the process towards the desired change (max. two domains of change).

KEY QUESTIONS

- Who and what needs to change, where, and in which way, for the desired change to become possible?
- What domains of change can a VLIR-UOS supported project realistically influence?
- Within the domain(s), what changes can a project effectively achieve within the timeframe of the project, why and how.
- Realistic and feasible to contribute to the desired change by working on these domains?

TOOLS/APPROACHES

- ✓ Rich Picture
- ✓ Developing high level Theory of Change

WHERE IN THE PROJECT PROPOSAL CAN YOU USE THIS?

2. Project strategy

In order for the desired transformation to happen, changes need to happen in different domains simultaneously. After having analysed the present "problematic" situation, the stakeholders can start to reflect on what situation would be considered satisfactory and can identify the domains/areas where important changes need to be made. Identifying these different domains of change can help to get a better understanding of the complexity of the development challenge the project wants to tackle. These "domains of change" should - ideally -be formulated as objectives.

The importance of visualisation

A project shouldn't be formulated from behind a desk. A good formulation process is participative and foresees space for collective reflection, discussion, etc. Various steps in the formulation process are specifically designed to be done in a participative way. When a project is formulated in a participative way, visualisation is often considered as meaningful. During project design, working with visualisation tools (e.g. using cards on a flipchart or drawing a rich picture) stimulates critical thinking, complements dialogue and can help in getting all participants on the same page. Discussing while drawing (or working with cards) engages stakeholders in the conversation, and provides the opportunity to actively share perspectives and question each other. Visualisation assists projects in developing causal pathways of change, prioritising, and identifying risks and assumptions.

For example: 'increasing the food security of a population in region X' might not only require a change in knowledge available about local soil management, but might also require: an informed government, new legislation on land rights, capacity building of farmers, improved access to fertilizers, the introduction of new storage techniques, etc.

After having identified the different domains of change that are needed to attain the long term desired change, the project can start to set priorities. As VLIR-UOS supports partnerships between universities and university colleges in Flanders and partner countries[2],

[2] For some partner countries, VLIR-UOS has lists of potential partner institutions. For other countries, VLIR-UOS has general guidelines on the type of partner countries VLIR-UOS supports (cf. VLIR-UOS country strategies)

a number of domains of change will automatically be excluded (For example: a VLIR-UOS project will never finance road construction). The different possible strategies and domains of change are studied and the most appropriate strategy for the project is to be selected. The most relevant and feasible strategy needs to be selected on the basis of criteria such as:

- Available know-how, capacities and interest of the stakeholders
- Complementarity with other actions
- Priority
- Best value for money
- Effect in terms of (gender) equity (does the strategy respect the principles of inclusive development)
- Environmental relevance (does the strategy respect the principles of sustainable development).

The project will not be able to tackle all problems or domains of change. In order to contribute to the desired change, the project needs to identify strategic priorities it will work on, without ignoring the complexity of the different domains of required change. This reflection is crucial as it will determine the strategy and the different objectives and results to be included in the logical framework. This can be achieved by visualising the desired change and the domains of change as exemplified in figure 5 while making choices.

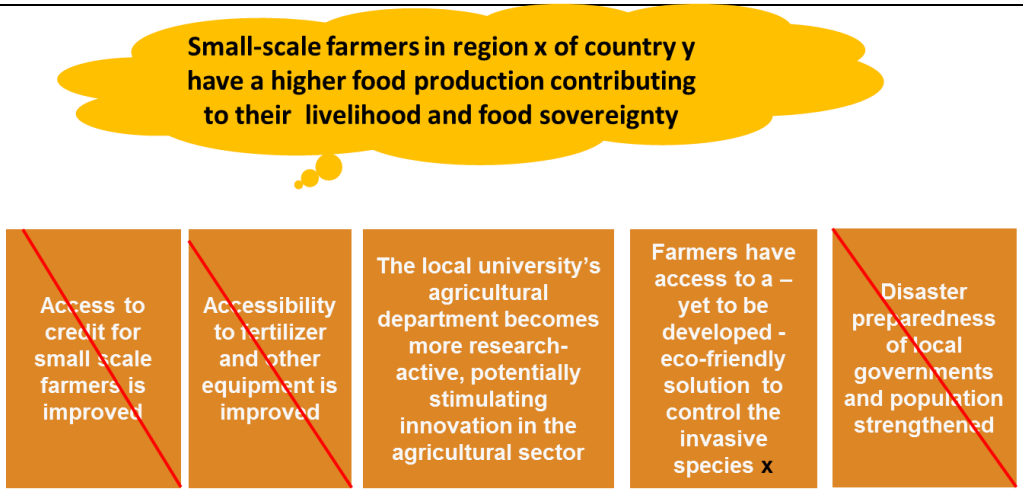

Figure 4 - Prioritising domains of change

Domains of Change in relation to Synergy and complementarity

Identifying domains of change can be useful to identify synergies (or complementarities) with other actors. You can identify what type of interventions can contribute to the same objectives as your project. E.g. in the example above: is someone working on improving access to credit for small scale farmers? This would imply a synergy with the project and it would definitively be worthwhile to collaborate with this actor.

4. Map pathways of change

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Mapping the pathways of change backwards from the desired change and the "domain(s) of change"

KEY QUESTIONS

- What needs to happen before the next positive step in the change process can take place?
- How do we think the change process might evolve?
- What needs to change for the desired change to occur (and: why?).
- Will the change process – or elements of it – work out differently for men and women?
- What elements of your pathways of change are within your sphere of control? Sphere of influence? Sphere of interest?
- What are the key risks of the project and what are the most important assumptions the formulation is making about the pathways of change?
- General recommendation: **Look back, review & fine tune after each step**

TOOLS/APPROACHES

- ✓ Theory of Change
- ✓ Objectives tree
- ✓ Three spheres model

WHERE IN THE PROJECT PROPOSAL CAN YOU USE THIS?

2. Project strategy

Risk management (annex)

2.4 Transversal themes of the Belgian Development Cooperation

In this fourth step, pathways of change are developed. These are projections of the envisaged change process, based on our ideas and knowledge on how we think change will happen. Mapping out these pathways of change is central in developing your intervention strategy or "Theory of Change". It is done by working backwards from the long-term desired change, while questioning what needs to change for the desired change to occur (and: why?). The mapping of pathways of change is the centre-piece of an intervention's strategy or Theory of Change, and draws from the earlier context analysis, the identified desired change and the domain(s) of change you chose to work on.

The pathways of change are a representation of causal pathways of different intermediate steps that need to be realised in order to achieve the desired change. They also need to make more explicit the links between the various elements, feedback mechanisms, influencing factors, etc.

The best way to approach the mapping of pathways of change is by visualising it, together with stakeholders. By involving them, this exercise is turned into a participative, reflective process. It thus guarantees a better quality project proposal, and also makes sure that everyone is on the same page and shares the same expectations. The following steps should be taken into account:

1. Start by mapping out the different phases for changes envisaged to happen in the domains of change, and to contribute to the desired, long term change. These will not be steps/changes that will be realised by the project, but steps we assume will take place. By identifying these compulsory steps/changes, the notions about the project might evolve as one will want to influence the likelihood of these steps/changes to take place. You will probably find that there are

many linkages between the change pathways: e.g. achieved changes in one pathway may be needed to enable a next step in another one. Discuss how contextual **factors** and **stakeholders** influence the change process you are mapping. Discuss any **potential unintended effects** (positive or negative).

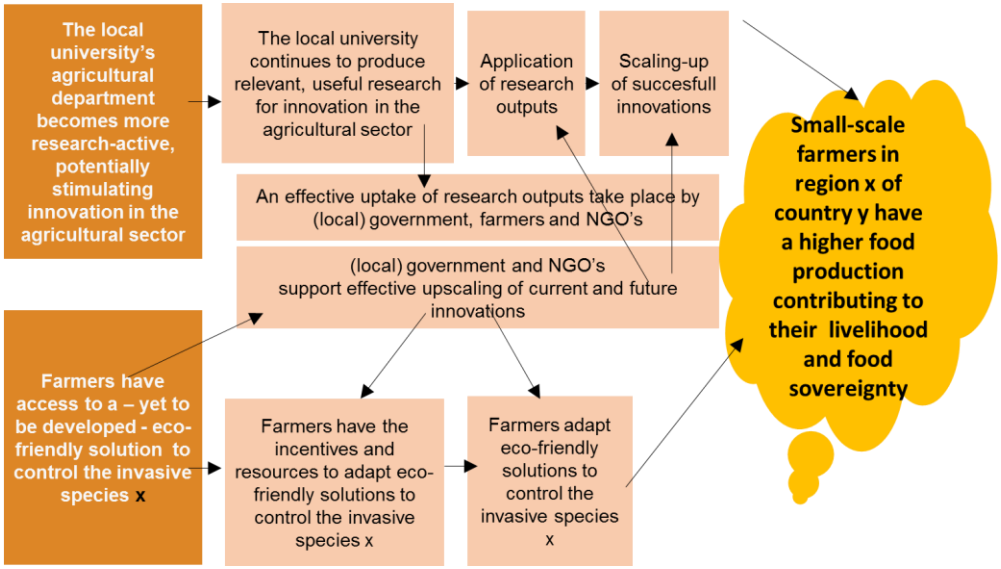

Figure 5 - Mapping out pathways of change (1)

2. Try to map out how the intervention would realise change in the prescribed domains of change. The steps you will map out now will include the different outputs that need to be delivered by the project, but will probably also include elements you simply assume will happen or some early signs of change (e.g. changes in culture, attitude, etc.), or. Focus on actors and how they would change. This process is not a linear process but will require some back-forward-back thinking about the change process/pathways. Here again, the way contextual **factors** and **stakeholders** influence the change process you are mapping should be discussed as well as any potential **unintended effects** (positive or negative)

   In Figure 7, the mapped pathway of change of the project attaches great importance to the extension of research outputs. This is a result of the conclusion in figure 6 reckoning that uptake by government (and by farmers) is crucial to attain the desired change.

