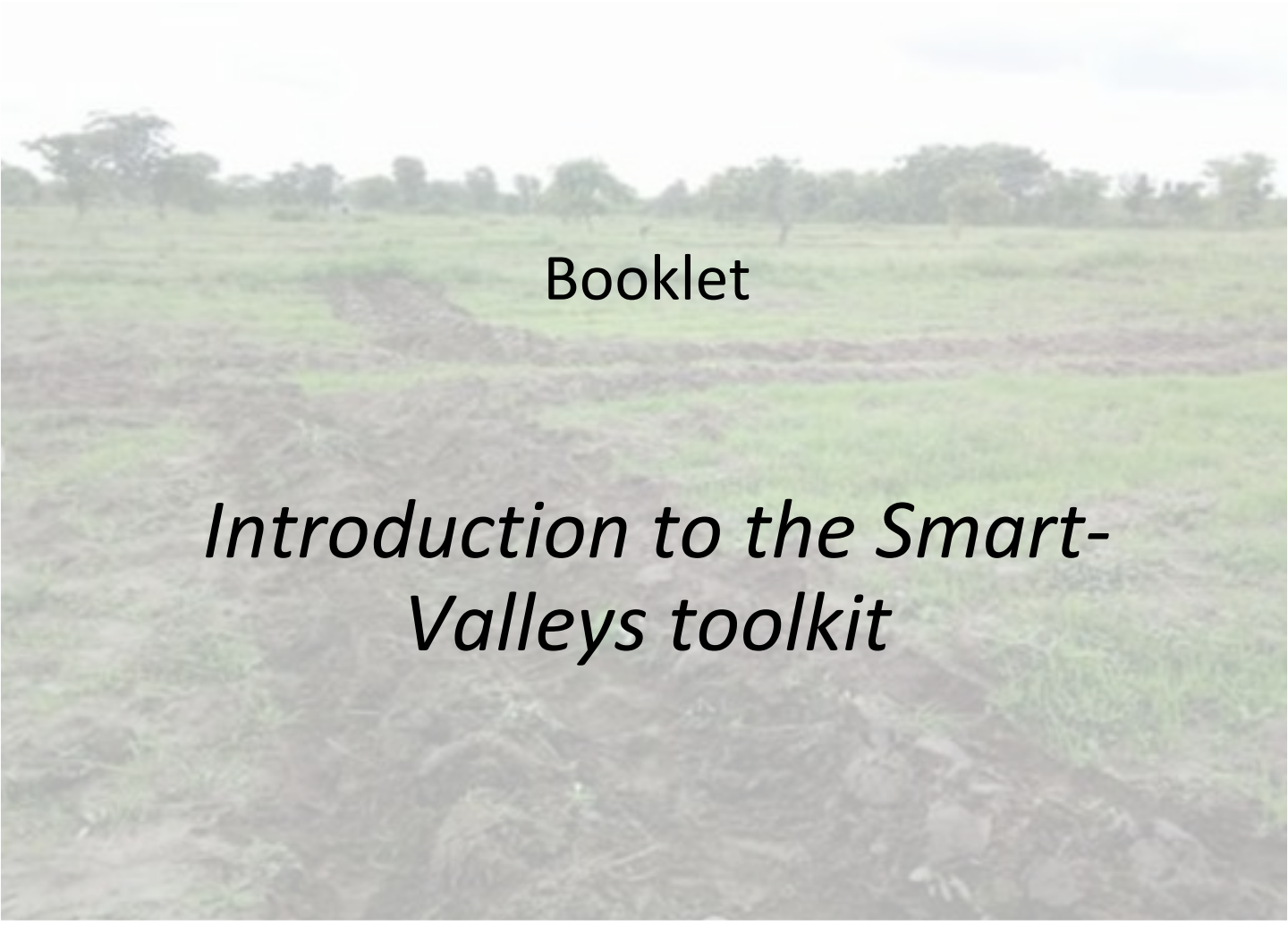

Booklet

Introduction to the Smart-Valleys toolkit

Summary

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About AfricaRice and Afrique-learning

AfricaRice:

AfricaRice is a leading pan-African rice research organization committed to improving livelihoods in Africa through solid science and effective partnerships. AfricaRice is a research center of CGIAR, which is part of a global research partnership on future food security. It is also an intergovernmental association of African member countries. Today, it has 30 member countries. The mission of AfricaRice is to contribute to poverty reduction and food security in Africa through research, development and partnership activities, aimed at increasing the productivity and profitability of the rice sector so as to guarantee the sustainability of the agricultural environment.

