



# Innovation platforms to support natural resource management

Natural resource problems afflict many African smallholders: they include low soil fertility, low yields, erosion, deforestation, fodder shortages, and lack of water. Individual farmers or communities cannot deal with these problems by themselves, so need outside help. Innovation platforms are a promising way of tackling them because they bring together farmers and other community members with a range of other stakeholders.

## Why innovation platforms for natural resource management?

Natural resources problems in farming communities can be hard to tackle piecemeal. Some examples:

**Scale.** Many of these problems are beyond the control of individual farmers, or even of the community as a whole on its own. While individual farmers may be able to control erosion on their own fields by planting along the contour, for example, there is little they can do to prevent erosion upstream. Such issues require larger scale intervention.

**Complexity.** Natural resource management issues tend to be complex, involving an interplay of bio physical, social and economic factors. An apparently

biophysical problem (gullying) may have its roots in social or economic issues (overgrazing, land tenure). A technical solution (checkdams) may be difficult to implement because of a lack of organization (a social issue) or no credit to buy the inputs needed (an economic issue).

### Definitions

An innovation platform is a space for learning and change. It is a group of individuals (who often represent organizations) with different backgrounds and interests: farmers, traders, food processors, researchers, government officials etc. The members come together to diagnose problems, identify opportunities and find ways to achieve their goals. They may design and implement activities as a platform, or coordinate activities by individual member.

**Conflict.** Many natural resource problems involve groups with divergent interests. Herders and farmers may compete over the rights to use land or water; farmers upstream may inadvertently cause erosion and flooding downstream.

**Cost.** Some interventions are relatively cheap and easy; think of contour farming or grass bunds, for example. Others require significant levels of investment, with lots of labour, inputs, technology and

equipment. Examples include checkdams, terraces, water harvesting and irrigation systems, reforestation schemes and fencing to control grazing. Large-scale community involvement and outside investment are often needed to implement these.

**Information.** Farmers often lack the information and skills they need to conserve natural resources. Even if they realize the link between deforestation and erosion, they may not know what can be done to solve the problem.

**Incentives.** In addition, the people ‘causing’ a problem may have few incentives to solve it. Natural resource interventions tend to have long payoff periods, or benefit someone other than the person who invests. These can be illustrated as follows:

- *Pay today, benefit in the future.* It is obviously in farmers’ long-term interests to solve problems such as overgrazing and erosion. Deteriorating soils, vegetation and water availability are in no-one’s interest. But overcoming these problems may entail major costs and little short-term gain. Building terraces, installing checkdams and planting trees are costly, and may take valuable land out of cultivation. Many such interventions have such a long payback period that individual farmers may not see a (direct) return on their investment. Outside investment is needed.
- *Pay today, someone else benefits.* The benefits of natural resource interventions often accrue to someone else rather than to the communities on whose land the conservation measures are made. A hill village may need to restrict grazing, plant trees or control erosion (all of which involve significant efforts and costs) to stop the community downstream from being flooded or its water supply from drying up.
- *Pay today, watch others get a free ride.* One way to prevent overgrazing is to reduce the size of flocks or to stop them from grazing in certain protected areas. That works only if everyone plays along. If some people flout the rules and continue to herd large flocks on the protected land, the vegetation cannot recover. Those who comply resent this, and are tempted to break the rules themselves.

### Case I. SIMLESA project: Innovation platforms on maize and legumes

SIMLESA is a four year (2010–14), multi-institutional project led by CIMMYT, focusing on maize–legume cropping systems. It covers five countries in eastern and southern Africa (Ethiopia, Kenya, Malawi, Mozambique, and Tanzania). Its objectives include understanding and developing value chains for maize and legumes, and developing and testing new crop varieties and integrated cropping systems to improve production. Innovation platforms are central to the project approach. Platform members include farmers, community leaders, seed companies, stockists, transporters, processors, equipment dealers, microfinance organizations, research and extension institutions, and government.

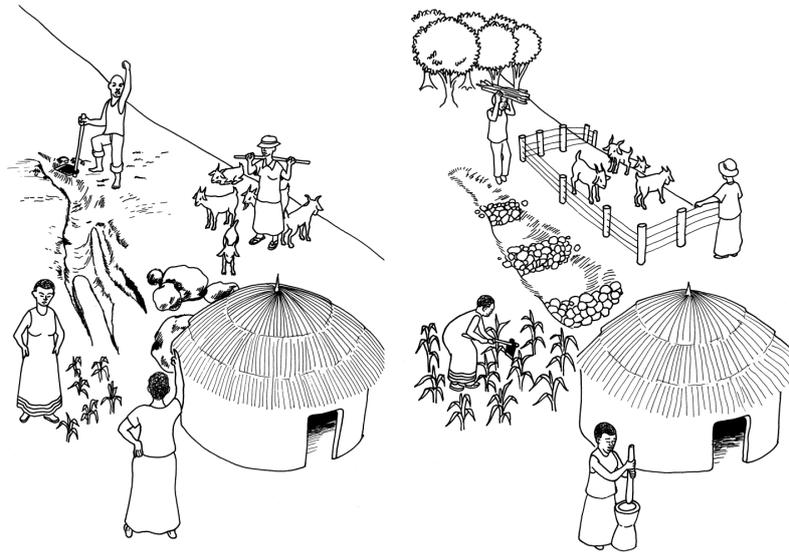
The platforms manage the testing and promotion of promising varieties and practices. Initiatives cover conservation agriculture, seed, equipment, livestock, cover crops and trees. In the short-term and at the farm level, these aim to improve the amount of inputs and knowledge that farmers have, reduce their costs and labour needs, and increase their incomes. That should lead to longer term benefits for the landscape as a whole: better yields, less environmental degradation and communal harmony.