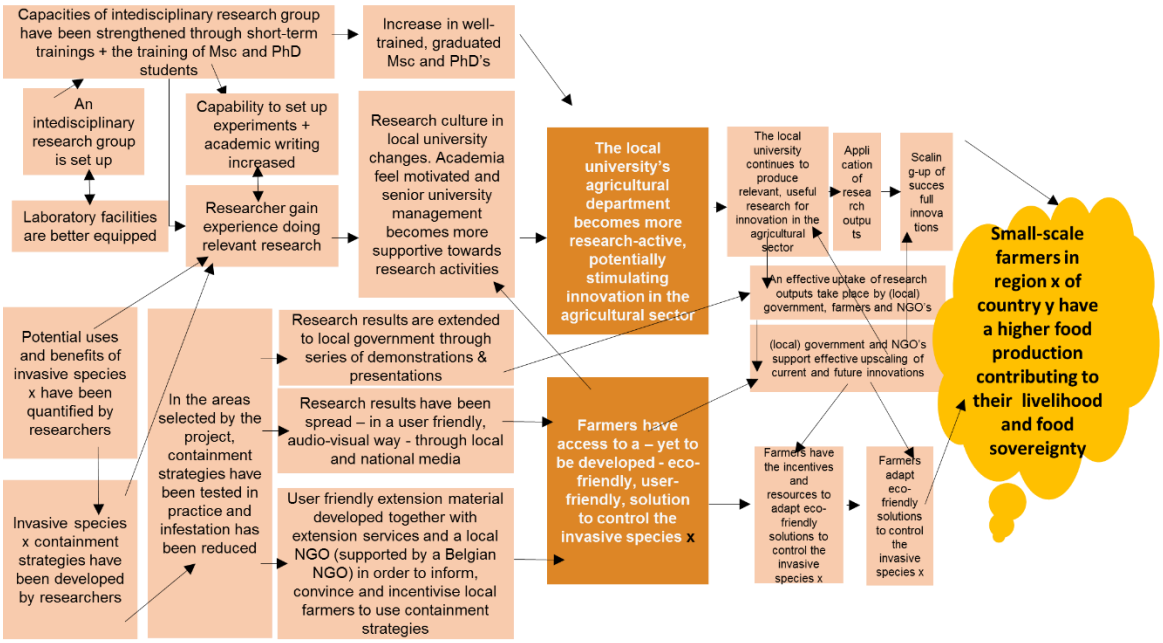

Figure 6 - Mapping out pathways of change (2)

3. Gender. Will the change process – or elements of it – work out differently for men and women? Are women likely to benefit at least equally from the changes envisaged ? This can be both at a higher level (e.g. access to eco-friendly solutions (extension)) or lower level (female academia having the same access to capacity building). What could be potential negative, unintended effects for women? If needed, review your pathway(s) accordingly.
4. Environment. Will the change process have a positive or negative impact on the environment (e.g. introduction of soil conservation practices) ? This can be at direct (e.g. introduction of exotic species) or indirect level (e.g. access to resource-efficient technologies).
5. Go through your "Theory of Change" again from left to right and ask yourself: is the flow of subsequent steps logical? Are steps missing? What else might each step lead to? Will the different changes be sufficient? Did we sufficiently take into account stakeholders' attitudes and interests? Contextual factors?
6. Three spheres. When your pathways of change are complete, use the "three spheres" to distinguish between parts of the change process the project can control, parts the project can influence but not control, and parts that are beyond influence of the project. Using the three spheres will make the formulation of the logical framework, and the level of ambition of the project, easier. This is visualised in figure 8.

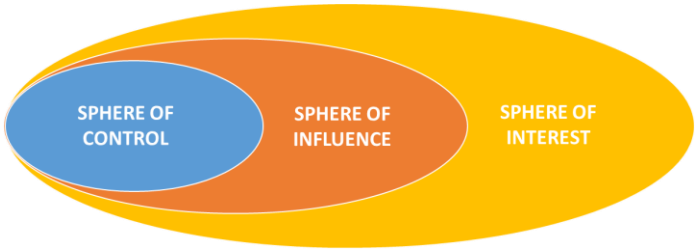

Figure 7 - Three spheres model

Apply the three spheres to your pathways of change:

- What parts are within the control of the project? These will mostly be the products or services delivered by the project (deliverables; *e.g. strengthening labs through refurbishment and new equipment is a change a project can perfectly control)*
- What is the point in the change process that beneficiaries or stakeholders make use of the project's deliverables (use of outputs) or stakeholders respond to the project deliverables? These changes are no longer under direct control (involved actors doing things differently), however the project should be able to sufficiently exert influence over these changes. Often these will be changes at the level of the direct beneficiaries of the project (use of outputs, changed behaviour, relationships, practices, improved performance, etc.; *e.g. local researchers actually making use of new labs, changed attitude towards research*)
- The parts of your pathway of change that are not in your spheres of control or influence, will be in your sphere of "interest": you cannot control the changes in this sphere, you have little influence over it, but you do have an interest in these changes as they are (considered essential for) your long term desired change *(e.g. improved living conditions, improved access to services….).*

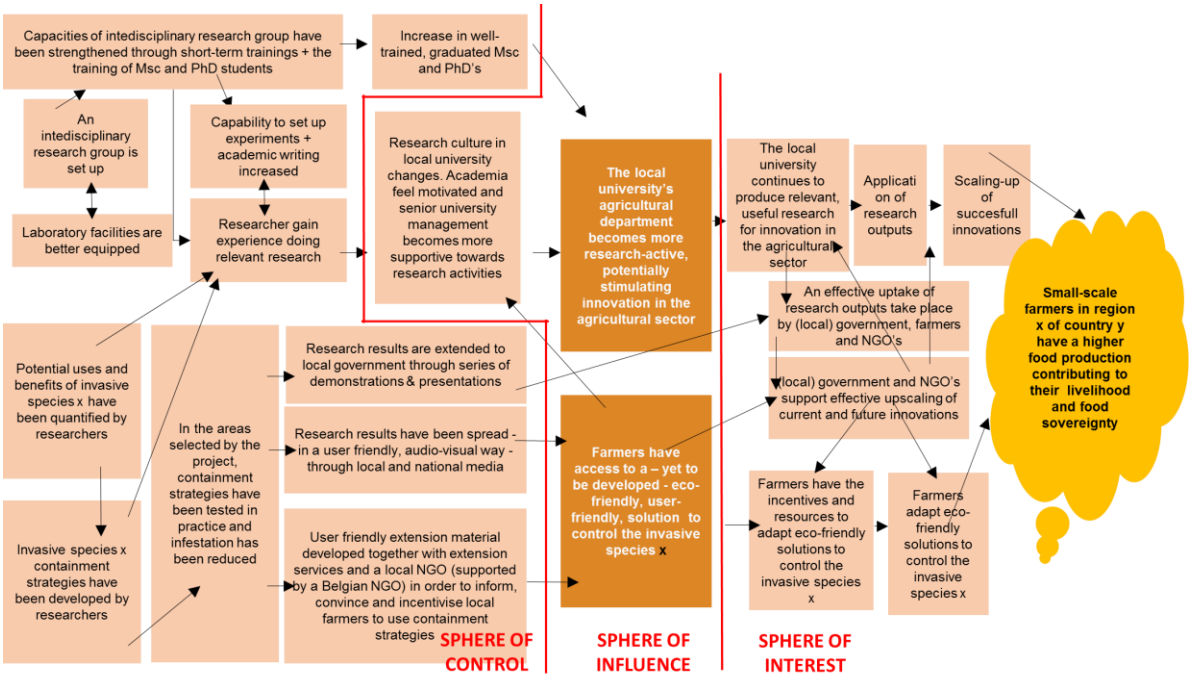

Figure 8 - Example of three spheres model applied

The final step in mapping pathways of change is the identification of risks and assumptions. A risk is an *"uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives. A risk is measured by a combination of the probability of a perceived threat […] occurring and the magnitude of its impact on objectives"*[3] Everyone involved in the formulation of an intervention should reflect on possible events/factors that are feasible, and others that would have a negative effect on the intervention

[3] (2009) Managing successful projects with PRINCE2

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and the achievement of the project. Also possible negative effects of the environment on the project need to be taken into account (e.g. increased frequency of extreme events destroy harvests). The same goes for gender (e.g. restrictions which make it impossible for women to participate at project activities).