Afrique-Learning:

Afrique-learning is a Beninese cooperative which creates and manages vocational e-learning courses specially designed for African youth. Courses are tailor-made in collaboration with experts in the field with the aim of producing interactive, illustrated, interesting and easy-to-study courses that provide the student with important information in simple and appropriate language. Learning is done independently at the student's own pace, it is assessed and a course certificate is attained following a final test. Courses are available on computer, smartphone or android tablet. They only require a very modest bandwidth and are therefore within the reach of students. Registration and classes are free.

Acknowledgements

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Find more information

- Defoer, T, Dugué, M-J, Loosvelt, M, and Worou, S. 2017. Smart-valleys: Trainer – facilitator' s manual. Abidjan, Ivory Coast: Africa Rice Center (AfricaRice). 130 pp.
- APRA-GIR Curriculum: Technical Manual (Wopereis et al., 2008).
- www.africarice.org

Introduction to the toolbox concept

What is the Smart-Valleys toolbox?

As the name suggests, this is a collection of tools. These aim to help the various actors involved in agricultural inland valley development according to the *Smart-Valleys* approach to carry out their tasks. Whether it is the technician who is currently instructing a group of farmers, the farmer improving his development works or the coordinator who designs and coordinates the field work.

Smart-Valleys is an agricultural inland valley development approach for rice production systems in sub-Saharan Africa, based on a participatory, sustainable and low-cost approach.

The toolkit covers various topics. On the one hand, of course, the practical aspects of the selection and development work in an inland valley. There is then a part on project coordination, which includes both practical assistance in organizing the project and guidelines for good practice in inland valley management.

A holistic approach to the management of inland valleys is presented, which communicates good sustainable practices to different actors. The toolkit is available in French and English.

Who developed it and why?

The toolkit was developed by Afrique-Learning with support from AfricaRice on behalf of AfricaRice.

The toolkit fills a gap by combining, for the first time, instructions and guidelines for all stages of an inland valley development project using the Smart-Valleys approach. Practical knowledge from years of experience has been used to document agricultural development processes and didactically convert them into learning materials.

Who is the toolbox for?

The person(s) responsible for setting up the project and then managing it. We will refer to this group of people under the generic name of "project managers". This toolkit will help the project manager to organize and then manage the project according to the objectives, by organizing the work of the supervisors and technicians who will participate in engaging farmers in the sustainable agricultural use of inland valleys.

Supervisors and technicians will find in this toolkit all the technical and practical information they need to organize collaborative work with farmers for the development and management of inland valleys according to the Smart-Valleys approach. The e-learning courses allow them to prepare and the practical guides accompany them in the field.

Finally, some farmers will be able to use the toolkit directly to better develop and manage their inland valleys, even outside the project. State or private extension services can of course use the toolkit to strengthen their knowledge and know-how.

Components of the Smart-Valleys toolbox

The toolkit includes three types of documents, to be used together: booklets, online courses and guides. Each type is intended for specific actors, for specific purposes.

The **booklets** provide detailed information on the subject. In addition to essential information, the user receives additional information to better understand the subject and its context.

Online courses help the user to understand the topic and to memorize the fundamental ideas and actions. The information is presented here in a didactic way and learning is supported by interactive tests. The courses mainly help technicians to understand the different components of the *Smart-Valleys* approach and the corresponding tasks. Once their apprenticeship is completed, the technicians will pass this knowledge on to the farmers during the fieldwork.

Finally, the **practical guides** are to be used during implementation in the field. Only information essential for practical implementation is presented here, in a way that is easy to use in the field. These are either instructions with technical data or guidelines on how the activity must be carried out. These guides are mainly intended for technicians and farmers who wish to improve their production on their own.

In this booklet, we describe common uses of the Smart-valleys toolkit. The booklets provide an overview for the project manager, the technician gains practical knowledge and basic understanding through online courses, and the technician and farmer use the guides when working in the field.

