

MODULE 12

LOCAL INSTITUTIONS

Overview

Improving smallholder agricultural systems is central to achieving climate-smart agriculture (CSA). This module focuses on local-level institutions and their role in facilitating the adoption of climate-smart agricultural strategies. The module demonstrates the importance of local institutions for CSA projects (Section 12.1); outlines priorities, needs, similarities and differences between key institutions (Section 12.2); and discusses considerations to bear in mind when building inter-institutional synergies for CSA initiatives (Section 12.3). Finally, it offers basic, practical guidelines to help practitioners and policy-makers build institutional support for CSA (Section 12.4).

Key messages

- To enable smallholders to make the transition to CSA, strong institutional support is required to improve the dissemination of information, provide financial support and access to markets, and coordinate the work of a large number of farmers over a wide area.
- The needs, priorities and drivers of individual institutions must be understood and managed suitably to successfully establish the needed CSA collaborations.
- Institutional synergies and networks for knowledge exchange are key to establishing, maintaining and scaling up CSA initiatives.

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12.1 Introduction

Definition

Many people equate the term 'institutions' with 'organizations'. In reality, institutions signify something broader than organizations. They essentially define the 'rules of the game'; the way things are and can be done, as defined by accepted norms, roles and values. Institutions include both formal organizations and contracts as well as informal social and cultural norms and conventions that operate within and between organizations (North, 1990; Ostrom, 2005). Section 12.2 describes different types of institutions and provides some examples.

Why is paying attention to institutions so crucial to CSA?

CSA requires changes in farming households' behaviour and strategies, as well as changes in the usual timing of agricultural practices. Without appropriate institutional structures in place, the innovations required to implement CSA may seem overwhelming to smallholder farmers. Successfully managing change demands accurate and up-to-date information, a degree of financial capacity and, if the changes are to be far-reaching, the ability to cooperate with others on a broad scale (see Box 12.1 for details for a successful CSA initiative). Some of the changes CSA requires include:

Adapting management approaches

As populations expand, competition for natural resources will increase. In addition, environmental and climatic factors threaten to degrade these resources. For this reason, CSA centres on finding new methods for managing soil, water and land. Water tables are dropping considerably in many places (e.g. in parts of India). Water harvesting and water storage techniques need to be able to deal with the likelihood of increasing rainfall variability. Land degradation and declining soil fertility are widespread problems. The uptake of new strategies and approaches are required to improve soil quality (structure, fertility, water regulation) and restore degraded lands.

Climate-smart crop varieties

As climate change alters rainfall patterns, one CSA approach for adapting to new conditions is to switch crops (e.g. planting sorghum instead of maize if rainfall decreases or vice versa if it increases). The move to new crops may involve planting varieties that have a shorter growing cycle, can better tolerate saline soils and extreme weather events (e.g. droughts and floods), and have greater resistance to pest and diseases.

Changing farming schedules

Climate change is forcing farmers to change the schedule of their customary farming activities. In East Africa, for example, many farmers have already begun to plant earlier than they have traditionally done because of shifting rainfall patterns (Kristjanson *et al.*, 2012)

Mitigating while adapting to climate change

As the need to mitigate carbon emissions grows, planting trees on farms and improving the management of livestock and rangelands will also be crucial CSA activities (FAO, 2010). Farmers usually adopt these actions primarily because they help enhance and diversify incomes, not because they lower emissions. Climate change mitigation is an added benefit.

Box 12.1**The Sustainable Agriculture in a Changing Climate (SACC) project**

The Sustainable Agriculture in a Changing Climate project (SACC), a partnership between CARE, the World Agroforestry Centre (ICRAF) and the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) with funding from the Rockefeller Foundation, began in September 2010. The project was originally intended to deliver payments to smallholder farmers from carbon markets for carbon stored through the adoption of agroforestry practices in the Nyando River Basin in Western Kenya, a mixed crop-livestock farming area with high levels of poverty and significant environmental degradation.

Alongside planting the trees that would generate carbon payments in the long run, the project also introduced interventions designed to provide immediate short-term income and food benefits, as a way of overcoming resource constraints and maximizing the participation of resource-poor women. These shorter-term interventions included: the introduction of early-maturing, drought-resistant and higher-value crops; an emphasis on sustainable agricultural practices; and the formation of linkages with a complementary project on Village Savings and Loans Associations (VSLAs, community-based informal financial groups). Based on lessons learned in the first phase, SACC is transitioning into a 'climate-smart smallholder agriculture' approach, with an emphasis on research and actions aimed at improved agricultural productivity and farm-level adaptation. The income and livelihood benefits from enhanced knowledge and access to tree seedlings, improved seeds and land management techniques are proving to provide the key incentives for entering the scheme, rather than carbon sales (Thorlakson and Neufeldt, 2012).

The project relies on institutions which support people in changing their behaviour. These include small savings and loans groups that help change peoples' attitudes about money and encourage them to start saving, often for the first time ever. Village management committees that mobilize farmers, coordinate resource persons, monitor activities and manage benefit sharing through innovative new means (such as payments via cell phone) are also important. New institutions providing access to markets and inputs are emerging. A professional independent company is being formed to manage the programme in the long-run. The success of the new CSA project is highly dependent on an effective, efficient and equitable governance structure, which will be essential for delivering the product (carbon) to the client (offset markets).

Source: CCAFS and CGIAR, 2012a

How can institutions support CSA?

Institutions can support smallholder farmers in three vital areas:

1. Producing and sharing technical knowledge

For relatively resource-poor smallholder farmers, putting CSA into practice requires knowledge and support. Farmers, herders and fishing communities need easier and more affordable access to the information that underpins innovative CSA practices. Institutions that produce and share information and help people translate this information into knowledge and action are essential. These institutions include: farmer field schools (or similar approaches that train and enable farmers to adopt new techniques); farm radio shows that provide easily accessible, useful and useable (i.e. needs-driven) agricultural and weather-related information to rural households; local agricultural demonstration plots and events; and farmer-to-farmer exchanges.

2. Providing financial services, credit and access to markets

The benefits gained by adopting sustainable land management techniques usually take time to materialize. In the meantime, the farmers must bear the costs in terms of labour, land and cash (McCarthy *et al.*, 2011). As a result, poor farmers lacking access to credit and markets are unable to adopt these techniques. This is why strengthening institutions to support agricultural markets, financing mechanisms and insurance schemes are critical for the CSA's success. These institutions include organizations and institutional arrangements providing credit, insurance, social safety nets, and payments or rewards for environmental services. Module 14 addresses in detail the financial instruments and investments that enable CSA.

3. Supporting the coordination of collaborative action

Collective action is critical for managing communal forests and pastures and lowering transactions costs.

Many CSA activities are only feasible and affordable if people work together (e.g. improved water or range-land management). Institutional arrangements that make groups function efficiently and effectively are essential. On a larger scale, institutional arrangements are also needed to facilitate coordination across organizations and sectors (e.g. through networks and knowledge-sharing platforms).

To illustrate these areas, Box 12.2 outlines a range of actions that local organizations and institutions can pursue to support CSA.

Box 12.2 Sample CSA actions for local institutions

When establishing CSA, local organizations and institutions can play positive roles in:

1. Producing and sharing technical knowledge

- Identify the main vulnerabilities in local agricultural and food systems, and the most vulnerable households.
- Consider and select the most locally appropriate innovations (both institutional and technical) from the range of potential climate-smart practices.
- Relay rapidly throughout the community new information on weather, climate and options for agriculture.
- Improve the quality and relevance of research on CSA through local participation.

2. Providing financial services (including credit) and access to markets

- Channel micro-finance effectively, to kick-start new practices, technologies and behaviours among farmers.
- Provide credit, insurance, social safety nets, and payments or rewards for environmental services.
- Stimulate local markets, build links with national and international markets, and improve market literacy among smallholder farmers.