Like risks, assumptions are uncertain factors that can have an influence on the intervention. Assumptions relate to the suppositions we make regarding the causal relation between each step in a pathway, the mutually reinforcing effects between different pathways, the (pre)conditions that are (or need to be) in place. *For example, in a project, it is assumed that by introducing new research methods, academics will actually start using those methods, which will lead to more and better research. This is based on the assumption that academics have sufficient incentives (time, interest) for doing research*.

Try to reflect on assumptions or potential risks on the basis of your defined pathways of change. This exercise will help you make some last changes to your pathways of change or may influence the operationalisation of your project in a later stage (e.g. planning certain activities to mitigate identified risks, make sure assumptions hold true). To identify assumptions, following questions might help: *If X changes, will Z really happen? Why? Under which conditions? What are we assuming? What evidence do we have that supports our assumptions about causality?*

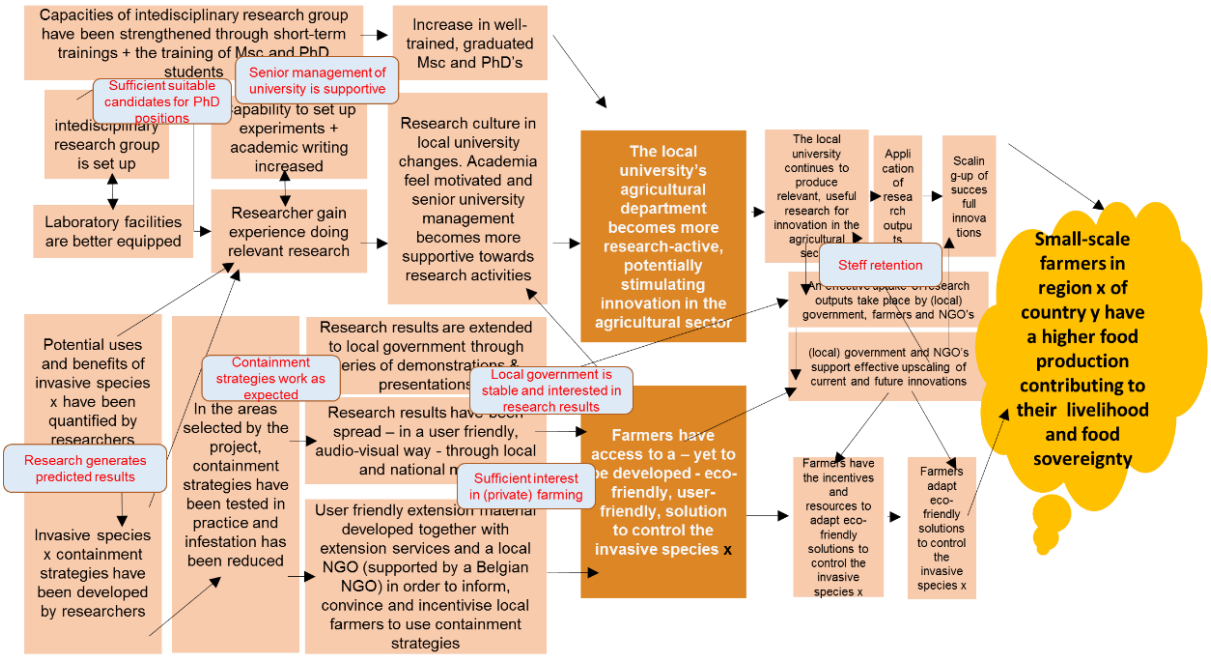

Figure 9 - Examples of identification of assumptions

5. Integrate in logical framework and risk matrix

5.1 The logical framework[4]

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Translate your Theory of Change into a results framework with well-defined objectives and intermediate results

KEY QUESTIONS

- What is the development change to which the project will contribute?
- What is the specific objective(s) the project wants to realize by the end of the project?
- What are the key intermediate results the project needs to deliver in order to attain the specific objective?
- Will these intermediate results be sufficient to realize the specific objective(s)?

TOOLS/APPROACHES

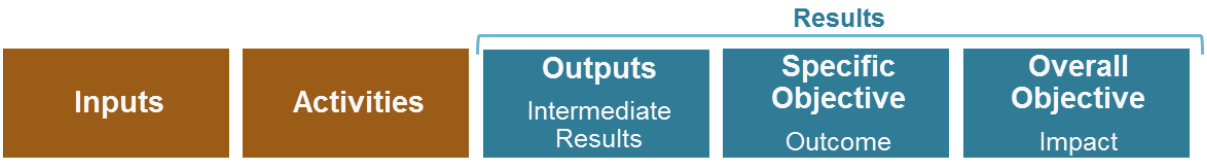
- ✓ Three spheres model
- ✓ Checklist logical framework and risk matrix (see annex)

WHERE IN THE PROJECT PROPOSAL CAN YOU USE THIS?

Logical Framework (annex)

Operational planning (annex)

The logical framework is a tool to formalise the intervention logic or "Theory of Change" that underlies a project. This intervention logic was developed throughout chapters 2-4.The intervention logic explains how a project is supposed to contribute to a chain of results that produces the intended or actual outcomes and impact. Defining results at different levels is often considered to be quite difficult. This chapter provides guidelines on how to go about.



The logical framework matrix represents the project strategy in a comprehensive visual tool. The format for the logical framework can be found in the Excel file in annex to the project proposal. For selected projects, this Excel tool will also serve as a monitoring tool throughout the implementation of the project (to be included as an annex to the Annual Progress Report (APR)). During implementation of the selected project, the logical framework needs to be considered as a dynamic tool which can be reassessed and revised as the project itself evolves and circumstances change during implementation. This process is important to allow quick adjustment to a changing reality in order to achieve the project's objectives.

The logical framework has a vertical and a horizontal logic:

- The *vertical logic* identifies what the project intends to do and clarifies the causal relationships.

[4] Some of the information in this sub-chapter is drawn directly from the M&E policy but repeated here for your convenience (by making this guide a stand-alone document)

- The *horizontal logic* relates to the measurement of the effects of resources used by the project through the specification of key indicators, and the sources where they will be verified. (see next chapter on indicators).

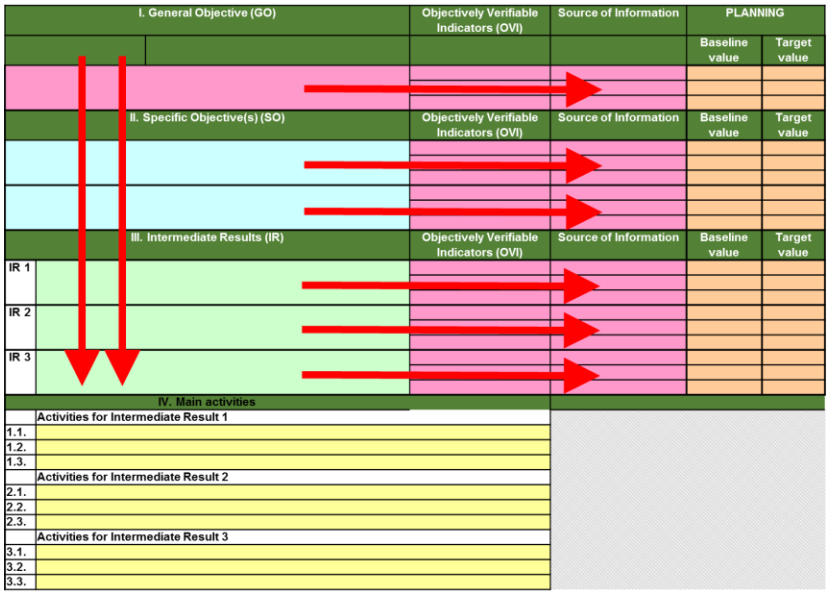


Figure 10 - Logical framework (horizontal - vertical logic)

In this chapter we will only discuss how the "Theory of Change" or "intervention logic" developed in chapters 2-4 is integrated in the logical framework (first column). The first column of the matrix sets out the basic strategy underlying the project. This logic reads as follows (from bottom to top). Means allow to carry out **activities** through which **outputs** (intermediate results) are delivered. These results collectively achieve the outcomes (**specific objective(s)**), which again, contributes to the general objective. In chapters 2-4 the project proposal has already identified the different components needed to develop this first column. Now it is a matter of setting the right level of ambition, developing a correct formulation, and clustering deliverables in a correct way.

5.1.1 Differentiating different results levels

The logical framework distinguishes 3 levels of results:

GENERAL OBJECTIVE

(Impact)

"*Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended*" (OECD-DAC).

The general objective refers to a long-term development result to which an intervention wants to contribute. It focuses on changes at the level of indirect beneficiaries. In most cases, this long-term result only appears **after the intervention** is over. This should normally be the "desired change" identified earlier (cf. chapter 1).

The General Objective finally is no longer in the sphere of influence. The attainment of the general objective is subject to so many different actors and factors that they fall outside the sphere of influence of the intervention. This also relates to the **"attribution gap"**: it is simply impossible to attribute the achievement of the General Objective to one single intervention.

SPECIFIC OBJECTIVE

(Outcome)

"*The likely or achieved short-term and medium-term effects of an intervention's outputs*" (OECD-DAC).