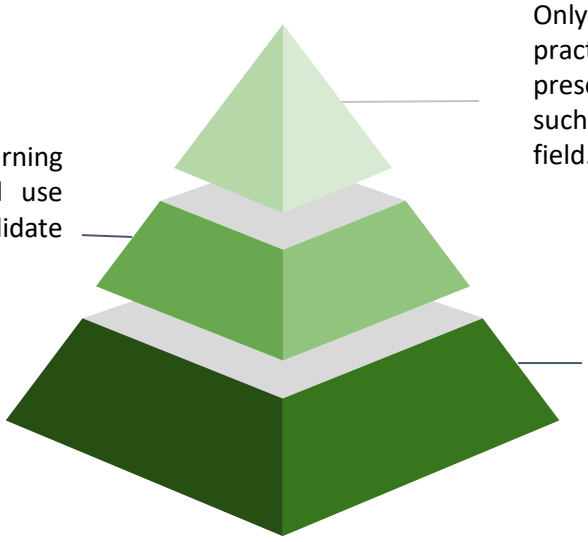
Each type of tool is therefore intended for specific actors. The farmer, for example, will generally be less interested in how inland valley development work is planned and organized by the project. However, in some circumstances it may be advisable for the project coordinator to take the online courses himself or for the technician to acquire knowledge about certain parts of the project organization. Think of the toolkit as one source of information that you can customize the use of.

Practical guides

Only information essential for practical implementation is presented here, and organized in such a way that it is useful in the field.

Online course

These interactive learning materials are didactic and use tests to reinforce and validate understanding and learning.



Detailed booklets

Small electronic or printable manuals, providing all the details and context, to ensure in-depth knowledge.

List of tools

Booklets

for the design and management of a project

- Booklet 1 - Introduction to the *Smart-Valleys* toolbox
- Booklet 2 - Organization of an agricultural inland valley development project
- Booklet 3 - Gender and rice production
- Booklet 4 - Concept of the "service" to implement a project
- Booklet 5 - Collection, entry and verification of data (I-IV)
    - Booklet 5-I - Tasks for collection, digitization and verification
    - Booklet 5-II - The data collection and management application
    - Booklet 5-III - Shared document management system
    - Booklet 5-IV - Use of a spreadsheet for data entry or collection
- Booklet 6 - Soil fertility and fertilizers
- Booklet 7 - Sustainable agricultural use of inland valleys

Online courses

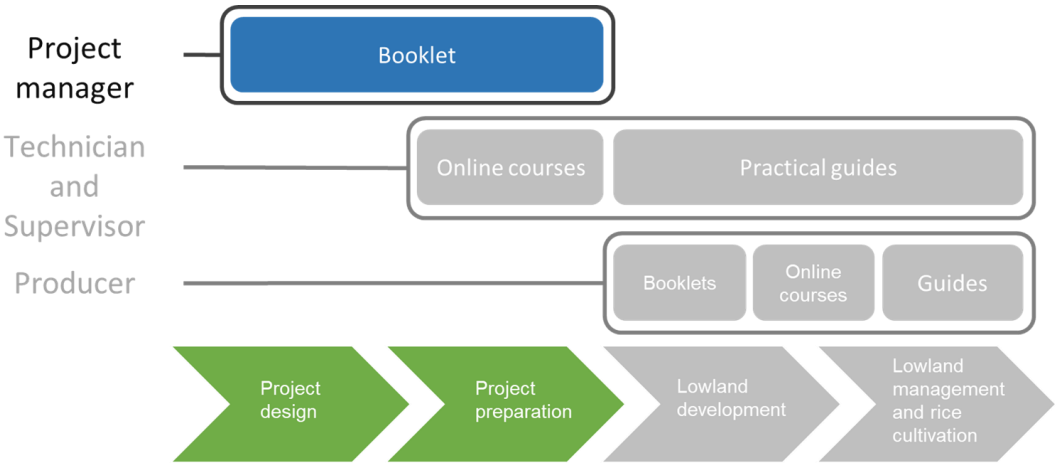
for training in self-management

- Course 1 - Gender and rice production
- Course 2 - Concept of "service" and how to perform a service
- Course 3 - Data collection, entry and verification
- Course 4 - Inland valley development for rice cultivation: the *Smart-Valleys* approach
- Course 5 - Inland valley selection for *Smart-Valleys* development
- Course 6 - Selection criteria for an inland valley for the *Smart-Valleys* approach
- Course 7 - Site visit & development plan of an inland valley
- Course 8 - Implementation of the development plan on the land
- Course 9 - The building of water control structures
- Course 10 - Management of the developed inland valley
- Course 11 - Soil fertility and fertilizers
- Course 12 - Sustainable agricultural use of inland valleys