3. Supporting the coordination of collaborative action

- Encourage new cultural norms for practice in agriculture, food distribution and household food management.
- Shift the focus of agricultural extension from delivering technology to working in partnership with local farmers to develop solutions.
- Underpin the sustainability of CSA through locally workable mechanisms for benefit sharing, dispute settlements and other governance issues.
- Protect local interests from potentially discriminatory external pressures associated with climate change policy, such as 'land grabbing'.
- Include particularly vulnerable social groups, such as women, youth or immigrants, in the benefits of climate-smart agriculture;
- Ensure that disaster relief in response to climate shocks reaches the right people quickly and effectively.
- Co-deliver wider services in support of CSA (e.g. health and sanitation services, education and knowledge exchange).
- Provide mechanisms for governments and other agencies to be more accountable to local people in their climate policies and investments.

Table 12.1
Examples of institutions and activities that support CSA

Institutions and activities for producing and sharing knowledge, strengthening capacities and enhancing communication	Institutions and activities for supporting markets, financing and insurance needs	Institutions and activities for improving coordination and collective action
Agricultural business hubs	Weather index-based insurance (crop and/or livestock) and outgrower schemes	Water user groups; forest management groups; etc.
Capacity strengthening for demand-driven and gender-sensitive agricultural advisory services (including climate services)	Investments that support agricultural marketing and the food system, including roads and market infrastructure	Brokering links between producer organizations, research services and higher education
Use of information and communication technologies (ICTs), such as cell phones and the internet to improve agricultural information access (e.g. market prices, transportation options, weather information)	Productive social safety nets (e.g. cash transfers, food distribution, seed and tool distribution, conditional cash transfers, food for work)	Strengthening capacity of agricultural research systems for linking with other actors (e.g. through stakeholder platforms, alliances and consortia, technology transfer and commercialization)
Investment in agricultural education and training institutions and curricula reform, including at primary and secondary levels	Payments for environmental services, smallholder agricultural carbon projects	Community-based actions to restore degraded lands, improve management of water, communal lands
Innovative governance arrangements and new regulations regarding quality and safety of food, intellectual property and biosafety	Investments in market value chains (e.g. carbon labels on food from smallholders)	Local seed and genetic diversity fairs, farmer-based labelling schemes
	Strengthening of informal agricultural markets (e.g. certification and training of traders)	Strengthening capacity of farmers' organizations to collaborate

12.2 Key institutions for CSA initiatives

Studies show that agricultural research is more likely to bring about changes in agricultural practices, technologies or policies when dialogue and cooperation is fostered among all the stakeholders who possess, produce, or use different kinds of knowledge. The most effective initiatives allow researchers, community members, private sector actors and policy-makers to jointly define the problems they aim to solve (Kristjanson *et al.*, 2009).

Services

As climate changes so does the role of agricultural advisory and extension services. Demand for new climate services is increasing. Farmers need wide-ranging advice on how to adapt their farming practices and their entire livelihoods, to take advantage of viable, profitable options with manageable levels of risk. Two types of advice are needed: firstly, information about available options (e.g. technology and market) to help adapt farming and livelihood systems; and secondly, information about the climate itself, in the form of weather forecasts, seasonal forecasts and longer-term climate trends (see Box 12.4).

Different players in the agricultural sector need completely different types of climate advice. Improved extension services should not provide 'one-size-fits-all' solutions or static advice (e.g. generic seed and fertilizer packages). They should mediate between different possibilities and market actors. Preference should be given to early warning and early action initiatives that distribute appropriate seeds based on seasonal predictions instead of to initiatives that try to control the damage caused by droughts or flooding. Institutions providing extension services should also consider building their own knowledge of weather index-based crop and livestock insurance schemes.

Today, the provision of agricultural research and extension services is spread across diverse public sector, civil society and private sector institutions. The similarities and differences in such a 'menu' of institutional options (Birner *et al.*, 2009) are explored below.

Box 12.3

Sharing improved seasonal weather forecasting with farmers in West Africa

Seasonal climate forecasts can considerably improve agricultural management and livelihoods for smallholder farmers (Hansen *et al.*, 2011). Nevertheless, constraints related to the legitimacy, salience, availability, and understanding of these forecasts, as well as gaps in data and the limited capacity of farmers to respond appropriately, have so far limited the widespread use of seasonal predictions in the Sahel region. Moreover, better weather forecasts alone will not spur widespread uptake of climate-smart agricultural practices. Strengthened agricultural advisory and input supply services are required, as are improved marketing strategies, enhanced safety net policies to ensure food security, and similar provisions.

There is however potential for making improved weather information accessible to African farmers. For instance, regional climate outlook forums and national meteorological services have been working together to provide useful weather forecast information to rural farmers in both Mali and Senegal. Together with researchers and other stakeholders, farmers are being trained in the use of probabilistic seasonal forecasts. The changes they make as a result of this knowledge is being evaluated, as are the impacts these changes make to the farmers' livelihoods.

Source: CCAFS and CGIAR, 2013a

Public sector institutions

Crucial governmental actions that support CSA include:

- the amendment and enforcement of related agricultural policies;
- the distribution of incentivizing agricultural subsidies;
- the provision of pertinent research and extension services;
- the improvement of relevant infrastructure (e.g. building roads); and
- the collection of national census data useful to CSA initiatives.

(Reid *et al.*, 2010; Swanson and Rajalahti, 2010)

The institutional structures through which such assistance is delivered stretch from national ministries (primarily Ministries of Agriculture, although ministries with related purviews, such as Fisheries or Land, also play a role) to regional, subregional and local offices. Top-down in structure, the public sector is less likely to make use of bottom-up tools to formulate the needs of specific farmer groups. Civil society institutions are generally well-placed to foster bottom-up engagement.

Public spending on agricultural extension services is justified when the effects of the extension services bring benefits to more than the recipients of the trainings. In the case of CSA, such wide-reaching benefits are easily confirmed. Aside from contributing to the universal 'public good' of environmental sustainability, CSA increases food security because it improves adaptive capacity and resilience. Improved food security leads to poverty reduction and improved health, which in turn fuels economic development, which can ultimately bring about greater political stability (Anderson and Feder, 2003).

However, the peak of public investment in agricultural extension has now passed. The twentieth century saw notable improvements in food security thanks to a heavy government emphasis on the transfer of new agricultural technologies to farmers. Following this success, public spending has decreased substantially. While there has been a corresponding rise of private investment, the long-term effects of decreased public involvement are significant. The prevalent extension systems tend to favour shorter-term, more localized, project-based approaches.

Given that CSA demands context-specific solutions, this tendency towards localized projects is appropriate. However, there is a need to ensure wider coherence and long-term continuity across projects. National Adapta-

tion Programmes of Actions (NAPAs), National Adaptation Plans (NAPs) and Nationally Appropriate Mitigation Actions (NAMAs), are intended to provide national frameworks to guide government actions on adaptation and mitigation under a future international climate agreement. These voluntary proposals to the United Nations Framework Convention on Climate Change (UNFCCC) are still under development, so their precise roles are still emerging. The fact that 60 percent of the countries who have submitted NAMAs mention agriculture as a way to reduce GHG emissions (FAO, 2011) suggests these proposals are pertinent mechanisms for institutionalizing governmental commitment to CSA projects at the policy level (see Module 13 on policies and programs). They should continue to be supported.