A specific objective comprises at least the **use of outputs** (short term), and whenever feasible the **effect of the use of outputs** (medium term). The specific objective is what needs to be achieved **at the end of the intervention**. Consequently, an intervention's success will be assessed against the achievement of the specific objective(s). All outputs need to be geared towards achieving the specific objective(s). There can be one or two specific objectives. The specific objective refers to changes at the level of direct beneficiaries of the intervention. As the specific objective(s) refers to the purpose of the intervention, it should be focused (specific). Therefore, the specific objective is not something that can be created directly: it is only achieved through the realisation of outputs and mostly requires **behavioural change** (someone or something doing things differently).

The Specific Objective(s) is no longer in the sphere of control: the intervention is increasingly dependent on stakeholders, changes in context and other factors that the intervention does not control. However, the intervention can exert a considerable amount of influence and if assumptions hold, the specific objective(s) can be achieved. The specific objective is what the intervention wants to achieve at the end of the intervention, and the intervention should do everything to achieve it.

OUTPUTS

Intermediate Results

The products, capital goods and services which result from a development intervention may also include changes resulting from the intervention that are relevant to the achievement of outcomes (OECD-DAC).

Outputs refer to products and services that are delivered ("deliverables") by the intervention (direct consequence of a number of activities) and – depending on the context – the direct results of the products and services. **Outputs are realised during the intervention.**

Outputs should be in the sphere of control of an intervention: without any exceptional events, the intervention can guarantee the achievement of outputs (they are under control). If an output is not in the sphere of control, then it is too ambitious.

The information in the previous paragraphs is summarised in the table below:

	Outputs (Intermediate Results)	Specific objective(s) (outcome level)	General objective (impact level)
Level of control	**Sphere of control**	**Sphere of influence**	**Sphere of interest**
What?	Products or services (can also include use of outputs)	Changes for beneficiaries	Contribution to a change at level of society
Resulting from…	Resulting from activities	Change resulting from the use of outputs	Resulting from the achievement of a combination of other outcomes
When?	Achieved during the project	Achieved at the latest at the end of a project	Appears after the end of project. The project only contributes to the impact level (no attribution)

5.1.3 Defining objectives and intermediate results

Defining objectives and intermediate results is often a challenging exercise in the development of a project proposal. In this chapter, additional guidelines are provided for the definition of objectives and intermediate results. Ideally you will be able to recycle the formulations used in the development of the Pathways of Change. Though, in most cases, you will need to reformulate and/or re-cluster different elements.

A. Defining the General Objective

Every VLIR-UOS supported project formulates **1 general objective (impact)**. A general objective refers to the long term effects of the project on the **indirect beneficiaries**. The general objective is reached only after the end of the intervention in most cases, sometimes already near the end of the intervention. The general objective is always a **developmental objective**: it answers a clear developmental problem[5]. The general objective should be clearly linked with the intervention and shouldn't be overly vague (e.g. contribute to poverty reduction, climate change mitigation). The intervention only contributes to the general objective, as its attainment will most likely depend on other interventions or factors.

Figure 11 - Cuba example

Some examples of general objectives:

- The livelihoods of farmers (both men and women) in province x are improved through a reduction of soil degradation.
- Public administrations in country x adapt environmentally sustainable and appropriate water distribution systems
- The nutritional health and income of rural communities (men, women and children) of xxx & yyy has improved by zz%
- Access to health care in rural areas in Kenya has been improved

Beware:
A general objective cannot be modified once the project has started.

B. Defining the Specific Objective(s)

The specific objective of an intervention refers to the 'project purpose'. It refers to the *changes* at the level of **direct beneficiaries** and needs to be attained before the end of the intervention. These changes occur when the outputs of an intervention are used and in some cases even the change that happens as a result of the use of outputs. The 'use of outputs' is crucial here. One can only create change when – for example – new methods are actually used, a newly developed curriculum is actually applied, a new or refurbished laboratory is used, new knowledge is being used to influence communities, policy makers, innovative practices are implemented, uptake of new knowledge takes place, etc. Often the specific objective will be limited to the "use of outputs". The "change due to the use of outputs" might be too

[5] Although an intervention can have long term effects on the academic institutions itself, the general objective formulated in the logical framework always needs to be a developmental objective.

ambitious to realise within the given context, period and/or budget. As many contextual elements affect the development process and will be critical for achieving the specific objective, we position the specific objective in the 'sphere of influence'. Every project has **no more than 2 specific objectives**. A specific objective needs to be formulated in a clear and *specific* way, making it observable/measurable. Avoid overly vague formulations of a specific objective.

Figure 12 - Cuba example

VLIR-UOS provides some guidelines on how typical objectives of a project look like. On the basis of previous projects, VLIR-UOS has identified the following specific objectives as most useful (see below). Please note these are just frequent, basic types of specific objectives. Other types of specific objectives are possible and mostly welcome. Use your imagination!

1. **Improved Research practices**
   - *Researchers perform better/more research (as a result of a new internal research policy providing incentives to do research)*
   - *Researchers (men and women equally) perform independent and innovative research using new methods (as a result of training on new methods, the delivery of lab equipment, etc.)*

2. **Improved Education practices**
   - *(SCA effectively integrated in the curriculum for teacher training →) Selected Student Centered Approaches (SCA) for science are applied by the lecturers.*
     …or in a more ambitious project …
     The learning outcomes in the field of teacher training have improved by at least xx% (through the introduction and application of – amongst others – selected student centred approaches for science
   - *An updated Occupational Therapy-curriculum is being applied at the institution x (through a small project working on the development of the OT curriculum (after benchmarking, labour market needs assessment, etc.)*
   - *More digital tools are used by teachers in order to reduce paper consumption*

3. **New knowledge, applications or services are created + uptake by relevant stakeholders**
   - *Take up by local government and international actors active in region xxx of the relative impact (sustainable economic and social contribution) of agricultural cooperatives in promoting the well-being of members, and to propose strategic options to accommodate the rural poor (as a result of new knowledge generated through research and the extension activities organised by the project to ensure uptake of new knowledge)*
   - *Local Government Authorities enabled to provide more performance public services to Tanzanians (after a research investigating the impact of a selected set of public service delivery modalities)*
   - *A phone application monitoring personal health – allowing the monitoring of personal health by a physician - is used by at least 5000 persons in rural areas of Kenia (As a result of the development of a phone application to monitor personal health in rural areas and the development link to a centralized data-system where a physician can monitor those data)*

Depending on the context, and particularly when a project is a follow-up of a previous project, the specific objective(s) can be more ambitious (e.g. policy makers that use the knowledge generated to upscale certain innovations).

Be advised:

- **Can you modify a specific objective during implementation?** A specific objective cannot be modified after the project has started. In specific, exceptional, circumstances – in which the project context has changed drastically - projects can request VLIR-UOS permission to change the specific objective. This can only be done through a written motivation in the Annual Progress Report and upon approval of VLIR-UOS.
- **Why are there three 'standard' specific objectives, while an intervention can only have 2 specific objectives?** The specific objectives refer to the purpose of the intervention, and thus need to have a clear focus. If you use 2 standard specific objectives (and formulate them according to your context), number 1 and 3 for example, does not imply that the project cannot have activities related to education: limiting interventions to 2 specific objectives is simply intended to focus the intervention's finality, purpose.

C. Defining the intermediate Results

Intermediate results (or outputs) describe what the intervention will deliver in order to achieve the Specific Objective(s). Looking at your pathways of change, you should be able to identify intermediate results by clustering the different deliverables in a logical manner.

Capacities of intedisciplinary research group have been strengthened through short-term trainings + the training of Msc and PhD students
Potential uses and benefits of invasive species x have been quantified by researchers
Invasive species x containment strategies have been developed by researchers
In the areas selected by the project, containment strategies have been tested in practice and infestation has been reduced
Research results have been extended in a suitable way to NGO's, local government and farmers

Figure 13 - Cuba example

A recurring error is that intermediate results are formulated at a level that is too low, resulting in an extremely high set of intermediate results: formulating intermediate results for every deliverable needs to be avoided. An intermediate result should be the direct result of a series of activities (and deliverables). Activities and deliverables are to be organised in a limited set of intermediate results. Many academics also work with "work packages": one intermediate result can contain several activities or deliverables. Ideally, a logframe never contains more than 5 intermediate results. If you end up with more intermediate results, consider reformulated them more broadly[6], clustering different deliverables:

Good	Intermediate Result: Research capacities of department X have been strengthened Activities: Needs assessment conducted ; A 2-day training on methodology y has been organised ; 2 staff members have successfully obtained a Master in xxx ; etc.
Bad	Intermediate Result 1: Needs assessment conducted Activities: A methodology for a needs assessment has been conducted ; the needs assessment is conducted ; the results of the needs assessment are processed Intermediate Result 2: A 2-day training on methodology Y has been organised Activities: a training venue is selected, participants are selected, a training programme is communicated, the training is conducted

[6] This can result into intermediate results that are no longer SMART (Specific, Measurable, Achievable, Relevant, Time-bound). This is not a problem per sé, as the intermediate result can be made SMART by further detailing the result in SMART indicators.

	Intermediate Result 3: 2 staff members have successfully obtained a Master in xxx Activities: Staff members have been selected for Master training, Staff members participate in Master in xxx ; Staff members graduate from Master in xxx

Be advised:

Modifying an intermediate result: An intermediate result can be modified after the project has started. This can only be done if motivated in the Annual Progress Report and upon approval of VLIR-UOS.