More: <http://simlesa.cimmyt.org>

### Benefits of innovation platforms

There are two traditional ways to deal with natural resource management issues: organize individual farmers and communities, or impose a solution from outside. Both are unsatisfactory: the first fails to bring in outside resources the community needs. The latter fails to consult adequately with local people. Innovation platforms can avoid these problems by bringing local stakeholders together with outsiders. This has various benefits.

**Common vision.** Innovation platforms bring together stakeholders with an interest in the natural resources of a particular area: groups and organizations such as farmers, herders, foresters, research, extension, local authorities, conservation officials, engineers and water-resources managers. By bringing them into a single forum, innovation platforms can make it possible to find common ground and develop a joint vision for improvements. Platform members analyse the problems, identify potential solutions, and put the chosen solutions into effect.



*Innovation platforms catalyse collaboration*

**Coordinating local activities.** The platform makes it possible to coordinate activities across levels. The community representatives gather ideas from their fellow villagers and voice their opinions on the platform. Once agreement on interventions has been reached, they seek commitment from the community and organize the implementation. The other platform members contribute skills and expertise, provide funding and equipment, and press for policy changes.

**Additional expertise.** If necessary, the platform can be expanded to include groups who at first sight are not obviously involved in natural resources, but who may nevertheless have an influence on them: traders, processors, financial services, input suppliers and so on. Membership of the platform can be adjusted as required to include such people.

**Multiple levels.** Natural resource issues often span multiple levels: a particular farming practice (such as ploughing) has effects on the broader landscape or watershed (in the form of erosion) and vice-versa. A landscape-level issue (such as erosion upslope) affects individual farms at the bottom of a hill. The problem has to be tackled at both levels simultaneously. By bringing together actors from these levels, innovation platforms make this possible. The SIM-LESA project (Case 1) is an example of this.

**Different entry points.** Because it has a broad range of members, an innovation platform can identify solutions that lie outside the traditional field of natural resource management. The range of potential entry points is wide. Some examples: improving the marketing of produce may make growing

crops more profitable. This encourages farmers to conserve the soil so they can grow more, and gives them the financial wherewithal to do so. Making microfinance available can give farmers the capital they need to make investments in soil fertility.

**Representing local interests.** Powerful government bodies often ignore local concerns. Innovation platforms can ensure a vehicle for farmers and other local stakeholders to voice their opinions and press for changes in policies (Case 2).

### Case 2. Sidiky Coulibaly's flooded field

Sidiky Coulibaly watched the water rise slowly but surely in his field. His rice crop was drowning in water overflowing from the neighbouring irrigation canal. The canal was blocked by silt, but the irrigation authority refused to clear it. It was the villagers' responsibility.

The village chief asked an innovation platform that was operating in the village to intervene. This platform was one of several run by the Convergence of Sciences–Strengthening of Innovation Systems program in Mali. It included farmers' representatives as well as staff of the irrigation authority. It discovered that the rules were indeed unclear—but that the local irrigation bureau did not even have a copy of the agreement governing maintenance of the irrigation scheme.

Getting a response from the irrigation authority would take too long, so the platform helped the villagers organize a gang of workers to clear the blockage. Meanwhile, the platform is working with the irrigation authority to revise the rules and to make them accessible in the local language.

More: Nederlof and Pyburn (2012).

**Scaling up and out.** Innovation platforms in different locations can generate, test and implement local solutions to local problems. Linking them together enables them to share ideas and learn from one another. Mechanisms include field days, cross-visits, video, posters and training sessions. Linking local level platforms with a national level platform can make it possible for innovations developed in one place to influence policies and recommendations, so have a nationwide impact (Brief 9).

## Innovation platform challenges

Innovation platforms are not a panacea for natural resource management issues.

- They require competent but neutral facilitation, which is usually difficult to guarantee (Brief 10).
- Resources are often sourced from outside, which keeps the balance of power against local people.

- A strong, self-organizing local entity is vital to sustain gains from innovation platforms, but such organizations are rare.
- There are often no clear incentives for farmers to be involved. This contrasts with innovation platforms on value chains (Brief 6), which have clear financial incentives.
- Natural resource issues often entail big power differences among the actors. More powerful actors may use platforms to coerce farmers to adopt a particular set of practices (Brief 4).

## References

Agricultural innovation systems: What do they mean to the work we do? <http://blog.cimmyt.org/?p=10302>

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*Innovation platforms are widely used in agricultural research to connect different stakeholders to achieve common goals. This is one of a series of briefs to help guide the design and implementation of innovation platforms. A contribution to the CGIAR Humid-tropics research program, the development of the briefs was led by the International Livestock Research Institute; the briefs draw on experiences of the CGIAR Challenge Program on Water and Food, several CGIAR centres and partner organizations.*

## Credits

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## Other briefs in this series

- 1 What are innovation platforms?
- 2 Innovation platforms to shape national policy
- 3 Research and innovation platforms
- 4 Power dynamics and representation in innovation platforms
- 5 Monitoring innovation platforms
- 6 Innovation platforms for agricultural value chain development
- 7 Communication in innovation platforms
- 8 Developing innovation capacity through innovation platforms
- 9 Linking action at different levels through innovation platforms
- 10 Facilitating innovation platforms
- 11 Innovation platforms to support natural resource management
- 12 Impact of innovation platforms



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