Chapter 5

Participatory Approaches for CWR *in situ* Conservation

> *Although the role of local people has not figured highly in most examples of* in situ *conservation of rare and endangered species … when we deal with species which have an economic or social value or otherwise impinge on the interests of local communities, such an approach is no longer tenable* (Heywood and Dulloo, 2005).

Aims and purpose

Participatory approaches present many opportunities for CWR *in situ* conservation, in addition to the positive contribution they can make to the social and economic empowerment of often marginalized groups. These approaches, though, also present immense challenges to scientists and their organizations, which often have limited understanding and capacity to support participatory methods effectively. Certainly, in the CWR conservation community, practitioners have had limited exposure to such approaches and techniques, compared to their counterparts in the on-farm community, and there is an almost complete lack of published information on approaches that might be replicated elsewhere.

This chapter focuses on these challenges and opportunities by introducing the concept of community participation and participatory approaches applicable to CWR *in situ* conservation planning and action. It is *not* meant as an exhaustive account of the many methods and tools of participation. The literature and internet abound with information on participatory approaches and tools (and how to use them), which have been successfully applied in other contexts and which can be readily applied to CWR conservation. The chapter guides the reader through some general information on participatory approaches, provides relevant examples and refers to the available resources as described at the end of this chapter. More importantly, the chapter aims to encourage an understanding of the development of participatory approaches, what participation involves and its

role in various conservation settings. By doing this, it is hoped that it will make CWR practitioners more aware of the opportunities for such community-based approaches. In the context of this manual, the term 'community' refers to local and indigenous communities. While there are similarities and parallels between participation and partnerships (see Chapter 4), for the purpose of this manual, 'participation' refers to working with communities to achieve conservation and socio-economic goals and involves an element of community empowerment, whereas 'partnership' refers to agreements and working arrangements entered into with other key stakeholder groups, largely for the purpose of CWR *in situ* conservation planning. The chapter concludes by highlighting the importance of biocultural diversity conservation and the potential for collaboration with recent initiatives such as community conserved areas (CCA) and indigenous biocultural heritage areas (IBCHA).

Participatory processes are demanding. Those involved must be aware of this reality. There will be many different perspectives and interpretations of purposes and goals which must be discussed and debated. Role reversals and attitudinal change will be required as will new ways of learning. There will also be important resource issues to consider with regards to the significant capacity development required, as well as the funds necessary to support community consultation and engagement. Participation should not be seen as an expedient for convenient implementation of activities. Empowerment, as well as conservation action, should be one of the goals. Common understanding and commitment to this must be established early on in the process.

Introduction

> *Multi-stakeholder processes and terms such as adaptive management, collaborative management, participation, citizen involvement, community based natural resource management, communities of practice, dialogue, interactive decision making and societal learning have proliferated in the natural resources management literature* (Hesselink et al, 2007).

Local and indigenous communities in biodiversity-rich countries have been closely linked to their natural environments for millennia. Often, they have intimate knowledge about habitats and their wild plant species, including wild relatives. This may include knowledge of their sustainable management. In many instances, this intimacy has been disrupted by conventional conservation approaches (United Nations, 2009). The latter part of the 20th century has witnessed a re-examination of some of these approaches to biodiversity conservation, with a growing recognition of the need to enhance the role of local and indigenous communities in the management of their environments and resources. While this may present win–win situations for those involved, it is a process that generates many challenges and potential pitfalls and requires long-term commitment.

Community-based natural resource management (CBNRM)

CBNRM models represent a shift from centralized to more devolved approaches to management which work to strengthen locally accountable institutions, enabling local communities to make better decisions about the use of land and resources. A recent review by the International Institute for Environment and Development (IIED) of the impact of CBNRM approaches has highlighted some notable ecological, economic and institutional achievements. While CBNRM is identified as an important strategy in meeting the goals of various international targets such as the CBD, some important challenges remain.

Source: Roe et al, 2009; http://www.iied.org/pubs/display.php?o=17503IIED

Challenges aside, community participation presents key opportunities for those involved in CWR conservation. Working closely with local communities can facilitate data gathering (see Chapter 8) and provide insights into CWR and indigenous knowledge such as ethnobotanical knowledge on uses, understanding of the distribution of CWR, patterns of the use of CWR and potential threats (see Box 5.1 and Figure 5.1).