Now that you have identified your general objective, specific objectives and intermediate results, you can integrate them in the logical framework.

5.2 Risks management

ESSENCE

Identify and manage the key risks the project will potentially face

KEY QUESTIONS

- What are the key uncertainties, assumptions risks?
- What is the probability the risk will occur (or: the probability the assumption is not valid)
- What is the potential impact of the risk
- If needed: how can we reduce the potential impact of the risk or reduce the probability of the risk occurring?

TOOLS/APPROACHES

- ✓ Pathways of Change
- ✓ Risk matrix
- ✓ Checklist logical framework and risk matrix (see annex)

WHERE IN THE PROJECT PROPOSAL CAN YOU USE THIS?

Risk management matrix (annex)

Both during formulation and implementation, the following steps need to be undertaken.

5.2.1 Identification

Interventions identify risks (or assumptions[7]) by reflecting on potential events/factors that could have a negative influence on the intervention. They are integrated in the risk management matrix, so that everyone involved in the intervention is well aware of the risks related to that intervention. Following risk-types are distinguished:

- Financial risks; these risks imply potential extra costs or a loss of income

[7] Although this chapter mostly talks about risks, risk management includes both assumptions and risks (or: every uncertainty in your project)

- Operational risks: potential negative effects on the efficiency (activities) of the intervention
- Compliance risks: potential non-compliance with laws, government guidelines, etc.
- Strategic risks: linked to the change process (assumptions you identified when developing the pathways of change) and the achievement of results
- Reputational risks: potential factors that could have a negative effect on the reputation of the implementing organisations or VLIR-UOS

5.2.2 Assessment

Risks are assessed on the basis of (1) the probability that a risk will occur (turning the risk into an issue) and (2) the potential impact the risk will have on the intervention. By assessing risks on the basis of these criteria, a risk level (or risk score) is attributed to each risk (probability x potential impact). The matrix below shows how the total score is determined for every risk.

Assessing intervention risks: Determining the risk level

Probability	1-Negligible	2-Minor	3-Moderate	4-Major	5-Severe
4-Almost certain	4	8	12	16	20
3-Probable	3	6	9	12	15
2-Possible	2	4	6	8	10
1-Unlikely	1	2	3	4	5

Potential impact

Figure 14 - Risk assessment

5.2.3 Response

Depending on the overall risk level, the intervention needs to formulate measures in order to address the risk. These measures are then implemented and regularly updated. The extent to which interventions need to respond to risks is partly determined by the 'risk appetite'. It determines to what extent risks are acceptable, or not, depending on the risk-level. In the matrix and table below this concept is applied. It shows the different risk levels (in a generic way) and explains when risks are acceptable, and when they need a response. When responding to a risk, a project tries to mitigate the risk. This means that the intervention tries to lower the probability of a risk occurring and/or tries to lower the potential impact of that risk. This can be done by reorienting certain activities, using different procedures, working with other partners, etc.

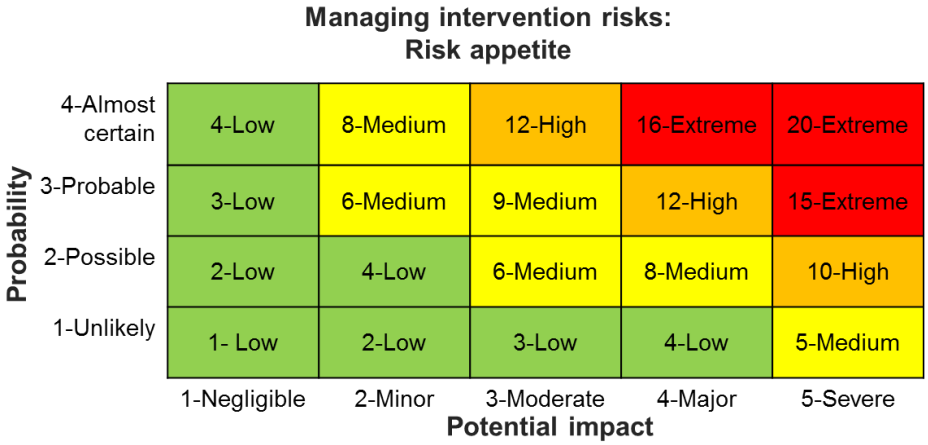


Figure 15 - Risk appetite

LEVEL	RESPONSE
Low:	Risks are accepted and are considered as assumptions (we assume everything to go well).
Medium:	An intervention doesn't need to reformulate (formulation phase) or take immediate action (during implementation) to reduce the potential impact or probability, but it needs to assure a sound follow-up of the risk. A measure in case the risk occurs is already formulated in this stage.
High :	Action to mitigate the risk (reducing the probability and/or the potential impact) is required. After the risk has been mitigated, the overall risk level is lowered.
Extreme:	Is it acceptable to start the intervention? The risk-level of a particular risk is so high (killer assumption) that this project should not start/be selected. The project definition needs to re-orient the intervention in order to mitigate the risk before submitting a project proposal. During implementation, an intervention (1) needs to take appropriate measures as soon as possible and (2) communicate the risk to higher levels (Flemish university (college) and VLIR-UOS).

5.2.4 Follow-up

All the information about an intervention's risks (identification, assessment, response) is integrated in a risk management matrix. This matrix is developed during project formulation, and is continuously updated during implementation (in case of selection). Updating the risk management matrix involves both the follow up of existing risks (and the implementation of risk responses) and the identification-assessment-response of/to new risks. You can find this risk matrix in the Excel file (annex to project proposal)

The matrix needs to be completed as follows:

(a) Identification: formulation of the risk (formulated as a potential event) + potential impact on the project
(b) Assessment: an assessment (with scores) of the risk on the basis of the risk matrix (Total risk level is generated automatically in the Excel format)

(c) Response: On the basis of an assessment, a risk response is formulated. The person responsible for implementing the risk response is mentioned.

(d) Follow-up: this column needs to be used (during implementation) to follow-up on risks and the responses to risks (response implemented or not? Successful? etc.)

Identification (a)	**Assessment (b)**			**Control (c)**	
Risks+ potential impact	**Probability**	**Potential impact**	**Total risk level**	**Response + person responsible**	**Follow-up (d)**
Not enough suitable candidates found at partner universities for PhD positions in the project which would impact the timely implementation of the project or the quality of its deliverables	1	4	4	Early announcement of PhD positions immediately following project approval (local promotor)	
Reduced interest in (private) farming as a result of changing socio-political situation which would impact the uptake of research findings	2	4	8	Strong emphasis on participatory on farm research; participation of local NGO to convince farmers of potential and profitability of improved farming practices (local promotor)	

Figure 16- Example of risk management matrix

6. Develop indicators

ESSENCE

Being clear about what we need to know to be effective, demonstrate effectiveness (and the attainment of results and objectives) and learn, throughout implementation

KEY QUESTIONS

- What information do we need to track and analyse the change process as it evolves?
- What information do we need to monitor assumptions or learn about the change process?
- What information do we need to demonstrate the realisations of the project?
- How will we collect this information? Who will do this? When? What systems need to be put in place?

TOOLS/APPROACHES

- ✓ Checklist logical framework and risk matrix (see annex)

WHERE IN THE PROJECT PROPOSAL CAN YOU USE THIS?

Logical framework (annex)

6.1 What are indicators

The OECD-DAC defines an indicator as a *quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor*.

Why are they important? VLIR-UOS interventions are required to identify indicators at the level of intermediate results, the specific objective(s) and the general objective. By monitoring indicators, interventions can learn from their progress, and take action when required (e.g. by adapting the planning of the intervention if progress is not as expected). VLIR-UOS can use them to track the progress of interventions. Indicators also have a role in the accountability of projects vis-à-vis VLIR-UOS and DGD. The availability of data on the progress of interventions also has an added value for evaluations.

Who measures indicators & the importance of alignment

The project team is responsible for the measurement of indicators. Many indicators can be measured directly (e.g. number of publications by the project) and do not need a measurement method. Other indicators might require more complex data collection methods and/or the involvement of other stakeholders. Whenever possible and relevant, the project needs to use existing monitoring systems (e.g. the Management Information System of the partner institution) which avoids the setting up of parallel measurement systems.

6.2 At what levels do we formulate and measure indicators?

Intermediate results (outputs)

For every intermediate result indicators need to be formulated. These indicators measure the) achievement of the intermediate result and any important deliverables resulting from the activities (if deemed crucial). The set of indicators that is developed doesn't need to include indicators on each deliverable of the intermediate result. Focus on the indicators giving the best "indications" about achieving the intermediate result.