Civil society

FAO defines 'civil society' as 'the sphere in which citizens and social movements organize themselves around objectives, constituencies and thematic interests' (FAO, 1999). 'Civil society organizations' include non-governmental organizations (NGOs, 'not-for-profit actors who are not governmental or intergovernmental' (*ibid.*)). They also include trade unions, professional associations, research and educational faculties, private foundations, religious organizations, issue groups, the media and similar organizations reflecting civic interests, values and concerns. Such institutions, acting independently of the state:

- voice their members' interests and demands;
 - defend their members' rights; and
 - take action to meet their members' wishes and needs.
- (Uphoff and Krishna, 2004)

Civil society has considerable potential to exercise influence by using its collective political voice to express local climate concerns to higher authorities and demand the provision of specific measures or services (see Box 12.4). To best realize this potential, it is crucial to understand the interrelationships between civil society organizations, the government and the private sector. Though nominally defined as separate from state control, the effective autonomy of civil society institutions varies depending on a number of factors; (e.g. educational institutions are often wholly or partially funded by the state, blurring the distinction between the public sector and civil society). Similarly, the freedom of expression of the media or religious groups may be state-controlled. A thorough 'stock-taking' or 'mapping' of the institutions and their interdependencies in a given situation is advisable when identifying entry points for CSA initiatives, opportunities for collaboration and potential tensions (Section 12.4 provides some guidelines on how such 'mapping' can be approached).

Box 12.4

Civil society policy advocacy: Fisherfolk get organized in the Caribbean

Climate change poses a considerable threat to fish-based diets and the livelihoods of fisherfolk in the Caribbean. It is expected to decrease the types and prevalence of marine species, and tropical cyclones of increasing intensity are likely to damage fishing boats and infrastructure, resulting in fewer productive days at sea. However, fisherfolk in the Caribbean have a long history of raising their voices collectively in times of crisis. Building on experiences at national level, the Caribbean Network of Fisherfolk Organisations (CNFO) was formed in 2004 to empower fisherfolk in the region to jointly advocate for government action on climate change.

Beyond aiming to secure national and regional fisheries policies which address the current and anticipated effects of climate change, CNFO seeks to stimulate adaptation planning processes across marine-related sectors. Besides facilitating capacity building and peer-to-peer support among its constituency, the network's successes to date include having gained observer status on the Caribbean Regional Fisheries Mechanism, undertaking activities in partnership with the fisheries management agencies in many of its member countries and its ongoing contribution to the drafting of a regional Common Fisheries Policy for the region. These accomplishments indicate a promising shift towards the institutionalization of more equitable, inclusive and stakeholder-driven working processes in the region.

Source: Lay *et al.*, 2013

To provide some background, short summaries of the possible services key civil society institutions can offer are provided below.

Non-governmental organizations

NGOs are typically strong in providing social services, especially when supporting poor communities (Swanson and Rajalahti, 2010). For example, building social capital by organizing farmer groups to articulate their own needs and formulate solutions collaboratively, brings immediate positive effects at the local level. NGOs can also be valuable partners for implementing projects, conducting research and carrying out outreach activities.

Universities and research institutions

Universities and research institutions are good providers of pre-training and in-service training for extension workers. As faculty members often conduct agricultural research of their own, they are obvious focal points for field staff in need of technical and management backstopping (Swanson and Rajalahti, 2010).

Private foundations

Private foundations rarely aim to organize popular movements. However the funding they offer and the expertise they provide in specific activities are usually not influenced by the public sector and for this reason they often have scope for greater innovation (Uphoff and Krishna, 2004).

The media

Mass media can reach large audiences with messages about CSA. Broadcast and electronic media include radio, television, film and the internet; print media includes newspapers, journals, publications; outdoor media includes posters, billboards and other materials placed in public view. An important channel for disseminating informative and educational contents, media can both reflect public opinion and shape it. In recent years, more and more people, even in rural areas have gained access to media hardware such as radios, televisions, computers and smart phones. Innovative technologies, such as solar-powered electronic devices, are also becoming increasingly important in mobilizing the media for development purposes.

Religious institutions and communities

The term 'institutions' does not merely refer to types of organizations; it also encompasses cultural and social norms and conventions. An awareness of public opinions and values is therefore important when formulating a CSA strategy. While religious institutions or issue groups are unlikely to provide CSA-related advisory services, they can offer indispensable insights into prevailing beliefs and values. They can be mobilized as powerful tools for advocacy and endorsement.

Box 12.5

The African Farm Radio Research Initiative

Farm Radio International is a Canadian registered charity that combines radio with other ICTs to serve smallholder farmers across Africa. It transmits information on low-cost methods to improve food security to 360 radio stations across 39 countries. A recent study assessed the knowledge, attitudes and practices of farmers living in 90 communities across 5 countries (Ghana, Malawi, Mali, Uganda and the United Republic of Tanzania). The study looked at specific agricultural improvements that had been featured on participatory radio campaigns (PRCs) in their area. It found that when agricultural producers were actively involved in these radio campaigns, more farmers tested and adopted new practices than when more traditional top-down, externally driven radio campaigns were carried out. One in five farmers who listened to the PRCs adopted the agricultural innovation – an adoption rate five times higher than for farmers not exposed to the radio programme. The cost of a PRC amounts to pennies per farmer reached, making it a cost-effective information dissemination strategy.

Source: Farm Radio International, 2011

Private sector institutions

As markets become increasingly important in developing economies, private sector actors also become significant providers of research and development, education and extension services.

When seeking private sector support for CSA initiatives, it is important to bear in mind that the private sector's main priorities are profit and public perception. CSA works to establish a 'triple win' scenario in which innovative practices produce higher yields, build resilience to climate change (reducing long-term risks) and lower carbon emissions all along the supply chain. By contributing to CSA, private businesses can enhance their brand recognition among key suppliers and consumers. Key private sector actors and the possible support they might provide to CSA initiatives include:

Individual farmers

Household farms and smallholder farmers are of course private sector actors themselves. As it takes too much time and too many resources to reach each individual farmer, approaching producer cooperatives is a good strategy to build a broad base of support for climate-smart practices in the farming community. The effectiveness of word-of-mouth communication among farmers should not be underestimated. Enlisting and maintaining the support of individual farmer 'focal points' or 'local champions' is advisable.

Producer cooperatives

Producers' cooperatives and unions are intended to reflect producers' interests. Along with providing or coordinating demand-driven extension to their members, farmer cooperatives and unions also represent stakeholder interests on a political level. However, such organizations are open to manipulation by governments and elites. Limited in capacity, most cooperatives have little influence on public policy decisions by their members. Nevertheless, close collaboration with producers' cooperatives or unions has high potential payoffs, as their legitimacy and influential capacity reaches wide networks of farmers (see Box 12.6).

Box 12.6

Adapting to climate change by growing medicinal plants: the Jammu & Kashmir MAP Growers' Cooperative

In the Baramulla, Bandipora and Pulwama districts of Kashmir, India, smallholder farmers who traditionally cultivate maize are facing increasingly unpredictable rains, snowfall, temperatures and humidity. With debt from repeated crop failures on the rise, and average annual incomes barely totalling 110 USD per hectare, many have been forced to sell their land to developers and abandon farming.

The Jammu & Kashmir Medicinal and Aromatic Plants Growers' Cooperative, formed in 2009, has demonstrated the viability and profitability of growing lavender, which can be grown on what is locally called 'kandi' (semi-barren, rainfed farmland). Lavender can yield USD 4 000 in yearly profit, has a 20-year lifespan and demands minimal input. It is highly resilient, almost pest-free and unappealing to grazing cattle. Furthermore, legal cultivation of medicinal and aromatic plants in India is a crucial step towards preserving natural biodiversity. Over 90 percent of medicinal and aromatic plants currently traded are sourced from the wild, and two-thirds of these are harvested by destructive methods.

The Cooperative has grown from 30 to 300 farmers since 2009. With government support, the Cooperative delivers planting materials and provides training. As members, small holder farmers are able to market and even export their products through the Cooperative and demand fair prices. Since 2009, collective harvests have been steadily rising.

In 2009, the Cooperative set up a half million dollar, aromatic oil distillation plant with a grant from the federal government. The unit now gets enough flowers to operate through the May-December season. Marketing linkages have been established within India and in Britain, and the Cooperative is now marketing essential oils of lavender, rose and geranium under the brand name 'Pure Aroma'.

The switch to low-risk, high-value aromatic and medicinal crops that thrive in the soil and unpredictable climate of the Kashmir region has given farmers new market opportunities and provided a more reliable source of income.