Participatory approaches allow opportunities for local and indigenous communities to be involved in planning and partnerships (see Chapter 4). Scientists and organizations can work with communities to strengthen the

Figure 5.1 *Collecting information on wild yams during a consultation with a community bordering Ankarafantsika National Park, Madagascar*

Source: Danny Hunter

Box 5.1 Participatory assessment of utilization of wild plants by local communities in Armenia

To preserve its wealth of globally important agrobiodiversity, in 1981, the Minister Councils of the Armenian Soviet Socialist Republic designated the south-eastern side of Yerevan city a protected area. Occupying an area of approximately 89ha, Erebuni State Reserve is situated in close proximity to a highly urbanized area, bordering the villages of Hatsavan and Voghchaberd, and the Erebuni district of Yerevan city. The reserve is rich in biodiversity and is home to 292 species of vascular plants, representing 196 genera from 46 families. Among these are over 40 species of wild relatives of wheat (*Triticum*), rye (*Secale*) and barley (*Hordeum*).

Despite sustained conservation efforts, the proximity of Yerevan city to the protected area is putting severe pressure on the distribution of wild plants, which are being collected for food and medicinal purposes to be sold in the city markets. Traditionally, wild plants contribute between 10 and 15 per cent to the average Armenian diet, yet due to overharvesting, they are becoming increasingly scarce. Plant collectors frequently trespass within the protected area to harvest and meet the increasing demand for wild crops. The phenomenon is becoming so widespread that many species of plants existing in the area have been included in the Red Data Book of Threatened Plants of Armenia.

In community consultations, lack of awareness of the importance of CWR as repositories of genetic diversity was identified as the major factor influencing overharvesting. For this reason, the UNEP/GEF CWR Project implemented a series of workshops and working groups in 2007, meeting with local community representatives, followed by surveys of residents of the communities, to gather information about the collection, use and conservation status of a range of wild plants. Meetings also provided local communities with the opportunity to learn more about the benefits and importance of conserving these valuable species. Discussions highlighted that rural communities, and mostly women from these communities, continue collecting a variety of wild plants for use in local dishes and for medicinal purposes.

The participatory process, carried out over a one-year period, has revealed the need to train local communities on the correct utilization of particular plant species. This holds particularly true for women, who continue to be the main source of knowledge about wild plants in Armenia, knowledge that has been passed down from generation to generation and continues to the present day. Furthermore, if the conservation efforts being made by the Erebuni State Reserve are to continue in the long term, it is essential that the surrounding local communities are engaged and aware of the benefits of conserving CWR in their natural environments and the threats posed to their well-being by overharvesting. To this end, participatory approaches must be sought, whenever possible, to improve cooperation with local communities to enhance CWR conservation.

Source: Naire Yeritsyan, UNEP/GEF CWR Project, Armenia

Figure 5.2 *Presenting research findings and other information back to communities is an important part of the participatory process*

Source: Danny Hunter

management of habitats and CWR species both inside (see Chapter 9) and outside (see Chapter 11) protected areas. Capacity can be developed so that communities and grassroots organizations are involved in the implementation of national action plans (see Chapter 6) and management plans (see Chapter 10), including species and habitat monitoring (see Chapter 13). Danielsen et al (2009) describe varying levels of local participation in natural resource monitoring which can be applied to CWR conservation. At the same time, working closely with communities presents opportunities to communicate knowledge on the importance of CWR and to raise awareness and build support for CWR conservation (see Chapter 16 and Box 5.1 and Figure 5.2). This can be matched with the appropriate community-based capacity development necessary to undertake related tasks (see Chapter 15).

A remarkable example of a participatory approach is that of farmers in Nepal who were able to improve rice crops by crossbreeding wild and local varieties through a participatory plant breeding programme facilitated by local organizations (Sthapit, 2008), thus demonstrating ways of strengthening the link between CWR conservation and utilization. A detailed account of participatory approaches and tools, such as the development of community biodiversity registers for on-farm conservation (many of which are applicable to the *in situ* context), is given by Friis-Hansen and Sthapit (2000). There has been further progress in participatory approaches to on-farm conservation compared with *in situ* conservation of agrobiodiversity in natural landscapes.