Indicators at the level of the intermediate result should deal with both quantity and quality. For example:

- *Number of peer reviewed articles in a journal (Number = quantity ; peer reviewed = quality)*

Sometimes more than one indicator is needed to fully demonstrate the achievement of an intermediate result. For example:

- *Intermediate result – Teachers are strengthened in using Student Centered Teaching (SCT) methods*
    - *Indicator 1: Number of teachers trained in SCT methods;*
    - *Indicator 2: Satisfaction of teachers that were trained in SCT (evaluation forms)*
    - *Indicator 3: Knowledge transfer of training on SCT (entry-exit testing)*
    - *Indicator 4: Number of PhD students supported by the project that have graduated during the project*

Specific Objective(s) (outcomes)

For every outcome or specific objective a number of indicators needs to be formulated. As the specific objective translates the purpose of the project, formulating a good set of indicators at this level is crucial. Indicators at this level need to cover the achieved change at outcome level (who/what has changed, how much, when). Identifying indicators at this level is often more difficult compared to the output level (IR) as changes at this level relate to behavioural changes, often requiring the elaboration of a measurement 'system' (e.g. surveys). Below you can find some examples. Of course, depending on the context, the example indicators can be more or less ambitious (and already include development related indicators)

Examples:

- *Satisfaction of students with quality of education (outcome improved education practices)*
- *Number of permanent staff with a PhD in the agricultural department*
- *A newly developed Bachelor in Speech and Language Therapy is organized annually) (outcome improved education)*
- *Number of students (by sex) planned to follow newly developed Bachelor in Speech and Language Therapy*
- *Number of students (by sex) effectively following a newly developed Bachelor in Speech and Language Therapy*
- *% of time dedicated to research by academic staff in a specific department /faculty (outcome improved research practices)*
- *No. of publications (per type) independently produced by the academic staff in the target department / faculty (outcome improved research practices)*
- *Increases in use of a refurbished lab (expressed in hours/visits) (outcome improved research practices)*
- *Number of meetings and educative interactions with policymakers, profile of engaged policy-makers (+ level of satisfaction and demand for information, support or related services) (Outcome: new knowledge uptake)*
- *Number of professional networks in which the partner is actively involved.*

General objective (impact)

General objectives are often formulated very vaguely. Identifying indicators at this level can clarify the exact meaning of the general objective. As changes at impact level usually appear after the intervention, VLIR-UOS does not expect a systematic monitoring of indicators at this level. VLIR-UOS does expect an identification of key indicators if possible.

Examples:

- *The employability rates of graduates (by sex) of the revised Master in Water resources engineering*
- *Number of new active academic financial partnerships*
- *The new curriculum for SLT (Speech and Language Therapy) is being expanded to other higher education institutes*
- *Farmers' post-harvest losses of crop x reduced by yy% in the zzz-region*
- *Irrigated land as percentage of crop land*
- *Proportion of rural population in Kenya with access to health care (disaggregated for access to health facilities and digital access)*

6.3 Formulating indicators

Standard indicators versus other indicators

Interventions need to formulate indicators for the different results levels and integrate them in the logical framework of the project. In order to facilitate the formulation of indicators, and in order to allow some country aggregation of indicators, VLIR-UOS does provide a shortlist of frequently used indicators (see below). These indicators are only a basic set of indicators. They measure some aspects of a project in a quantitative manner.. They can then be integrated into the logical framework of the project.

Quality of an indicator

Indicators can be quantitative or qualitative, direct or indirect. A general way to assess the quality of an indicator is by doing a "SMART" assessment. This means that you assess whether your indicator is:

- **S**pecific: While the result can be defined more broadly, the indicator should be narrow and focus on the 'who' and 'what' of the intervention. Additionally, 'how', 'where' and 'who' is doing 'what' is equally important to include in the indicator.
- **M**easurable: The indicator should have the capacity to be counted, observed, analysed, tested, or challenged.
- **A**chievable: The target should be feasible.
- **R**elevant: An indicator should be a valid measure of the result. There is no reason to create an indicator which does not relate to the larger intermediate result/outcome. The indicator should be meaningful and important.
- **T**ime-bound: The indicator should be connected to a specific time frame. It should be clear in what time period the indicator will be measured so that it is known when a result/outcome is expected

The SMART principle is not always applicable to more qualitative indicators. Alternative ways to assess indicators: CREAM and SPICED

CREAM: C**lear (**indicators should be precise), R**elevant (**appropriate to the subject and evaluation), E**conomic (**can be obtained at a reasonable cost), A**dequate (**the ability to provide sufficient information on performance), M**onitorable (**easily monitored, and amenable to independent validation).

SPICED: **S**ubjective, **P**articipatory**, I**nterpreted and communicable**, C**ross-checked and compared, **E**mpowering**, D**iverse and disaggregated (More information on SPICED can be found here)

Failing to plan is planning to fail

Projects need to plan the measuring of indicators and need to take into account the feasibility (cost/benefit) of measuring indicators. That is why there is a column "Source of Verification" (where will the project get the information) in the Logical Framework format. Next to identifying the source of verification, projects need to think about:

- How will we measure the indicator?
- Frequency of data collection: annually, every 2 years? Starting when?
- Who in the team is responsible for the data collection?

Baseline and targets

The VLIR-UOS Logical Framework format foresees a column for baseline values. For every indicator, the project needs to set a baseline value: the value of the indicator at 'time 0' (before the start of the intervention). This is crucial information and is used as a point of reference against which results will be measured or assessed in the future. In case it is not possible to set a baseline value before the start of the intervention, it should be identified in the first Annual Progress Report.

The VLIR-UOS Logical Framework format foresees a column for targets. Setting target values for indicators are used to plan the results and can help the project to create clarity on the level of ambition of a project and enables a clear results focus. In principle all indicators need to have target values (DGD instructions). However, while targets can be more easily identified at output level (e.g. number of Masters graduated), at higher results levels it can be impossible or undesirable to do so.

Be advised

Whether defined targets are attained or not will not be used by VLIR-UOS to judge the value of a project. Rather it should motivate projects to analyse the project and its development process and analyse why an intervention has not attained its targets.

Changing indicators during implementation

If an intervention wishes to change indicators (or target values), it needs to explain this in the Annual Progress Report. VLIR-UOS needs to approve the proposed changes – by validating the Annual Progress Report.

I. General Objective (GO)	Objectively Verifiable Indicators (OVI)	Source of Information	PLANNING	
			Baseline value	Target value
Small-scale farmers in region x of country y have a higher food production contributing to their livelihood and food sovereignty	Acreage of infested land converted to productive agricultural land	Not available	0	NA
	Increased productivity of agricultural land in the region	Not available	NA	NA
	Percentage of farmers in the region that have adapted new control strategies	Not available	0	NA
II. Specific Objective(s) (SO)	**Objectively Verifiable Indicators (OVI)**	**Source of Information**	**Baseline value**	**Target value**
The local university's agricultural department becomes more re-	Number of articles in international peer reviewed journals	Web of Science, project reports	0	5
	Number of oral presentations on international scientific congresses	Conference websites, project reports	0	2

search-active, potentially stimulating innovation in the agricultural sector		Number of permanent staff with a PhD in the agricultural department	Project administration	4 Male 0 Female 4 Total	4 Male 2 Female 6 Total
		Increase in self-reported motivation of academics to do research	e-survey (organised by project during formulation and at the end of the project (targeting academics) using a 0-10 scoring	3	7
		Increase in supportive attitude towards research by senior university management	e-survey (organised by project during formulation and at the end of the project (targeting management and academics) using a 0-10 scoring	2	6
Farmers have access to a – yet to be developed - eco-friendly, user-friendly, solution to control the invasive species x		Percentage increase in food production on farms adopting control strategies	Project reports	0	21%
		Number of broadcasts of research results on national or local media	Project administration	0	8
		Number of request for additional presentations or demonstrations by local governments	Project administration	0	6
		Total estimated reach of broadcasts	National statistics	0	60 000
		Number of farmers that received training before the end of the programme	Project reports	0	400
III. Intermediate Results (IR)		**Objectively Verifiable Indicators (OVI)**	**Source of Information**	**Baseline value**	**Target value**
IR 1	Capacities of interdisciplinary research group have been strengthened	Number of PhD students supported by the project that have graduated during the project	Project administration	0	2 (0 male, 2 female)
		Number of Master students supported by the project that have graduated during the project	Project administration	0	2 (1 male, 1 female)
		Number of researchers at partner university working on invasive species x control	Project administration	0	8
IR 2	Potential uses and benefits of invasive species x have been quantified by researchers	Number of successful and profitable control strategies identified	Publications, project reports	0	4
IR 3	Invasive species x containment strategies have been developed by researchers	Number of farmers involved in the on-farm participatory research	Project administration data, publications	0	20
		Average percentage of invasive species removal on fields in the participatory research	Project administration data, publications	0	85
IR 4	In the areas selected by the project, containment strategies have been tested in practice and infestation has been reduced	Number of farmers adopting new Marabú control strategies in pilot phase	Project administration data, publications	0	125
		Conversion (ha) of infested land to agriculture in the project area by the end of year 4	Publications local government data	0	200
IR 5	Research results have been extended in a suitable way to NGO's, local government and farmers	Number of audio visual extension materials developed	Project reports	0	5
		Number of training modules package developed together with local NGO	Project reports, training packages	0	3
		Number of presentations or seminars with local government	Participant registration	0	3
		Number of government official reached through presentations or seminars	Participant registration	0	70
		Number of demonstration farmer field schools set up	Project reports	0	4

Figure 17 - Example of a logframe

6.4 Frequently used indicators

The following list represents indicators that are often used by projects. This list basically serves as a menu from which you can pick those indicators that are relevant to you. Every project will also need to develop project-specific indicators. This list simply aims to get you started. VLIR-UOS asks projects to correctly copy these indicators (as to allow future aggregation) and not to alter the formulation (adding

information to the formulation is possible). VLIR-UOS will systematically follow-up on some of these indicators