Source: UNFCCC, 2013a

National and international agribusinesses

Agribusinesses with supply chains in developing countries are increasingly exploring the potential of buying climate-smart produce or engaging in climate-smart agricultural practices. They are well placed to promote market literacy among smallholder farmers. An advantage of corporate advisory services is that these are often highly specialized, focusing on the specific products being produced in the precise context of their production. The advisory personnel work exclusively with the contract farmers (Swanson and Rajalahti, 2010). Though strongly localized, this focused and in-depth attention cannot often be matched by public sector or civil society efforts, which usually have broader mandates.

Commercial consultancies

Governments or farmer organizations are increasingly choosing to contract commercial consulting firms to provide extension services. This is gaining popularity as private sector service is generally identified with greater efficiency, as the business ethos of providing value for money tends to lead to results-oriented delivery (Anderson and Feder, 2003).

Banks, credit and savings institutions

Implementing CSA requires a certain amount of capital to manage the transition to the new climate-smart practices. Liaising with credit-giving institutions to provide appropriate means (e.g. microfinance loans) to smallholder farmers can enable a wider uptake of CSA practices (see Box 12.7. and module 14 on financial instruments and investments). Reaching out to inform smallholder farmers about the available funding and insurance options is essential.

Purchasers of carbon credits

Private sector actors (e.g. multinational businesses) seeking to offset their carbon footprints by purchasing emissions reductions on the carbon markets represent a viable source of financing for agricultural climate change mitigation projects, including those that promote agroforestry.

Box 12.7

Micro-insurance reduces exposure to weather risk in Andhra Pradesh, India

The changing climate threatens agricultural productivity in Asia. Higher temperatures and increased drought and flooding, which degrade the soil, can result in large-scale crop failure and decreased productivity over the long term. For most Indian farmers, traditional crop insurance has not been a viable option for managing such weather risks. Insurance providers faced high costs of measuring crop damage for large numbers of smallholder farmers, and as a result, coverage premiums were too expensive for small-scale rural producers.

In 2003, however, a partnership between ICICI Lombard General Insurance and BASIX, a Hyderabad-based microfinance institution, with technical support from the World Bank, piloted the sale of rainfall index insurance contracts to smallholder farmers in Andhra Pradesh. This project represents the first farmer-level weather index-based insurance in the developing world.

Contrary to traditional weather insurance, index-based insurance uses the strong correlation between crop yields and rainfall to trigger insurance payments to policy holders when rainfall falls below a certain level. Indicators can vary according to the local climatic conditions relevant to the policy holder. The scheme does not require insurance companies to assess crop damages for individual farmers, and this greatly cuts transaction costs and allows for more affordable policies.

The scheme began on a small scale with 230 participants and focused only on crop-specific risks. By 2005, the scheme was considering the risk exposure to climate variations of an entire district. During the 2005 monsoon, BASIX sold over 7 600 policies to almost 7 000 customers across six states. Complementary partnerships with local organizations and effective and transparent communications with farmers were crucial to the scheme's success. Innovative features like doorstep delivery and quick payouts when index triggers are reached helped build trust and confidence. The partnership's communication strategy enabled farmers to understand insurance as a product. The strategy also channelled customer feedback to ICICI, which adapted its product designs to suit different local conditions and needs.

Source: UNFCCC, 2013b

Stakeholders

The local stakeholders (e.g. farmers and employees of local agriculture-related organizations) who are the main recipients of the extension training discussed in Section 12.1 are often linked to each other by institutional arrangements. These may be formal, such as cooperatives and farmer's unions and organizations¹ or informal.

Producer cooperatives and farmers' unions and organizations

Farmer's unions, cooperatives and organizations are the most visible stakeholder institutions representing and supporting local interests at the regional and national levels.

Along with voicing farmers' interests on a political level, farmers' organizations also commonly provide or coordinate demand-driven extension services to their members. Their legitimacy as lobbyists for bottom-up action makes them important partners for promoting the adoption of CSA-related practices. In bringing about the transformation to CSA, unions and cooperatives are well-placed to take on key responsibilities, including:

- actively leading their members to embrace CSA principles and practices;
- becoming stronger information and service providers, serving as 'CSA knowledge platforms';
- catalyzing carbon fund mobilization and channelling payments for ecosystem services to smallholder farmers;
- serving as policy lobbying and advocacy groups to influence national CSA-related policies; and
- taking a role as value chain actors in promoting carbon footprint labelling in partnership with private companies.

Partnerships between farmers' unions and decentralized training institutes need to be strengthened to empower national farmers' federations to act as direct, CSA-specific service providers to farmers. Section 12.3 '*Building synergies*' discusses the support platforms or networks for CSA offered by individual institutions.

Box 12.8

Uganda National Farmers Federation: climate adaptive approaches to food security workshops

The Uganda National Farmers Federation (UNFFE) was established in 1992 as the Uganda National Farmers Association. Today, over 200 000 individual farmers and more than 70 organizations are members, paying a small annual fee in return for representation and support. This support comes in a variety of forms: policy advocacy, agricultural trade fairs, market and climate information or extension services and materials (e.g. the UNFFE's quarterly publication 'The Farmer's Voice', radio and cassette training sessions, farmer workshops and study tours).

The increasing hardships brought about by climate change, such as late rainfalls or droughts, that agricultural producers are facing have not gone unnoticed by the UNFFE. To meet the challenge, UNFFE organized, in collaboration with the Dutch Farmer's Organization Noord and the pan-African agricultural company Agriterro, a national workshop and two regional workshops on 'Climate Adaptive Approaches to Food Security' in 2012. The objectives of the workshops were to:

- clarify the link between agricultural development and climate change;
- analyse the potential impacts of climate variability and climate change on the livelihoods of farmers in the pilot-districts Nakasongola and Sironko;
- identify appropriate adaptation measures taking into account the differences between short, middle and long-term approaches; and
- optimize communication to members and farmers, by replicating best practices through demonstration farms and extension services and linking farmers through District Farmers Organizations networks and the UNFFE national network.

Following discussions of how climate change has been manifesting itself and affecting livelihoods in Uganda, priority solutions were formulated. These include differentiated directives for government, UNFFE and farm-level actions. They would also be tested in pilot projects in Nakasongola and Sironko. Once the pilot process has been completed, the UNFFE intends to mainstream the lessons learned on CSA into its wider support systems.

Source: UNFFE, 2012

¹ Private sector actors may be considered local stakeholders as well. However, as corporate willingness to train its producers and staff to maximize results has already been addressed in the previous section, it will not be repeated in this one.

Informal, social and cultural institutions

As mentioned earlier, institutions are not only formal organizations. Informal arrangements, common practices, habits and spoken or unspoken agreements all constitute 'institutions'. They also shape how things are done in a community and influence if and how new practices are adopted. The term 'culture', signifying 'the distinctive ideas, customs, social behaviour, products, or way of life of a particular nation, society, people, or period' (Oxford English Dictionary) is often used to broadly describe these informal institutions.

Initiatives, such as CSA, which demand changes in practices and habits, often have cultural implications (see Box 12.14) that create barriers to adoption. Implementing change is most successful if the informal, social and cultural arrangements in place are understood, and activities and actions are channelled through the appropriate institutions, including faith groups, women's groups, ethnic communities or traditional leadership hierarchies. These institutions can be powerful allies for development projects at the community level and can bring local knowledge, social legitimacy and established networks to CSA programmes. As many rural people prefer to undertake collective, rather than individual actions, the importance of local, typically small, groups for CSA activities should not be underestimated. These collective actions may include tree planting, tree nurseries, water storage and management (e.g. irrigation), and soil improvement (e.g. terracing) (Meinzen-Dick *et al.*, 2010; Place *et al.*, 2004).