Community participation can help countries implement the CWR conservation actions necessary to meet their obligations and targets, as set out in

international agreements and conventions such as the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Also important are the opportunities that community participation in CWR *in situ* conservation offers in contributing to the poverty reduction and social and economic empowerment targets proposed by the Millennium Development Goals (MDG), especially MDG 1 and 7.

Nonetheless, it needs to be stressed that participatory approaches will generate many challenges for scientists who may be used to working with conventional, quantitative research approaches. Most natural scientists are usually not experienced with the attitudes, skills and behaviours considered necessary for participatory approaches. *To ensure an effective participatory process, it is good practice to seek out those social (and natural) scientists in your organization or others with extensive skills and experience in using participatory methods and tools, and facilitating participatory approaches with local and indigenous communities.* It is also good practice to review what other national conservation programmes and projects are doing in order to build on the lessons learned to ensure that the research team is adequately sensitized to the objectives, needs and demands of using a participatory approach. This will also help to identify who to contact for advice and guidance on engaging community groups and organizations (see Boxes 5.2 and 5.3).

What is participation?

Participation is a somewhat ambiguous term that enjoys a high level of popularity in strategy, policy and project documents but is not always accompanied by a similar level of understanding in terms of what it actually means or an appreciation of what is involved. Because of this ambiguity, participation is open to interpretation and variability in practice. Many typologies of participation have been described, such as that of Jules Pretty and colleagues (described in Bass et al, 1995). These are useful as a way of categorizing levels of, or commitment to, participation with the recognition that participation, by default, is not necessarily a good thing. Most typologies of participation describe a continuum of participation from passive to active such as that illustrated in Table 5.1. At its most effective, participation can lead to situations where communities gain control over decision-making and actions, as well as resources through a process of empowerment and self-initiated mobilization.

The goals and objectives of the planned CWR conservation intervention will determine the level and extent of participation required. *It is not always necessary to strive for a level of participation which equates with community autonomy or mobilization, but the work should in some way enhance community empowerment.*

Box 5.2 Involve local and indigenous communities early

Although the Confederation of Indigenous Peoples of Bolivia (CIDOB) were included at the outset (in 2004) as a member of the National Steering Committee of the UNEP/GEF CWR Project in Bolivia, it was more in an advisory role rather than as a partner for executing or undertaking specific project activities. However, CIDOB, as a member institution, was able to play an active role and lobby for the involvement of indigenous peoples. It also played an important role in advising the Vice-Ministry of Environment, Biodiversity and Climate Change (VMABCC), the Project Coordination Unit and the other national partner institutions, to respect and recognize the rights of indigenous peoples over their traditional knowledge associated with CWR, which included securing prior informed consent of indigenous peoples when considering the inclusion of information on traditional knowledge associated with CWR and ethnobotanical studies into the databases of the project's National Information System.

Eventually, with the support of the General Director for Biodiversity and Protected Areas (Indigenous Guaraní), CIDOB was given an executing role in the project in 2007. In December 2006, representatives of CIDOB and the Directorate-General for Biodiversity and Protected Areas – Vice-Ministry of Environment, Biodiversity and Climate Change (DGBAP-VMABCC) held a series of meetings to inform CIDOB on the project scope and the topics on which CIDOB could work. This eventually led to CIDOB carrying out the following activities on CWR species for three genera (*Arachis*, *Theobroma*, *Annona*), together with four other national partner institutions of the CWR Project. The activities included:

- systematization of information for inclusion into the institutional database on CWR of CIDOB as a part of NIS;
- creation of distribution maps in community lands;
- ecogeographic surveys and specimen collection in the field, in areas of species distribution and community lands;
- development of public awareness materials; and
- organization of outreach activities in the sub-central lowlands.

The clear lesson learned from CIDOB's involvement in executing CWR activities was the need to identify such activities at the early project design stage. Funds were already committed to other partners and the small amount that could be allocated to CIDOB was too limited to achieve major impact in community lands.