The practical guides

technical supports for practical work

- Guide 1 - Presentation of services for the selection and development of an inland valley
- Guide 2 - Data sheets for data collection
- Guide 3 - Data Sheet Checklist
- Guide 4 - Introduction and sensitization to the *Smart-Valleys* approach
- Guide 5 - Site visit & development plan of an inland valley
- Guide 6 - Implementation of the development plan on the land
- Guide 7 - The building of water control structures
- Guide 8 - Inland valley selection for *Smart-Valleys* development
- Guide 9 - Selection criteria for an inland valley for the *Smart-Valleys* approach
- Guide 10 - Management of the developed inland valley
- Guide 11 - Soil fertility and fertilizers
- Guide 12 - Sustainable agricultural use of inland valleys



The project manager

The toolbox offers specific project coordination tools to plan and organize your intervention. As a project manager, the following tools are essential for you:

- The booklet: *"Organization of an agricultural inland valley development project"*
  Use this booklet to define the processes for recruiting service providers, for training and working in the field.

- The booklet: *"Concept of "service" in implementing the Smart-Valleys approach or any other project"*
  Use this booklet to implement the service delivery approach in your Smart-Valleys project or any other project. The approaches described must be adapted to the reality of your project and its location.

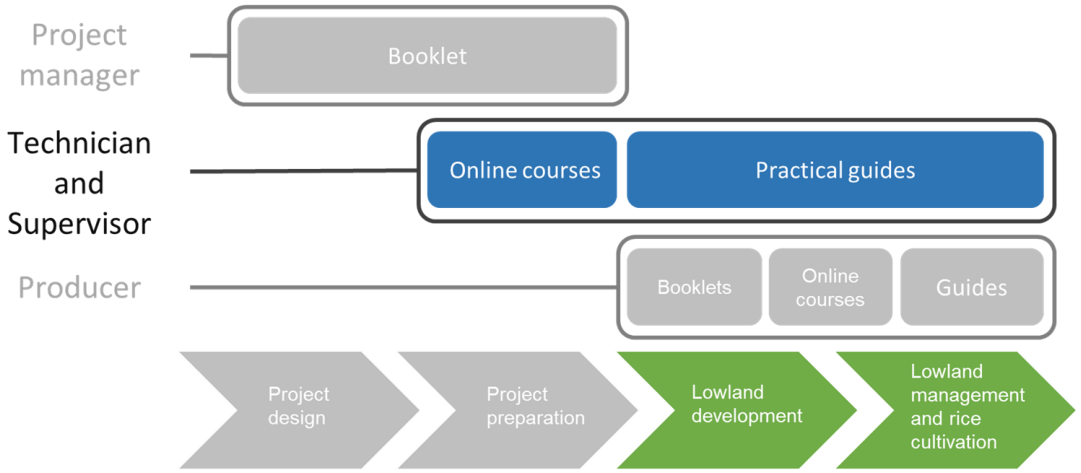
- The practical guide: *"Presentation of services for the selection and management of an inland valley"*
  This booklet helps you understand the tasks you need to organize for your Smart-Valleys development project, and how to organize them. It will also allow you to better understand which personnel to recruit and how to train them.

- The booklets: *"Collection, entry and verification of data I-IV"*
  These booklets will help you create, customize and manage the data capture systems needed for your Smart-Valleys project.

    - The field sheets for data collection will give you specific examples and models that you can use as they are or customize.

