



Practical guide

Introduction and sensitization on *Smart-Valleys* approach

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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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Who and what is this guide for?

This guide provides technicians who are going to introduce the *Smart-Valleys* approach with necessary information to sensitize producers, development agencies and NGOs and enable them to decide whether they want to adopt the approach.

Photos credits

- [1] Photos provided by AfricaRice
- [2] Photos taken by AfricaRice experts

Smart-Valleys approach

Objective

In this section, you will find an introduction to the *Smart-Valleys* approach with its advantages and limitations.

Overview of the approach

Smart-Valleys:

- is based on a participatory, sustainable and low-cost approach
- is relatively simple, compared to traditional approaches characterised by long and expensive studies
- is in accordance with nature, instead of requiring the construction of large and expensive works
- requires full participation of those involved
- involves beneficiary producers at all levels of its implementation
- does not only include development works. It is a holistic approach covering many aspects: from the site selection to rice-growing management through the evaluation of the approach at the end of the year
 - for that reason, it can be modified and adapted to the situation on the field, which can change from year to year
- The land development is carried out by farmers, with the technician's support
 - this facilitates long term management by farmers themselves
 - this decreases the risk of farmers giving up on the inland valley



[1]



[2]

Advantages of the approach

- Increased yield due to good water management
- Good average yield in relation to the investment made (average of 3 to 4 t /ha)
- Low cost - Producers do not need large machinery for the works, it is sufficient to have access to labour, with only the hoe and a few other simple and inexpensive equipment (stakes, rope, paint)
- Easy to learn and apply - it makes the farmer independent
- Easy to maintain and therefore sustainable over time
- Can be done on small and medium areas of inland valleys (0.5 to 10 ha) and gradually: you can start on a small area and expand in following years
- The approach facilitates water management, and therefore can reduce:
 - the quantity of inputs required
 - weed control work



[2]

Limitations of the approach

- It is not suitable for alluvial plains
- It is not suitable for inland valleys cultivated by producers who are not organized
- It is not suitable for inland valleys with very rugged terrain which requires the involvement of a specialist in rural engineering
- It is not suitable for inland valleys with steep slopes

Practical advice for the technician

Objective

In this section, the technician will find practical instructions and recommendations, helping him to organise sensitization sessions on *Smart-Valleys* approach

Organizing sensitization sessions

- Make an appointment in advance with relevant stakeholders
- Prepare the material needed for the meeting (videos and photos on the *Smart-Valleys* approach; print out key information you want to transmit; paper, chalk, markers etc.)
- On the day:
 - show the *Smart-Valleys* video (projector, tablet or laptop)
 - provide participants with key information printed ahead of the meeting
 - organize an exchange session in the form of questions and answers on the *Smart-Valleys* approach so that participants understand it well, enabling them to decide whether they want to embrace and apply it
 - mention the constraints that the farmers will encounter, such as dry patches, floods, erosion etc.

Strategies to ensure farmers can make a good decision

- Talk about some past experience with the approach - give examples of success but also examples that lead to failure
- Compare the production obtained on *Smart-Valleys* sites with those of other inland valleys
 - visualise the sites with the approach and those without the approach on photos or videos
 - organize visits to discuss with farmers on a *Smart-Valleys* site and also on other sites where the approach was not implemented
 - visit these inland valleys with the community, the “resource people” and the farmers
 - discuss the repercussions and the difficulties encountered - try to find solutions to these difficulties with the farmers
 - compare the *Smart-Valleys* site’s production to that of before and to the site(s) not using the *Smart-Valleys* approach
 - invite a farmer who has already applied the approach to talk about his experiences

Helpful answers to frequent producers' concerns

It is Hard work

- the work is hard but it is an advantage that the development work can be carried out without large machines, only with manpower - because a tractor can cause damage in inland valleys
- once the water control structures are built, farmers will only have to maintain them for the following years

The project does not provide financial means or inputs

- financial support is not necessary - only labour is needed to carry out the works
 - however, in some cases, it is necessary to stabilize the structures with rubble stones, at the level of protection bunds and at water inlet - this may require transportation of the rubble from another location and thus transportation costs
- also, without using additional inputs, at the end of the year farmers will have a better rice yield, which will bring them more money - the improved water management is sufficient for this
- with the acquired knowledge, farmers will be able to expand the rice-growing inland valley area in the future, independently of external technicians' support and thus further increase their yield, making the approach an investment for the future
- if a project helps financially, then producers receive this benefit only once. But, with the knowledge that producers will have acquired through the *Smart-Valleys* approach, they will be able to use this advantage each following year
- the approach's success is directly linked to the farmers' motivation - if a project provides funding, it can attract farmers who are not motivated by the success of the project, but only the short-term benefits - therefore it is important to find those who are serious and who thus contribute to the success of the approach



[2]



Scan the QR code with your smartphone to view the video:

"Smart valleys - A simple, participatory and inexpensive approach of inland valley development"