Despite this, the collaboration did achieve important outcomes. Prior to the project, little was known about the issue of *in situ* conservation of CWR by CIDOB as the national indigenous peoples' organization and also by the indigenous peoples on whose community lands many CWR species are found. The project was able to address this issue by strengthening capacity within CIDOB through support of an indigenous technician, the building of linkages to scientific organizations and the considerable sharing of information and knowledge related to CWR that took place. There was also a strong commitment by scientific researchers in the project to explain complex issues in non-technical language, which helped facilitate networking and an increased awareness among scientists of the rights of indigenous peoples over their traditional knowledge and natural resources. The issue of CWR and their conservation are now on the natural resource management agenda of CIDOB.

Such was the interest of CIDOB in these activities that they developed a stand-alone project proposal for the *in situ* conservation of CWR in community lands in an effort to continue the work of the project.

Source: Beatriz Zapata Ferrufino, National Coordinator, UNEP/GEF CWR Project, Bolivia

Box 5.3 Checklist for developing an effective consultation process

Begin consultation at the earliest stage possible of project design

Before commencing project design, consider how communities will be involved in this process and determine the best avenues to secure their engagement.

Prior to visiting local communities and villages, seek permission from community members. Share with them the motivation and purpose of the proposed research and explain the benefits of providing local knowledge and resources. Visit different community groups (e.g. women's groups, farmer associations) and hold meetings to share information about the project. Ensure that information is accessible by the community and is presented in a transparent manner. During community visits, identify local representatives who can serve as future contacts for the development of an agreement outlining project objectives and activities.

After obtaining local permission to undertake research, engage communities in the entire research process. Collect information about the location, population size and community members' interests, concerns and perceptions. You need to fully understand the local context and ensure the project addresses local needs.

Explain to communities their roles and responsibilities, including the activities to be conducted and the impacts these may have on community practices (limits to areas of use or specific species, presence of outsiders, etc.). Respect local traditions, culture and traditional knowledge, working to include community members as much as possible. Explore avenues to overcome language barriers and cultural differences which may hinder the success of the project. A relationship of trust must be built with local communities.

Build the confidence of communities

Community involvement should be at the centre of the project. Make sure to engage communities in the earliest stages of project design; be certain that no one is excluded. It is important to identify and involve traditional decision-making authorities within communities, as well as to encourage the participation of marginalized groups such as women and children. Offer support to these groups and others to ensure their voices are heard. Respect local customs and traditions and provide adequate information for communities to make informed decisions.

Identify stakeholders and their rights over land, natural resources and associated knowledge

To meet the needs of project stakeholders, it is important to identify:

- indigenous groups and local communities directly or indirectly affected;
- landowners and holders of resource rights where research will be conducted;
- authorities with jurisdiction over locations and activities, including local, state and national agencies;

- key persons with knowledge of the cultural, social and economic context of the communities where research will be conducted;
- individuals and authorities with the power to influence the project in a positive or negative manner; and
- community groups to be involved, including women, elders and youth – pay close attention to ensuring the participation of women as they may not hold formal positions in the community, but do bring a unique and important perspective to the table. Separate consultations with women may be required.

Agree on acceptable logistic and administrative frameworks for consultation

Formulate a plan outlining measures for communication and information exchange and access and identify capacity building needs of the communities. Raise awareness among communities to be sure they know their legal rights and their authority to influence the research process. Determine if interpreters are required and identify such support, as needed.

Develop and finalize the project work plan and timeframe for implementation in line with community suggestions and preferences. Seek advice from communities in terms of the most appropriate forums for consultations (e.g. workshops, informal discussions, video presentations). Informal discussions are often useful to identify different needs for consideration, which may not be raised by community members in formal settings or in front of a public audience. Jointly identify themes for, and agree on, the frequency of meetings throughout the life of the project. Ensure that joint decisions are clarified, being careful to consider various views and opinions. Finally, establish a mechanism to review the effectiveness of community consultations and identify accessible means to resolve conflicts which may arise during the project.

Source: adapted from Laird and Noejovich (2002) *Biodiversity and Traditional Knowledge*, Earthscan

Although some writers make it sound as though there is a separate 'participatory' research method, this is misleading. The idea of participation is more an overall guiding philosophy of how to proceed, than a selection of specific methods. So, when people talk about participatory research, participatory monitoring and participatory evaluation, on the whole they are not discussing a self contained set of methodologies, but a situation whereby the methods being used have included an element of strong involvement and consultation on the part of the subjects of the research. Not all methods are equally amenable to participation.