Use the following booklets to develop your knowledge and understanding of the major themes associated with the Smart-Valleys approach. The empowerment of women in rice cultivation, the sustainable agricultural use of inland valleys and the preservation of soil fertility are at the heart of inland valley development:

- "Sustainable agricultural use of inland valleys"
- "Soil fertility and fertilizers"
- "Gender and rice production"



Supervisors and technicians

Training

Ideally, any training must include face-to-face sessions and online courses. Depending on the schedule or the availability of actors, and in particular when the trainers are experienced, online courses may be used predominantly. If possible, it is best if they are used to prepare for classroom training and then serve as a follow-up and refresher afterwards.

The order of lessons is important. The fundamental basics must be taught first. These are about the sustainable agricultural use of inland valleys, the preservation of soil fertility or the approach to gender in rice cultivation. Then come the courses directly concerning the development of inland valleys according to the Smart-Valleys approach:

Preparation courses

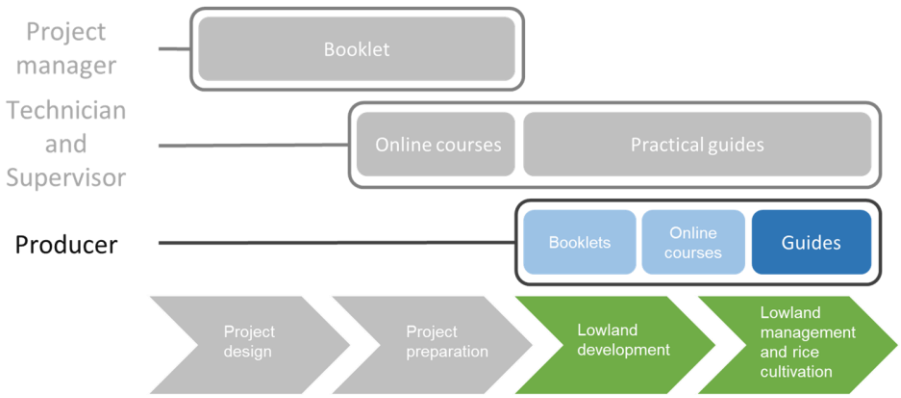
- Sustainable agricultural use of inland valleys
- Soil fertility and fertilizers
- Gender and rice production
- The concept of "service" and how to perform a service
- Collection, entry and verification of data

Inland valley Development courses

- Inland valleys development for rice cultivation: the *Smart-Valleys* approach (basic course)
- Inland valley selection for *Smart-Valleys* development
- Selection criteria for an inland valley for the Smart-Valleys approach
- Site visit & development plan of an inland valley
- Implementation of the development plan on the land
- The building of water verification structures
- Management of the developed inland valley

Guides

When supervisors and technicians are in the field, the practical guides will help them refresh their memories and make sure they are following the important steps. These guides are detailed in the next section, for farmers.



The producers

Some farmers may wish to learn, on a self-learning basis, about improving the productivity and sustainability of their inland valleys. In order to have a complete overview, the following booklets are recommended:

- "Sustainable agricultural use of inland valleys"
- "Soil fertility and fertilizers"

The booklet "sustainable agricultural use of inland valleys" deals with the sustainable agricultural use of inland valleys. It shows how the fauna and flora of the inland valleys can be preserved for the farmers benefit. It also covers weed and pest verification for rice cultivation as well as the benefits of crop diversification.

The booklet "Soil fertility and fertilizers" will show you different methods to maintain the fertility of the inland valleys soil, which allows for a sustainable exploitation of the inland valleys and will enable good yields in the long term.

The following practical guides are designed to help with fieldwork. What should be the height of the plot bunds? How do I know if the leaves of the mango tree should be used for compost or as erosion protection? Or how do I make a map of my inland valley site?

You can find it all explained in a few words in these guides:

- Soil fertility and fertilizers
- Sustainable agricultural use of inland valleys
- Inland valley selection for *Smart-Valleys* development
- Selection criteria for an inland valley
- Site visit & development plan of an inland valley
- Implementation of the development scheme on the land
- The building of water verification structures
- Management of developed inland valleys

For those farmers who can, it is of course recommended that they also take the online courses. Here you can find more information, in particular on the stages of inland valley development:

- Inland valley selection for *Smart-Valleys* development
- Selection criteria for an inland valley
- Site visit & development plan of an inland valley
- Implementation of the development plan on the land
- The building of water verification structures
- Inland valley management