Box 12.9 Informal seed systems

A key example of an informal institutional arrangement is 'informal seed systems', which includes all non-certified seed sources (primarily farmers' own seed, saved from previous crops, but also seed obtained in exchanges through social networks or at rural markets). Most farmers in developing countries access the seeds they plant through the informal seed system. Seeds are cheap and easy to access in this way, which makes the informal seed system popular.

In traditional systems of seed exchange, the social principles of trust and reciprocity usually serve as an assurance of quality. In general, these networks are confined to a very local level, with little interchange with outside sources. This limited opportunity for exchange and a lack of scientific information about the quality and genetic content of the varieties being exchanged make it difficult for farmers to select appropriate seeds. Climate change is likely to affect the geographic suitability of crop varieties. For this reason local markets should be used to communicate and collect relevant information about changing conditions and feed climate-resilient varieties into the informal system, where seed exchange continues beyond the market between families and neighbours. Further initiatives to help spread CSA through informal networks include local seed and genetic diversity fairs, alternative labelling systems (e.g. quality declared seed or farmer-based labelling schemes) and training of traders.

Source: Lipper and Oosterveer, 2011

12.3 Building synergies

To facilitate interaction and communication between many individual institutional actors (e.g. agricultural producers, traders, community and agricultural producer groups, government agencies, and private food sector actors), a conducive environment needs to be created. Actors need a place where they can articulate demands, share lessons and promising solutions, and create the 'pull' that elicits innovation (Clark *et al.*, 2011). This 'institutional interplay' should not only be 'horizontal', taking place on the same organizational level, but also integrate institutions 'vertically', incorporating perspectives across traditional levels and hierarchies (Young, 2002; Lebel, 2005). The scale (national, regional, district, or village) of such efforts depends on the problem being addressed, its coordination requirements, and the structures of the value chains involved.

This section considers key requirements for setting up such 'safe spaces' or platforms for institutional learning and innovation. These include capable partnership brokers as well as careful consideration of equity issues and cultural institutions. On this basis, networks and CSA platforms are emerging as a kind of 'umbrella'

institution, enabling a lively interaction among communities working on climate-smart agricultural activities all over the world. Box 12.10 illustrates an example of synergy at the international level in the coffee and tea industry.

Box 12.10

AdapCC: a climate-smart partnership for coffee and tea production

The 'Adaptation for Smallholders to Climate Change' (AdapCC) initiative supports coffee and tea farmers in developing strategies to cope with the risks and impacts of climate change. The initiative is a public-private partnership by the leading British Fairtrade company for hot beverages, Cafédirect, and the German Agency for International Cooperation (GIZ). Financing of the project is shared by Cafédirect (52 percent) and the German Federal Ministry for Economic Cooperation and Development (BMZ) Public-Private Partnership programme (48 percent).

Six pilot projects in Latin America (Mexico, Nicaragua and Peru) and in East Africa (Kenya, Uganda and the United Republic of Tanzania) were implemented between April 2007 and February 2010. In Nicaragua, the International Centre for Tropical Agriculture (CIAT) projected a 2.3°C average temperature increase in certain municipalities by 2050 and 100 to 130 mm decreases in annual rainfall. It was predicted that there would be an overall loss of the coffee farming areas, coffee production would need to move to higher altitudes, and coffee quality would decline.

Based on a detailed Risk and Opportunity Assessment (ROA), the Nicaraguan pilot group, PRODECOOP (a coffee-growers' organization), developed an action plan to manage the risks identified by adapting local production systems. Some of the outcomes of the action plan are listed below.

- A training process for 24 CAFENICA members on climate change and adaptation measures was conducted. (CAFENICA is an umbrella organization, grouping 12 coffee organizations including PRODECOOP. It represents over 6300 small-scale coffee growers.)
- A small meteorological station to monitor rainfall and temperature was established.
- Techniques and methodologies for the fabrication of agricultural organic inputs were validated.
- More efficient water use and management techniques (drainage, storage and micro irrigation) were tested and implemented.
- The experiences from the pilot were collected and systematized in order to be transferred to a wider range of coffee producers.

Following the successful implementation of its six pilot projects, the AdapCC partnership is now due to be scaled up in and beyond the original pilot countries.

Source: AdapCC, 2010

Brokering partnerships

Partnerships, such as joint public-private initiatives, needed to support and catalyse CSA involve diverse sets of actors with diverse goals, agendas and interests. Because of this, they entail high transaction costs and require a specific set of skills. Experience shows that brokerage functions are critical in facilitating such partnerships (Clark *et al.*, 2011). By definition, these brokers have to be good communicators, skilled at supporting interactive collaboration between different types of stakeholders. They must be proficient in helping people to acquire and share different kinds of knowledge. It is also critical that brokers be able to deal with large (and often hidden) asymmetries of power among actors. Successful cross-institutional interactions rely on clearly delineated and appropriately assigned responsibilities. This minimizes competition or duplication between individual entities in favour of harmonized efforts and shared outcomes (Young, 2002).

Depending on the local context and capacities, social capital and legitimacy, the brokering role can be played by local government, extension services, civil society organizations or national agricultural research systems (see Box 12.11).

Box 12.11**Participatory and negotiated territorial development in Mozambique**

Mozambique has made significant advances in the last 20 years with legislation that can avoid a major social conflict over land and promote an equitable form of new investment. FAO facilitated the consensus-building process that led to the National Land Policy declaration (1995) and resulting Land Law (1997) using two complementary approaches: Participatory and Negotiated Territorial Development (PNTD) and a rights-based approach.

Local communities are not always able to use all the land resources which they legally have rights over. As growing environmental concerns such as climate change increase pressures on land and other natural resources, the need for sustainable economic growth and securing local rights is underlined, especially as surging investment in large-scale agriculture occupies the best and ever-larger areas. It is not enough to rely on legal protection alone: however, existing rights must be identified and made visible through registration, but, perhaps even more importantly, rights holders must be empowered to articulate and defend their rights, allowing for equitable participation in consultations. FAO has therefore provided civic education and legal support for communities, specialized training for district officers responsible for implementation on the ground, specific programmes for paralegal training over the years, as well as extensive media campaigns and the active pursuit of partnerships.

Brokering such partnerships between smallholders, local communities, private sector actors and the overall government institutions requires time, energy and tact. FAO (as an impartial entity with expertise on the subject) assumed this brokering role in Mozambique making use of PNTD: a people-centered and process-oriented approach whose purpose is to bring diverse stakeholder interests to a negotiation table in order to build a wide consensus on further steps, clearly defining specific stakeholder contributions against a timeline.

Source: Tanner, De Wit and Norfolk, 2009

When establishing or considering support to existing CSA initiatives, it is crucial to prepare key partners to play their different roles effectively. This is especially true as some of the skills required (e.g. facilitation, synthesis, stakeholder engagement, monitoring and evaluation, impact assessment) cannot be easily mastered in formal training alone. These skills require substantial coaching and mentoring on the job. Two vital questions for CSA project designers to answer are:

- 1) Who is best placed to play the role of broker?
- 2) Who should be responsible for individual aspects of the project?

Various tools and approaches have been developed to help with this. One such tool is 'Outcome mapping', which was developed at the Canadian International Development Research Centre to help principal project partners articulate what they want the project to achieve. Each partner chooses specific metrics to measure progress towards achieving those outcomes. Articulating the outcomes sought by the different individuals and organizations at the project outset helps bring the different actors towards a joint understanding of overall project goals and come up with innovative strategies to achieve them (Kristjanson *et al.*, 2009).

Many CSA initiatives, such as payments for environmental services, have to deal with conflicting viewpoints of different stakeholders (e.g. upstream versus downstream communities), which require pioneering modes of engagement. Negotiation support tools can be helpful to project and programme planners (Clark *et al.*, 2011), as are approaches that build and nurture public-private partnerships (e.g. Box 12.12).

Box 12.12 The Challenge Dialogue System™

The Challenge Dialogue System (CDS)™ is a corporate methodology for engaging diverse stakeholders in dialogue to help tackle a complex issue collaboratively, overcome deadlock and facilitate exchanges of information. The system is built around eight steps including: participant engagement and input-gathering; face to face interactions and virtual exchanges; outcome synthesis and integration; and the continuous reflection on the strategies being acted upon and their results.