Source: Pratt and Loizos, 1992

Table 5.1 *A typology of participation*

Passive participation	People participate by being told what is going to happen or has already happened. It is a unilateral announcement by an administration or project management without listening to people's responses.
Participation in information giving	The information being shared belongs only to external professionals. People participate by answering questions posed by extractive researchers using questionnaire surveys or such similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research are neither shared nor checked for accuracy.
Participation by consultation	People participate by being consulted, and external agents listen to views. These external agents define both problems and solutions and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board people's views.
Participation for material benefits	People participate by providing resources such as labour, in return for food, cash or other material incentives. Much on-farm research falls into this category, as farmers provide the fields but are not involved in experimentation or the process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when incentives end.
Functional participation	People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organization. Such involvement tends not to be at early stages of project cycles or planning, but rather after major decisions have already been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.
Interactive participation	People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple objectives and make use of systematic and structured learning processes. These groups take control/ownership over local decisions, so people have a stake in maintaining structures or practices.
Self-mobilization	People participate by taking initiatives independent of external institutions to change systems. Such self-initiated mobilization and collective action may or may not challenge existing inequitable distributions of wealth and power.

Source: Bass et al, 1995

Participatory approaches and methods – a brief history

The history of the systematic use of participatory methods can be traced back to the late 1970s with the introduction of a new research approach called *rapid rural appraisal* (RRA) which quickly became popular with decision-makers in development agencies, including NGOs. A criticism of the RRA approach was that it was 'extractive' and the role of local communities was limited to providing information, while the power of decision-making about the use of this information remained in the hands of outsiders. During the 1980s, NGOs working closely with communities further refined RRA approaches and developed what is known as *participatory rural appraisal* (PRA). While using similar methods and tools, the underlying philosophy and purpose changed: while RRAs led to situations of extracting information, often in a single event, PRAs were designed to follow the peoples' own concerns and interests and to build a process of involvement that would lead to actions and capacities to intervene and address such concerns. Thus, it enhanced a community's own capacities for analysing their circumstances of living, their potentials and their problems in order to actively decide on changes and action. These shifts towards interactive, mutual learning are now reflected in *participatory learning and action* (PLA), an approach and terminology commonly used by teams working in development and conservation, involving many of the elements and tools of RRA and PRA.[1] Some of the participatory tools and methods that can be used constructively for CWR *in situ* conservation planning and action are listed in Box 5.4.

The list included in Box 5.4 is by no means exhaustive and the reader is referred to the information at the end of this chapter for more detailed descriptions, many of which include advantages and disadvantages, on how to use these tools and others that may be relevant.

Before getting started, however, *it will be useful to ask the following questions* to stimulate thinking and guide decision-making during the formulation of the participatory intervention:

- Why is a participatory approach necessary?
- What experience and skills in participatory approaches exist in my organization?
- What experience and skills exist in other partner organizations?
- Who might make up the team for a participatory approach?
- Is there a need for additional training in participatory approaches for team members?
- Are the communities that need to be involved, well defined?
- Does my organization already have existing relations with the proposed community?
- Do other collaborating national organizations have existing relations with the proposed community?
- Has the participatory process and planning involved the community from an early stage?

Box 5.4 Participatory tools and methods to consider

Brainstorming – quick, easy way of generating ideas and information with groups of people.

Review of secondary data – often performed, although the emphasis on previous data can lead to erroneous interpretations.

Direct observation – observation related to What? When? Where? Who? Why? How?

Do it yourself – role reversal used to gain an insider's perspective. Community members are encouraged to become the 'experts' and teach the researcher how to perform daily tasks and activities.

Participatory mapping and modelling – community members draw or model past or current situation using local materials. Researchers gain an understanding of land-use patterns and changes, agricultural practices and resource distribution by asking questions on the picture/model. This approach has recently been developed further to include participatory GIS and 3-D modelling.