EDUCATION	**RESEARCH**
Number of new or substantially updated Bachelor programmes developed (curriculum)	Number of articles in international peer reviewed journals
Number of new Bachelor programmes accredited	Number of articles in national peer reviewed journals
Number of new or substantially updated Master programmes developed(curriculum)	Number of conference proceedings (full paper)
Number of new Master programmes accredited	Number of chapters in books (based on peer review)
Number of new or substantially updated PhD programmes developed (curriculum)	Number of books with international distribution (author or editor)
Number of new PhD programmes accredited	Number of working/technical papers/popularising literature/articles
Number of new courses developed	Number of Research protocols
Reach (number of students) of new courses (disaggregated by sex: male: - female: - total:)	**EXTENSION AND OUTREACH**
Number of syllabi/textbooks developed	Number of presentations or workshops and reach (Number of persons reached)
E-Learning packages developed (distance learning, CD-rom etc.)	Number of citations in local media
HR DEVELOPMENT	Number of training modules package developed
Number of Master students supported by the project that have graduated (disaggregated by sex: male: - female: - total:)	Number of audio visual extension materials
Percentage of academic staff with a Master degree by relevant institutional level (department or faculty level; disaggregated by sex: male: - female: - total:)	Number of spin-offs/incubators
Number of PhD students supported by the project that have graduated (disaggregated by sex: male: - female: - total:)	Number of policy advice/papers
Percentage of academic staff with a PhD degree by relevant institutional level (department or faculty level; disaggregated by sex: male: - female: - total:)	

7. Operationalise – plan activities

ESSENCE

Plan the activities needed to deliver the intermediate results

KEY QUESTIONS

- What activities do we need to implement to deliver the intermediate results?
- When do we need to implement them?
- What means? Who is responsible?
- What management activities are needed to guarantee a smooth implementation?

WHERE IN THE PROJECT PROPOSAL CAN YOU USE THIS?

Operational planning (annex)

While the logical framework is the main strategic planning document of a project, the operational planning offers:

- a more detailed planning of the activities to be undertaken. These activities cover both content and management activities
- a detailed resource scheduling.

The activities defined during the formulation phase generally do not allow to appropriately implement the project. These activities often need to be detailed by defining 'sub-activities' (contributing to the implementation of the activities, just like the activities contribute to the results). While over-planning needs to be avoided, the following items should generally be covered during operational planning:

- adequate timing of activities
- adequate division of tasks and responsibilities
- adequate estimation of means and a precise cost calculation

Special attention should also be given to the integration of the transversal themes in the operationalisation of activities (e.g. ensuring gender balanced participation at project activities, compensating emissions for flying).

Annexes

Annex 1 : Flash cards transversal themes

Flash Card: Digital for Development (D4D)	
Content	VLIR-UOS asks applicants to think about ways to integrate "Digital for Development" (D4D) within their project/programme proposal. Also during implementation, VLIR-UOS asks interventions to report on D4D. As presented in the Strategic Policy Note on 'Digital for Development' (D4D) for the Belgian development cooperation', three action areas are set out: ○ **Better use of (big) data**: a vast majority of VLIR-UOS interventions are data driven. Big data volumes are collected and analysed in innovative ways, thus producing actionable insights for higher education institutes and development actors. Open data can be instrumental to all stakeholders in society. ○ **Digital for inclusion**: VLIR-UOS interventions work on lowering the threshold for access to information for academic staff or students, and on the digitalisation of higher education (e.g. e-learning, digital student management, etc.). Multiplying tools can maximize the number of beneficiaries of an intervention. ○ **Digital for inclusive and sustainable economic growth:** within its scope of service to society, impact and sustainability policies, VLIR-UOS seeks to increase employment and social protection through digitisation and digitalisation,. Labour markets and private sector development are further connected to education and training. D4D is not only about ICT infrastructure but also about energy (electricity), skills and expertise, good governance and leadership, and tools (platforms).
Motivation	According to VLIR-UOS, Information Technologies and Services (ITS) can improve the quality of learning and teaching, and radically expand the reach of learning environments supported by such technologies, also in the context of learning systems such as universities and university colleges. Moreover, ITS play an increasingly important role in diminishing the transactional distance between partners involved in developing, managing, implementing and monitoring programs and projects of interuniversity collaboration, such as those facilitated by VLIR-UOS. In the former case most of the learning is to the benefit of individuals, even though individuals often learn best in a socially relevant and interactive context. In the latter case the learning takes place primarily at the organizational level and results, for instance, in improvements, at that level, in the implementation and management of projects.
Contact person:	Christophe Goossens (VLIR-UOS)
Best practices	Geographical information systems (GIS), social media, sensors, mobile money, digital identity, intelligent systems, open source platforms & crowdsourcing, sms-platforms & message applications, application program interface (API), bandwidth management, data management and analysis, distance learning, audio-visual learning mechanisms, datacentre design and management…
Available tools/links:	Kindling.be (online forum for the Belgian Digital for Development platform, D4D-Be) Strategic Note D4D (as published by DGD in September 2016) Draft EU Policy on D4D (May 2017) Info sheets on digital resources (on agriculture, health and governance published by Enabel)° 9 principles of digital development (help digital development practitioners integrate established best practices into technology-enabled programs).

Partners:	AGORIA, Startups.be, The Shift, Because Health, Educaid.be, Close The Gap, DGD, Enabel, BIO, EU
Questions for reflection on D4D:	• Are there any purchases of ICT-hardware foreseen (apart from the regular office machines)? If so, how will it contribute in achieving the identified objectives? • Is data to be collected? If so, what programmes will be used to do so? Is there a research protocol outlined including the data collection? • Will the collected data be shared with other stakeholders such as governmental and other development actors • Will the project continue on important ICT-infrastructure that was developed by previous projects? What specific issues will be further elaborated? • Will the project make use of and possibly contribute to larger ICT-structures e.g. university bandwidth, optic fibre, national programmes such as DHS, EMIS, EPI… • In case the project has an important teaching module, is any type of blended learning being considered, especially in a rural developmental environment?

Flash Card: Gender	
Content	VLIR-UOS is committed to achieving more gender equity and equality in the VLIR-UOS partner countries, including Belgium, both in the higher education sector and in society in general, through UOS funded interventions. There are two pathways of integrating gender in programmes or projects, through **stand-alone projects** with a specific focus on gender or through the **mainstreaming of gender** in all projects (e.g. all projects have an outcome related to gender).
Motivation	**Sustainable and inclusive development cannot be achieved if women and girls, who constitute half of the population, do not have equal rights and prospects.** Furthermore, insufficient use of human capital **within the higher education sector** has a harmful impact on the development of higher education institutions, as it decreases efficiency and excellence by missing out on women's involvement at all academic levels. More in general, ending all forms of discrimination against women and girls is also **crucial to accelerating sustainable development**. It has been proven time and again, that empowering women and girls has a multiplier effect, and stimulates economic growth and development.
Contact person:	Inge Vandewyvere (VLIR-UOS)
Examples & questions for reflection on gender	**At organisational level of the project:** ○ Does the project ensure gender balanced representation in the team? (cfr. VLIR-UOS policy: 60-40% to 40-60% representation of both sexes) ○ Does the project incorporate mechanisms to ensure gender balanced participation in decision-making processes? ○ Does the project team include a member with gender expertise? ○ Does the project include sex-disaggregated indicators for follow-up? **At content level of the project (direct or indirect beneficiaries):** ○ Does the project consider the way in which the situations/needs/challenges of men and women differ? (= gender analysis) (e.g. investigating the role of women in the environmental management practices of indigenous communities) ○ Does the project take different gender roles and divisions of labour between men and women into account? (= gender sensitivity) (e.g. taking into account gender differences in a research on unemployment) ○ Does the project focus on changing gender roles and divisions of labour between men and women? (= gender transformative approach) (e.g. working on awareness raising with girls for HIV/AIDS prevention) ○ Does the project integrate sex and gender analysis into research? (e.g. including perception differences between men and women about ecosystem services as confounding factor in a research) ○ Does the project identify cultural/religious/legal restrictions that would not allow women or men to participate in project activities (e.g. identify the reasons making it difficult for young female academics to work outside office hours) ○ Does the project ensure gender balanced participation at project activities? (e.g. providing day care during training) ○ Does the project engage with women's groups, associations, NGOs as project counterparts and/or as gender advisors? (e.g. consulting a microfinancing institution for women on fertiliser use)

	○ Does the project create structural and organisational changes in the gender balance of the higher education institution (e.g. developing a strategy and action plans on gender, appointing a focal point…)
Available tools/links:	Strategic Policy Note Gender and Action plan for integrating the gender dimension (DGD) Gender mainstreaming in higher education toolkit (INASP) Gender mainstreaming the project cycle (UNIDO) Gender policy (VLIR-UOS) Implicit bias (Jonge Academie)