CDSTM has been applied to a wide range of users, including: private sector actors seeking performance improvement; public sector actors seeking to enhance their information systems and decision-making processes (e.g. the Forestry Ministry of British Columbia, Canada); and networks between non-profit, public and private sector actors working on a common theme (e.g. The Food Innovation Network).

Source: Innovation Expedition Inc., 2006

Equity issues

Diversity, inclusion, and participatory approaches are critical to building the quality of social capital needed for the lasting uptake of resilience-enhancing climate-smart agricultural practices. Long product value chains can only realize their full climate-smart potential by considering the individual well-being of the many stakeholders involved. Attention to equity issues throughout these chains is required (Box 12.12) to ensure that the institutions do not (knowingly or unknowingly) discriminate against certain groups. Different inequalities and asymmetries call for different kinds of support. Key options are listed below.

Developing capacity

Capacities should be developed so that all relevant stakeholders understand their own rights and can represent their own interests in the inclusive planning processes that should underpin CSA project design (more on capacity development in Module 17).

Involving mediators

Like partnership brokers, mediators must be strong communicators who can foster collaboration by helping to find common ground between disagreeing parties and helping to minimize obstructive hierarchies of influence. Bringing external mediators on board may be worthwhile, as they can be accepted as impartial facilitators by involved parties. Respected figures (e.g. traditional leaders or religious guides and prominent advocates for a relevant issue) with eminence and legitimate authority can also draw attention to the issue at hand and play a powerful mediatory role within a given community or context.

Providing support mechanisms

Evidence shows that the least food secure households are also those least likely to take up new CSA practices (Kristjanson *et al.*, 2012). Support mechanisms, such as social safety net programmes (e.g. cash transfers, distribution of food, seeds and tools), can assist particularly vulnerable minorities or social groups by ensuring their access to a minimum amount of food and other vital social services. Recent initiatives in this area include Ethiopia's Productive Safety Net Programme and Kenya's Hunger Safety Net Programme. Both of these programmes make it more likely that additional CSA efforts will benefit women, children and the poorest households (more detail on social safety nets in Module 16).

Box 12.13

Women in (climate-smart) agriculture

The 'Women's Empowerment in Agriculture Index' (WEAI), an approach for measuring the empowerment, agency, and inclusion of women in the agriculture sector, was launched by the International Food Policy Research Institute (IFPRI) and partners in 2012.

The Index measures women's empowerment relative to men within their households. The five domains of empowerment for women considered in the Index are:

- inclusion in decisions about agricultural production;
- access to and decision-making power over productive resources;
- control over use of income;
- leadership in the community; and
- use of time.

In 2011, pilot surveys, conducted in Bangladesh, Guatemala and Uganda, provided insights into the different gender dynamics in each country. The WEAI partners continue to validate the Index, testing whether the relationships between empowerment and its underlying determinants remain consistent in larger samples. These efforts will help to promote transparency and ensure that investments in women's empowerment are targeted for maximum impact.

Also seeking to further gender equity, CCAFS and FAO published a training guide for agricultural development professionals in 2012. The guide provides users with resources and participatory action research tools for collecting, analysing and sharing gender-sensitive information about agricultural communities, households and individuals who are facing a changing climate.

Sources: IFPRI, 2012; CCAFS and CGIAR, 2012b

Cultural considerations

While addressing questions of equity and representation, CSA projects need to take into account the cultural institutions that shape the lives and practices of the communities they seek to support. Negotiating a balance between the international principle of equity and the reality lived in local communities can be a delicate matter. In this regard, the issue of women's rights may be particularly sensitive. In addition, committees elected democratically for project support may ignore existing informal institutions and traditional leadership (Reid *et al.*, 2010). Because they may be seen as central to the local cultural identity, certain traditional agricultural practices may not be able to be replaced with climate-smart practices (Box 12.14). Taking local realities into account is vital if projects are to be successful over the long term.

A participatory planning process allowing stakeholders to articulate their convictions, preferences and concerns is of critical importance. This ensures that these issues can be taken into account in project design from the outset (see Box 12.14). Cultural considerations overlap with questions of equity. Again, participatory planning should include skilled mediators and capacity building to integrate cultural institutions into CSA project plans.

Box 12.14**Cultural barriers to climate change adaptation in Northern Burkina Faso**

A 2009 study comparing the ethnic groups Rimaiibe and Fulbe in the village of Biidi 2 in Northern Burkina Faso shows that Rimaiibe are successfully embracing livelihood diversification to adapt to climate change, but the same adaptive approach is not considered viable by Fulbe. The Rimaiibe's chief adaptive strategies (labour migration, working for development projects, growing gardens and including women in economic activity) contravene Fulbe's sense of personal integrity and freedom.

Fulbe identity is bound to the annual practice of transhumance (they herd livestock across Burkina Faso's central plateau between December and June). Among Fulbe men, transhumance is considered to be a proof of independence and self-worth. Transhumance continues to be pursued even though the plateau is becoming increasingly cultivated and inhabited, which makes the practice more and more difficult. Fulbe view sedentary crop cultivation less favourably than itinerant livestock rearing. In addition, hiring oneself out for work or migrating for labour is not considered an option. Until postcolonial legislation in the 1980s afforded Rimaiibe rights and land, they were effectively slaves to the Fulbe. This history makes Fulbe even more reluctant to be associated with activities that are proving successful for Rimaiibe. Highly prizing their self-sufficiency, Fulbe tend to live scattered in the bush at some distance from the village. The Rimaiibe live closer together in the village. When development practitioners hire workers for day labour, they do so in the village centre, which is easily accessible to Rimaiibe, but not Fulbe. Finally, strongly defined gender roles make Fulbe men reluctant to include women in income-generating activities. These cultural factors that have created barriers to adapting to changing conditions have led to a sharp rise in Fulbe poverty and food insecurity.

These insights offer an idea of how local cultural institutions may complicate the uptake of climate change initiatives that have succeeded in other contexts. Understanding the local culture is useful when formulating project strategies. In the case of Biidi 2, it became evident that development practitioners needed to meet with Fulbe in the bush and with Rimaiibe in the village. They could not assume that Fulbe would come to the village centre when in need of paid work. Dialogue about cultural practices and beliefs along with an exchange about securing physical and economic well-being is also advisable.

Source: Nielsen and Reenberg, 2010

Networks

Because of the many institutional interactions involved, CSA initiatives rely on networks to support information exchange and partnership-building. These networks link research institutes (e.g. National Agriculture Research Systems (NARS), universities and international agricultural research institutes), the providers of agricultural advisory and extension services, climate information services and farmers' organizations. Specifically formed CSA networks or 'platforms' are proliferating regionally and internationally (see Box 12.15).

In addition to sharing and managing knowledge across institutional silos and facilitating institutional cooperation in pursuit of shared objectives (Young, 2002), these networks can also fulfil a significant extension role. By centrally training trainers (e.g. professors, regional planning experts, and technology transfer specialists) to go on to train local practitioners in different regions (e.g. extension field agents, local and decentralized planning officers), the benefits of extension can be widely scaled up.

When creating, facilitating or joining a network, it is crucial to be clear about the added value the network intends to provide to its users. Networks can be vast repositories of data, expertise and contacts. However, due to the high rate of network proliferation, staying abreast of all developments and navigating the information offered can sometimes be overwhelming. Building up a forum for sharing knowledge and discussing new ideas can be time- and resource-intensive. In general, it is better to join already existing platforms and develop new conversations or collaborations within them and leave the creation of new fora for distinct issues.