Transects, group treks and guided field walks – a walking tour is carried out through an area of interest with a local guide to learn about the area's geography and identify problems and solutions.

Seasonal calendars – set up with local materials showing monthly variations and seasonal constraints in rainfall, labour, income, expenditures, debt, harvesting periods, etc. This can help identify opportunities for action.

Daily activity profiles – the daily activities (tasks and time taken to complete them) of community members can be explored based on age and gender.

Semi-structured interviewing – this technique involves informal interviews that follow set questions, but which allow new topics to be explored as the interview develops.

Permanent-group interviews – groups exploiting the same resource are interviewed together to identify collective problems and solutions (e.g. people using a same forest source).

Timelines – major community events are dated and listed to help communities and outsiders understand cycles and reasons for change and take measures for future action.

Local histories – a similar exercise as timelines, but provides more detailed account of changes. This can be used for crops, wild resource changes, population changes, health trends, etc.

Local researchers and village analysts – training local people to collect, analyse, use and present data.

Venn diagrams – overlapping circles that help visualize the relationship between people, communities or institutions.

Participatory diagrams – people are encouraged to display their knowledge on pie and bar charts and flow diagrams.

Wealth and well-being rankings – this technique involves asking people to rank cards representing individuals or households from rich to poor or from sick to healthy. It can be used to cross-check information and produce a benchmark against which future development interventions can be measured or evaluated.

Direct-matrix pair-wise ranking and scoring – a tool used to assess local perceptions on different topics, ranging from value of resources to wealth. People are asked to rank and

compare individual items, using their own categories and criteria, by raising hands or placing representative objects on a board. For example, trees can be ranked from best to worst for their properties as a source of fuel and fodder.

Matrices – tools for gathering information and facilitating discussions. For example, a problem–opportunity matrix could have columns with the following labels: soil type, land use, cropping patterns and available resources; and rows with the following labels: problems, constraints, local solutions and initiatives already tried.

Traditional management systems and local-resource collections – this tool can be used to learn about local biodiversity, management systems and taxonomies.

Portraits, profiles, case studies and stories – insightful descriptions of problems and how they are dealt with can be obtained by recording case studies and how household conflicts were resolved.

Key probes – questions addressing a key issue are posed to different interviewees and the answers compared. The question might be something like 'If my goat enters your field and eats your crops, what do you and I do?'

Folklore, songs, poetry and dance – local folklore, songs, dance and poetry are analysed to provide insight into values, history, practices and beliefs.

Futures possible – people's expectations are sounded as they are asked how they foresee the future and to predict the different scenarios if action for a specific problem is or is not taken.

Diagrams exhibition – diagrams, maps, charts and photos of the research activity are displayed in a common area to share information and promote discussion. The tool can provide a further means of cross-checking information and may inspire other community members to take part in research activities.

Shared presentations and analysis – participants are encouraged to share their findings with other community members and outsiders, providing a further opportunity for cross-checking information and obtaining feedback.

Night halts – interactions with community members are greatly facilitated when the researcher lives in the village during the study, as it allows for early morning and evening discussions, when community members tend to have more leisure time.

Short questionnaires – useful if conducted late in the research process and are topic-specific.

Field report writing – key findings are recorded and summaries made of diagrams, models and maps produced during the study, as well as the process involved in creating them. (Check that community has consented to data leaving the village.)

Self-correcting field notes – field notes help the investigator focus on achievements, lessons learned and outstanding activities. Regular revisits to the field notes help the researcher correct any mistakes and identify problems and solutions.

Survey of community members' attitudes toward participatory process – community members are asked to voice their expectations regarding the participatory activities. Their feedback helps improve the process and techniques, and maintain realistic expectations.

Source: Grenier, 1998

It is now widely accepted that local people need to share in the benefits derived from protected areas, and this is best achieved through their playing a role in the management and protection of such areas. This is now reflected in the protected areas work of WWF and UNESCO's Man and the Biosphere Programme (MAB) and other agencies.

Source: adapted from Heywood and Dulloo, 2005

Background to participation in conservation planning

A recent global survey and comparative case study analysis highlights that conservation professionals and managers of biosphere reserves now regard participation as one of the most important success factors for management. However, a separate study, using case studies from selected protected areas using participatory approaches in their formal structure, points out that it does not necessarily always translate into economic benefits for local people.