Flash Card: Private Sector Development (PSD)	
Content	To bridge the gap between international development and the private sector, a "Belgian SDG (Sustainable Development Goals) Charter for International Development" was launched in October 2016 by Minister of Development Cooperation Alexander De Croo. By having signed the SDG Charter, VLIR-UOS recognized the interdependence between the roles of the private sector, civil society and public sector, and the increasing need for these actors to work together - as true partners - in crafting impactful solutions to common global challenges.
Motivation	A vibrant private sector[8] is an engine of growth which generates decent jobs and creates increased opportunities for more inclusive growth. While governments can empower poor people through regulation, funding and providing public goods, private initiatives can also provide services and generate much needed employment. A large and formal private sector can also be a strong advocate for policy reform and a driving force for good governance, establishing a virtuous circle in which an improving business environment brings private sector growth, which in turn strengthens governance reforms.[9]
Contact person:	Herman Diels (herman.diels@vliruos.be)
Best practices/ Examples	1. **Reforestation of sub-Saharan drylands in Kenya** 'Better Globe Forestry Ltd' (BGF) is a commercial afforestation company in Kenya, with a vision to alleviate poverty by tree planting in sub-Saharan drylands. At its core, it is planting commercial tree species in several sites in Kenya. As such the company is pioneering large-scale planting of trees in semi-arid areas. It considers the tree species *Melia volkensii* as having great potential, but realised that more applied research is needed to turn it into a major afforestation species. So BGF contacted the University of Nairobi (UoN) and the Kenya Forestry Research Institute (KEFRI), and in cooperation with the University of Ghent a South Initiative proposal was submitted to VLIR-UOS and selected for implementation in 2016. **2. Enhancing food crop and fish productivity in Uganda through integration of aquaculture and irrigated agriculture** The Ugandan fish processing company 'Greenfields Ltd' requested assistance from VIVES University College in developing methodologies and training to enhance aquaculture fish production in Uganda. By a fruitful interplay with Makerere University, a South Initiative proposal was elaborated on the integration of aquaculture with irrigated agriculture. A pilot integrated aquaculture/irrigated agriculture production system was established allowing for practical experience, training, demonstration and extension. The pre-conditions regarding to some key logistics and land requirements for the project were guaranteed by the involvement of the private company Greenfields Ltd. Their experienced staff and the disposability of various aquaculture equipment gave a head start on the construction of the pilot farm for the South Initiative. The demonstration site was used by Makerere University as teaching facility for students studying agriculture and fisheries and aquaculture to boost teaching and research. **3. Postharvest losses of Ethiopian fresh fruit**

[8] the 'private sector' refers to a basic organizing principle of economic activity where private ownership is an important factor, where markets and competition drive production and where private initiative and risk taking set activities in motion – based on the OECD's Development Assistance Committee's (DAC) guidelines.

[9] https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/2013-2017_-_Private_Sector_Development_Strategy.pdf

	A TEAM project of KU Leuven with Addis Ababa University in Ethiopia focusses on the reduction of post-harvest losses of mango and avocado, and involves the producers directly into the research activities. By doing so, the research results are more relevant, and the uptake of results is more likely. To prepare the introduction of novel technologies, collaborations are being developed with R&D centers, local community growers, co-operatives and industrial companies through workshops, news bulletins and extension activities. 4. **Bean research in Kenya** To accelerate the uptake of research outputs and increase ownership, a stakeholder platform was established in the framework of a TEAM project of KU Leuven with Jomo Kenyatta University of Agriculture and Technology (JKUAT) in Kenya, focussing on the 'hard-to-cook defect' in beans. This stakeholder platform comprised of farmers, research institutions, government field extension officers, but also private sector players (food industry). The platform met every project year to review progress and give corrective action to the project. **5. Revival of the textile industry in Eldoret, Kenya** In the framework of the IUC programme with Moi University in Kenya, a major contribution was made to the revival of the textile industry through the development of a research centre (in collaboration with VUB and UGent) at a textile factory (Rivatex East Africa Ltd) that was acquired by Moi university and which has become a key research facility. The factory is now also an important case study for the Ministry of Industrialisation. **6. Milk production in the Rwenzori, Uganda** The private sector is involved in the ongoing IUC programme with Mountains of the Moon University through the support of the companies 'Kemin Europe NV' and 'Packo Inox' in the set-up of a 'Dairy Development Centre' at the university where hands-on training will be provided to farmers and service providers in order to improve high quality milk production. **7. Development of medical imaging education in West Africa** The lack of paramedical knowledge with medical imaging capabilities (radiographers) is an important weakness in the healthcare sector of many African countries. Moreover, experience from various stakeholders in the market shows that the lack of education in this specific domain, leads to dangerous situations for the patient, as well as can cause damage to the equipment in a huge number of cases. That is why 'Siemens Healthineers Belgium', a leading medical technology provider, wishes to improve the medical imaging sector in West Africa by building capacity on higher education, in collaboration with a local university and a to be chosen Belgian higher education institute. By joining forces, the goal is to setup a radiographer education program in a local university associated with the radiology department of one or more associated (university) hospitals.
Available tools/links:	• Belgian SDG Charter • Strategic note PSD
Partners:	- The Shift - Enabel - Belgian Investment Company for Developing Countries (BIO)

Flash Card: Environment	
Content	VLIR-UOS highly values the **protection** of the **physical** and **biological environment** in its interventions. Therefore projects are sensitized to think about the impact on and the integration of environment and environmental sustainability in the formulation phase. Different **characteristics** of the environment can be brought into consideration: soil, water, air, biodiversity, climate and climate change, forest, energy, extreme events… The integration of environment can be done on **two levels**: within the **management** of the project and in the **content** of the project (e.g. as an objective or intermediary result).
Motivation	The protection of the environment and natural resources is a **precondition for sustainable development**, as a healthy environment forms the foundation of human welfare and well-being. Sustainable development is development that answers to the needs of the current generations **without endangering** the potential for **future generations** to provide for their needs. In order to guarantee sustainable human development, natural capital, in balance with economic and social capital and with respect for the planetary boundaries, constitutes the foundation for dignified development.
Contact person:	Wannes Verbeeck (VLIR-UOS)
Examples & questions for reflection on environment	**Management of the project** ○ Does the project foresee in CO_2 compensation? (e.g. compensate emissions for flying through greenmiles) ○ Does the project integrate the principle of circular economy? (e.g. purchase of a second hand car) ○ Does the project aim to reduce waste? (e.g. introducing composting methods) ○ Does the project limit the use of papers and other materials? (e.g. standard recto verso printing and focus on digitalisation) ○ Does the project mention sustainable food consumption? (e.g. vegetarian catering at events) ○ Does the project uses renewable energy sources (e.g. use of solar energy) **Content of the project** ○ What is the environmental context of the project? (e.g. heavy metals in water) ○ What are the links between the environmental characteristics and socio-economic issues in the area? (e.g. intensive farming leads to soil depletion, erosion leads to decrease in soil fertility) ○ Is the main objective of the project in line with the principles of sustainable development? (= environmental relevance) (e.g. risk of deforestation by promoting cocoa production through a project) ○ What are the possible effects of the environment on the project? (e.g. deregulated agricultural calendars because of climate change) ○ What are the possible (negative/positive) effects of the project on the environment? (e.g. increase in chemical waste because of the installation of a new laboratory) ○ Do the beneficiaries of the project have the management capacity to adapt to the environment? (e.g. installation of rainwater collection)
Available tools/links:	Strategic Note on Environmental Sustainability KLIMOS toolkit Louvain Coopération toolkit Free online course: pathways to sustainability (linking environmental integrity with social justice)

Annex 2 – Checklist logical framework matrix

PROJECT NAME:				
PROJECT PROMOTOR:				
LOGICAL FRAMEWORK	**OK**	**+/-**	**NO**	**Comments (if any)**
1. The project has a single general objective which refers to a developmental change.				
2. A maximum of 2 specific objectives have been formulated				
3. The specific objectives are clearly stated as objectives (and not as an activity).				
4. The specific objectives are not restatements of the Intermediate Results, but refer to an actual Change (use of outputs or the result of the use of outputs) as a result of producing Intermediate results.				
5. There are not too many intermediate results (max. 5). Intermediate results are formulated at a sufficiently high level (not an intermediate result for every main activity).				
6. Intermediate results are clearly stated.				
7. Intermediate results are stated as results.				
8. Logical flow? Is the results chain as a whole reasonable and logical, i.e. are the links between general objective, specific objective(s) and intermediate results realistic, plausible and clear? (Especially between intermediate results and specific objectives)				
9. Do indicators sufficiently allow to demonstrate the achievement of the specific objective(s)? Indicators are different from IR level?				
10. Do indicators sufficiently allow to demonstrate the achievement of the intermediate results, sufficiently covering them?				
11. Are data sources referenced under sources of verification robust, i.e. already established data sources (including project data collection activities, if any).				
12. Have baselines and targets been included for most indicators?				
13. The columns for the monitoring of indicators have been left empty				
14. Have standard indicators been correctly included in the log-frame				
15. Indicators identify were data is to be disaggregated by gender, location, age, or other dimensions of interest to the project team and sponsors.				
RISK MANAGEMENT	**OK**	**+/-**	**NO**	**Comments (if any)**
1. Risks have been formulated in a convincing manner (incl. the potential impact of the risks occurring)				
2. Risks refer to key internal or external factors critical to achieving success				
3. Risks have been scored appropriately				
4. Clear risk mitigation measures have been formulated if needed				