The most successful networks are those in which users do not view their participation as an additional effort. Instead, they feel the benefits are concrete enough to merit a commitment to an ongoing engagement with the network. In such cases, following discussions and sharing information via networks becomes part of the normal

working mode. It is not always easy for a network to motivate its members to move beyond passive or cursory participation. Building a sense of concrete 'achievement' can be done through initiatives such as periodic face-to-face meetings between network members, explicitly moderated discussion groups, virtual briefings and workshops.

At the same time, it is not necessary for a network to be constantly active with vibrant collaboration. A data repository, updated and accessed by members on an as-needed basis, is also valuable, as is a mostly passive group of affiliates, who mobilize themselves when required.

Box 12.15 Examples of CSA platforms

Each of the CSA platforms listed below fosters international interaction on different aspects of climate change activities using different means (e.g. face-to-face or virtual facilitation; discussion groups or document pools).

The Climate Change Adaptation and Mitigation Knowledge Network (AMKN)

AMKN is a map-based online platform created by CCAFS that brings together climate, agriculture, and socio-economic information and posts photos and videos of farmers living at research sites across the tropics. It is an information service and key tool for practitioners, donors, policy makers, and researchers interested in food security and climate change. The platform displays food security and climate data, such as crop adaptations to climate change, drought indexes and global climate models. Zooming into a region, you can also explore multimedia features, including dozens of video testimonials from farmers in CCAFS regions, which illustrate how farmers today are coping with climate variability.

Source: CCAFS and CGIAR, 2013b

The Community for Climate Change Mitigation in Agriculture

Launched in 2012 by FAO, the Community for Climate Change Mitigation in Agriculture has built a network specifically for practitioners who work on reducing greenhouse gas emissions in agriculture. It offers an online resource library and hosts discussions on relevant issues, both in a member-only online forum and in a public social networking group. The community has over 600 members. A three-week online learning programme on agroforestry was delivered to over 250 participants in February 2013.

Source: FAO, 2013

WeADAPT

WeADAPT is an online 'open space' on climate change adaptation issues with over 1 500 members from more than 200 organizations. Members share case studies, tools and advice online in different thematic 'hubs'. In doing so, they help build a professional community of practice on adaptation issues and develop policy-relevant tools and guidance for adaptation planning and decision-making. The forum provides a number of services. For example, fellow members working in related fields are automatically introduced to each other in order to foster an exchange of ideas, and materials relevant to members' stated research interests are listed automatically. Collaboration with the Climate Information Portal of the University of Cape Town makes international climate data accessible to all members.

Source: WeADAPT, 2013

Climate and Development Knowledge Network

The Climate and Development Knowledge Network supports decision-makers in designing and delivering climate-compatible development by combining research, advisory services and knowledge management in support of locally owned and managed policy processes. It works nationally, regionally and globally in partnership with decision-makers in the public, private and non-governmental sectors. Led by PricewaterhouseCoopers LLP, the network is managed by an alliance of organizations that include Fundación Futuro Latinoamericano, International NGO Training and Research Centre (INTRAC), LEAD International, the Overseas Development Institute and SouthSouthNorth.

Source: Climate and Development Knowledge Network, 2012

12.4 Quick institutional context assesment

Whether a new CSA initiative is being designed, or an existing project is being reviewed or expanded, the guidelines below are intended to help establish a clearer understanding of the institutional environment in hand. A context assessment itself is already a form of capacity building (European Commission, 2005), as an overview of relevant institutional capacities is crucial in advising decision-making. 'FAO has developed a detailed Capacity Assessment to facilitate situation analysis (FAO, 2012). Many additional, formalized methodologies for carrying out institutional and capacity assessments also exist (FAO, 2012). There are many detailed, formalized methodologies for carrying out institutional and capacity assessments (see reference list and additional resources for examples; see also Modules 13 on policies and programs, 17 on knowledge, learning and capacity development and 18 on assessment, monitoring and evaluation). The following key steps are simple and easy to follow. By identifying possibilities for successful project progress, they will help project developers and practitioners build a quick but useful picture of the institutional context. Table 12.2 summarizes these key steps in a simple matrix and provides an example of what such an assessment might look like using a fictional case scenario.

STEP 1. GENERAL OVERVIEW

List existing climate change plans in the project country (e.g. NAPs, NAPAs and NAMAs). Do they mention agriculture?

- Have CSA projects been implemented in the country or region so far? If yes, by whom and how? If not, why not?
- List all sectors the project involves and which should be involved (e.g. agriculture, forestry, fisheries).
- List the relevant individual institutions involved and to be involved, as thoroughly as possible. Note whether these are finance and/or service providing institutions, stakeholder groups, value systems, etc. Refer to the distinctions provided in this chapter.

STEP 2. INSTITUTIONAL INTERESTS AND MANDATE

Different kinds of institutions have different interests and functions.

- Against the general competencies identified for the institutions listed in step 1, sketch their interests, underlying principles and aims. (There may be overlap with competencies.)
- List how these institutions stand to benefit from the project in question.

STEP 3. INSTITUTIONAL STRENGTHS

Different kinds of institutions have different kinds of authority and areas of influence. Map out apparent strengths for the institutions listed in step 1.

- How can these be capitalized upon in the project design?

STEP 4. INSTITUTIONAL WEAKNESSES

Along with the strengths found in step 3, note down which areas the institutions require support for the project to flourish. Possible areas for attention highlighted by the World Bank Institute (2011) include: weak social and political commitment; minimal stakeholder participation in setting priorities and in transparency issues; poorly defined rights and responsibilities; complex and inflexible administrative and bureaucratic structures; corruption; and lack of means.

- Factor these institutional weaknesses into the planning to ensure the project's aims are feasible, given the institutional context.
- Use this part of the assessment to determine plans for capacity development within the project.

STEP 5. SCOPE FOR SYNERGIES

Based on the mappings produced in steps 1-4:

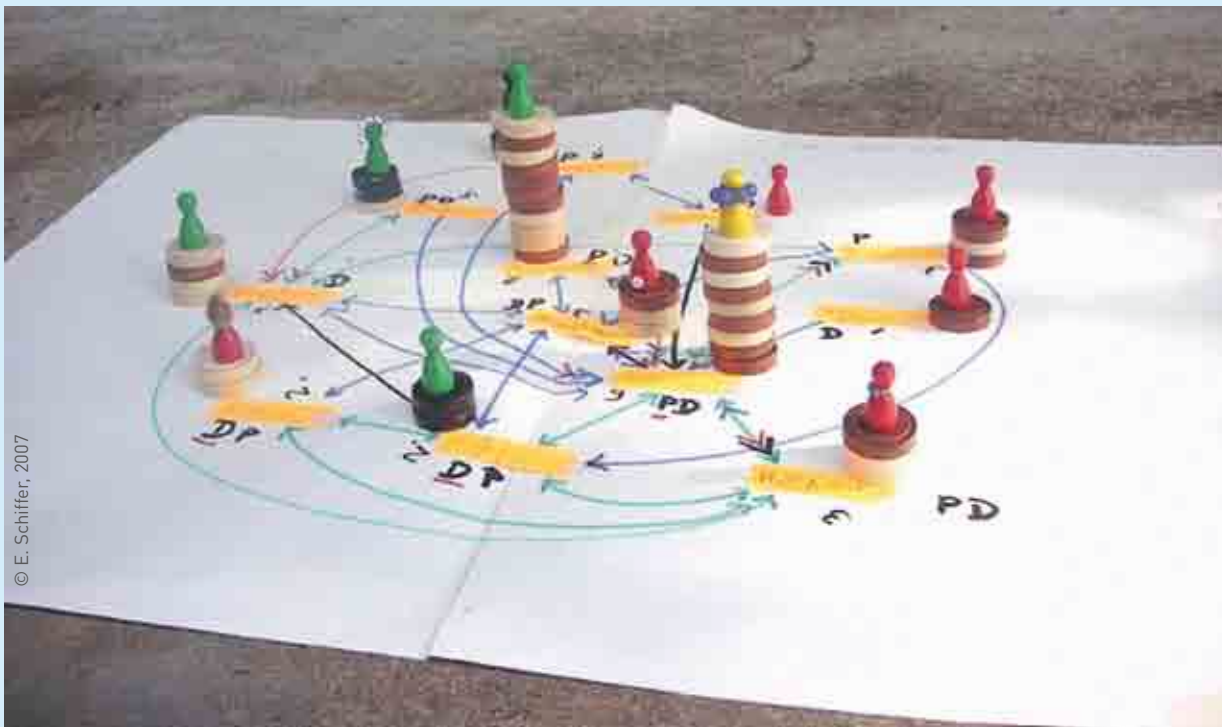
- Identify what kinds of synergies and collaborations could best bring out the institutional strengths and compensate for identified institutional weaknesses.
- Consider how such partnerships could be brokered and mediated.
- Bring partners together and jointly map out desired outcomes and strategies for achieving them (Box 12.15 features a tool that could further support such mapping).
- Let these synergies guide the project's progress.