Source: adapted from Stoll-Kleemann and Welp (2008) and Galvin and Haller (2008)

Conservation planning, like its counterpart in agriculture and rural development, has often employed 'top-down' and centrally planned approaches that have a primary objective of biodiversity conservation and pay little attention to the needs or aspirations of local communities. Often, it was felt that any form of community involvement actually compromised this objective (Pimbert and Pretty, 1995). Conservation planning has not been served well by these 'command-and-control' strategies of the past, often perpetuating the poverty, inequality and power structures that hinder the realization of biodiversity conservation and sustainable development in the first place. As a result of the many lessons learned from this history, community participation is now regarded as fundamental to the attainment of the economic, political, social and environmental objectives that underpin conservation, while 'exclusionary conservation' is not considered sustainable (Kothari, 2006a). This has led to a paradigm shift, from 'ecology first' to 'people first' perspectives (O'Riordan and Stoll-Kleeman, 2002) in conservation planning and management. Such shifts in practice offer considerable opportunities for innovative approaches to CWR *in situ* conservation both inside (see Box 5.5) and outside (see Box 5.6) protected areas. Others refer to this shift as the move away from the 'preservation approach' – trying to isolate and maintain biodiversity in natural parks by excluding indigenous and local communities – towards a more 'biocultural systems approach' – allowing human activity as part of the process and thereby rendering a much more successful conservation strategy.

Box 5.5 Community participation in developing a management plan for wild yams in the National Park of Ankarafantsika, Madagascar

The UNEP/GEF CWR Project's work on wild yams in Madagascar is both exciting and innovative and highlights the challenges and conflicts faced in trying to promote *in situ* conservation in protected areas of a resource of considerable value and use by local communities living inside or bordering the park (there are around 58 small administrative units inside or bordering the national park). Overharvesting of wild yams, erosion and poverty in these communities are inter-related. The project in Madagascar has successfully facilitated a participatory process in developing a management plan that will allow local communities to sustainably harvest and manage these wild relatives. The management plan seeks to reduce highlighted threats and issues that negatively impact on biodiversity conservation in the park. Prior to the project, the national park authority's (National Association for the Management of Protected Areas in Madagascar – ANGAP) policies and regulations were not seen as favourable to local communities who have been harvesting wild yams inside the park for generations. They are an important source of food in times of scarcity (rice) and also sold to generate income. Wild yams are very much seen as an important component of villager's identities. Their ancestors have always harvested, eaten and sold wild yams. ANGAP now has plans to scale up this process to other national parks in the country. The effort and dedication involved in the mainstreaming of CWR conservation into management plans is all too often underestimated by the CWR community. Working directly with local communities through this process requires an even greater intensity of commitment (Figure 5.3).

Source: Jeannot Ramelison, UNEP/GEF CWR Project National Project Coordinator, Madagascar

Figure 5.3 *Working closely with local communities who depend on wild relatives for food or other needs is vital for the development of successful management interventions*

Photo: Danny Hunter

Box 5.6 The Potato Park, Peru

Six Quechua communities in Peru worked closely together, with the Asociación ANDES and other organizations, for several years to establish a 'Parque de la Papa' (the Potato Park). The Potato Park is a centre of diversity for a range of important Andean crops in addition to the potato, including quinoa and oca. The park represents a community-based agrobiodiversity-focused conservation area – also described as community conserved areas (CCAs) and indigenous biocultural heritage areas (IBCHAs) – and is home to a diversity of Andean crop landraces as well as CWR, along with many other species regularly harvested from the wild for food, medicine, and cultural and spiritual purposes. The park is also home to a host of endemic plant species. The park aims to ensure sustainable livelihoods of indigenous communities by relying on local resources to create alternative livelihoods while using customary laws and institutions to facilitate the effective management, conservation and sustainable utilization of biodiversity and ecosystems. The Potato Park, which is not an official protected area, and IBCH areas, in general, represent unique opportunities for CWR conservation practitioners to engage with communities and grassroots organizations to ensure that CWR issues and concerns are integrated into plans. Such work also presents opportunities for linkages between protected and agricultural landscapes to facilitate expected CWR species migration under climate change.