Box 12.16**Net-Map: a hands-on social networking tool**

'Net-Map', an empirical tool produced by the IFPRI, makes it easier to assess and improve complex governance systems. The tool can be used both as a means for conducting research and as an instrument for organizational development and strategic network planning.

Net-Map's approach is participatory. Interviewees and interviewers work together to sketch a network map of the actors and stakeholders involved in the situation in question, and map out the connections between them. The aims, motivations and power dynamics between all stakeholders are also assessed collaboratively. These different factors are translated onto the map in three dimensions by building up checkers pieces to demonstrate hierarchies between different actors (these 'influence towers' are depicted below). Simple to set up and visually straightforward, Net-Map has been used successfully when working with local communities and at national and international strategic levels.

The tool was originally developed in collaboration with the White Volta River Basin Board (inaugurated in 2006) in rural Ghana. It was designed to enhance the Board's capacity to realize its large-scale environmental goals by clarifying the interactions between individuals, organizations and networks around its 17 members, which include local leaders, district officials, NGOs and researchers. The tool has been used by a wide range of international organizations since, including the International Fund for Agricultural Development (IFAD), the World Bank and the World Health Organization (WHO).



© E. Schiffer, 2007

Source: IFPRI, 2008; IFPRI, 2009

Table 12.2
Matrix for the quick institutional context assessment

Fictional sample case: an initiative on women's empowerment in CSA

1) General overview		2) Institutional interests/ mandate	3) Institutional strengths	4) Institutional weaknesses	5) Scope for synergies
Sector/Type of institution	Name of institution				
LEAD: International NGO specializing in environmentally sustainable development.	–	Climate-smart development Women's empowerment	Institutional experience implementing development projects Availability of funds	Outsider; little local knowledge or legitimacy	Can partner with all the below, capitalizing on their strengths and balancing out their weaknesses (see below).
Regional branch of ministry of agriculture	–	Rural economic development Sustainable resource management	Authority Access to relevant population data Experience delivering agricultural extension services Availability of some funds	Overstretched human resources Limited funds Limited experience with CSA or women's development initiatives	Can support its rural development and sustainable resource management by developing women's earning potential through CSA in partnership with NGOs. Can contribute its authority, technical and site-specific knowledge to the project.
Local women's rights NGO	–	Women's empowerment	Activism and campaigning experience, at national and local level Local knowledge and networks (stakeholder, government, etc)	Lacking funds No interaction with policymakers	Can bring skills and local socio-cultural expertise to project funded by public sector and international NGO.
Local radio station	–	Disseminating information to benefit the public Profit (i.e. producing popular broadcasts)	Wide-reaching dissemination of information at low cost	Only reaches households with radios Programmes listened to may be determined by the men of the household	Can be engaged for a 'women's hour' CSA show, gender equality awareness raising campaigns, etc. Radios could be distributed to women via women's faith group.
Women's faith group	–	Faith Mutual support amongst each other and to others Constituent well-being	Access to a large number of women, with pre-existing sense of solidarity	Authority within wider (mixed) society uncertain (e.g. if perceived to transcend traditional gender roles)	Can endorse CSA for women and proliferate messages within the community. Can serve as an access point for talks, or distribution of inputs (e.g. seeds, tools, radios).

1) General overview		2) Institutional interests/ mandate	3) Institutional strengths	4) Institutional weaknesses	5) Scope for synergies
Sector/Type of institution	Name of institution				
Local branch of national farmers' union	–	Support and profit for constituents Political representation	Detailed knowledge of local farming conditions Access to established farming community	Male-oriented (majority of constituents are male) Low capacity; not powerful enough to influence agricultural policy at national level	Can provide valuable technical knowledge and extension. Can be a forum for dialogue about women's inclusion in farming within the traditional farming community. Can provide insights on market conditions and private sector partners.
International retailer	–	Profit Positive public perception	Market access Funds available	Little experience working with smallholders Output rather than outcome/process oriented	Can provide a market for the emerging women smallholder farmers while augmenting public standing by engaging in socially and environmentally sustainable production. National farmers' cooperation and national/ international NGOs can act as interface with smallholders for the retailer.

12.5. Conclusions

This module has outlined the major kinds of institutions that can advance CSA and has described their most salient characteristics and roles. The case studies provided indicate how different institutions in distinct contexts can provide key support to CSA initiatives. This support includes: producing and sharing technical knowledge; providing financial services and access to markets; and brokering or fostering collective action between stakeholders and initiatives. The Quick Institutional Context Assessment provides a simple methodology to assist project planners and implementers in identifying helpful institutional partners for their own CSA projects. It highlights areas requiring particular attention in order to create an enabling environment for the project in hand. References to more detailed mapping, planning and capacity assessment methodologies are made throughout the chapter and are provided in the reference list.

Understanding the institutional context within which a CSA initiative is implemented is crucial to the project's success. Institutional endorsement is vital, as it is often pivotal in motivating individuals to support projects. Institutional opposition or apathy is highly obstructive. If smallholder producers are to adopt climate-smart

agricultural practices and maintain them over the long-term, a strong network of institutional support needs to be in place to assist and encourage their efforts. Equally, local-level activities can and should help shape institutional actions. Institutional networks on CSA, open to bottom-up information flows as well as horizontal and top-down ones, should plan to engage in an ongoing learning process and be prepared to be adaptable in their approaches (Lebel, 2005).

CSA initiatives should ground their interventions in a sound understanding of the different opportunities, capacities and complexities that individual institutions bring to the table. Based on these insights, participatory processes can be used to formulate practical ways in which partnerships and collaborations between individual institutions can lead to mutually beneficial synergies that can increase food security, improve livelihoods and foster environmental integrity.

Notes

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Acronyms

AdapCC	Adaptation for Smallholders to Climate Change initiative
AMKN	Climate Change Adaptation and Mitigation Knowledge Network
BMZ	German Federal Ministry for Economic Cooperation and Development
CARE	Cooperative Assistance for Relief Everywhere
CCAFS	Programme on Climate Change, Agriculture and Food Security
CDSTM	Challenge Dialogue System TM
CGIAR	formerly Consultative Group on International Agricultural Research
CIAT	International Centre for Tropical Agriculture
CNFO	Caribbean Network of Fisherfolk Organisations
CSA	climate-smart agriculture
GHG	greenhouse gas
GIZ	German Agency for International Cooperation
ICRAF	International Centre for Research in Agroforestry
ICT	Information and Communications Technology
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
MICCA	Mitigation of Climate Change in Agriculture project
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plans
NAPA	National Adaptation Programme of Action
NARS	National Agricultural Research Systems
NGO	non-governmental organization
OED	Oxford English Dictionary
PRC	Participatory Radio Campaign
ROA	Risk and Opportunity Assessment
SACC	Sustainable Agriculture in a Changing Climate project
UNFCCC	United Nations Framework Convention on Climate Change
UNFFE	Uganda National Farmers Federation
VSLA	Village Savings and Loans Associations project
WEAI	Women's Empowerment in Agriculture Index
WHO	World Health Organization

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