Recently, the UNEP/GEF CWR Project collaborated with Asociación ANDES on capacity building and CWR conservation. In 2009, the Asociación ANDES hosted an international training workshop on 'Design and Planning of Agrobiodiversity Conservation Areas' in Cuzco, Peru, at the request of a delegation of farmers and researchers from Ethiopia who were considering a similar concept for an Ensete park. The UNEP/GEF CWR Project was able to work with colleagues at the Asociación ANDES to ensure that resources and materials on CWR *in situ* conservation were included in the training. The workshop resulted in the Joint Declaration on Agrobiodiversity Conservation and Food Sovereignty, which draws attention to the importance of CWR in community conserved areas.

Source: adapted from Argumedo (2008) and Argumedo and Stenner (2008)

Let the locals lead

To save biodiversity, on-the-ground agencies need to set the conservation research agenda, not distant academics and non-governmental organizations.

Source: Smith et al, 2009

Biocultural diversity conservation: An opportunity for CWR *in situ* conservation

As already alluded to, there is a growing body of knowledge on indigenous management systems of *in situ* plants and crops which shows that local people possess a great diversity of sustainable and localized conservation-oriented knowledge and practices. This field of biocultural diversity conservation (Leakey and Slikkerveer, 1991; Adams and Slikkerveer, 1996) is rapidly emerging as a highly dynamic and integrative approach to understanding the links between nature and culture, and the interrelationships between humans and the environment from the local to global scale (Maffi and Woodley, 2010), providing opportunities that are certainly worth exploring in regard to enhancing the *in situ* conservation of CWR. Such approaches rightly point to the need for integrating human values and needs in conservation strategies (Maffi and Oviedo, 2000; Maffi, 2004). Several other authors have highlighted models of low-intensity mosaic usage of the environment and its resources by local communities for positive and equitable biodiversity conservation outcomes, including Altieri and Merrick (1987); Alcorn (1991, 1994, 1995); Toledo (2001); Carlson and Maffi (2004).

Global commitment and support in recent years for enhanced community participation in biodiversity conservation has led to the emergence of community conserved areas (CCAs, see Box 5.6), recently described as the most exciting conservation development of the 21st century (Kothari, 2006b). Although most CCAs, which are dealt with in more detail in Chapter 11, fall within the definition of Category V protected areas, they do not necessarily have this designation in practice and may also not be identified as part of the national protected area network. CCAs, most of which address agrobiodiversity conservation, both wild and domesticated, have been defined (see Kothari, 2006b) as:

> *Natural and modified ecosystems with significant biodiversity, ecological and related cultural values, voluntarily conserved by indigenous and local communities through customary laws or other effective means.*

CCAs contain three essential elements:

- communities closely tied to ecosystems and/or species through cultural, livelihood, economic or other important links;
- community-based management decisions leading to the conservation of habitats, species and ecosystem services; and
- communities as the prime actors in decision-making and implementation of actions.

Kothari (2006b) identifies two general types of CCA with implications for sustainability:

- **Strong types** are usually internally originated and driven, fully backed by local practice and culture, strongly supported by other stakeholders (e.g.

NGOs) and with the community entitled to some form of ownership rights recognized by the national policy framework.
- **Weak types** are usually externally originated and driven, poorly supported by NGOs and do not secure long-term ownership rights.

Importantly, CCAs include mosaics of natural and agricultural ecosystems containing significant biodiversity value and are managed by farming and rural communities. This can help synergize links between agricultural biodiversity and wildlife and gene flow and migration, and represents an exciting prospect for future community-based work in CWR conservation.

Sources of further information

The **Center for People and Forests** (RECOFTC) has one of the most useful CBNRM online sources of information available. There is a wealth of downloadable manuals and publications available. Of particular interest is their manual for 'Participatory Management of Protected Areas'. The manual on 'Facilitation Skills' will also be useful for anyone working with participatory approaches. Website: http://www.recoftc.org/site/index.php?id=392

Chambers, R. (2002) *Participatory Workshops: A Sourcebook of 21 Sets of Ideas and Activities*, Earthscan, London, UK.

Community Empowerment is a website dedicated to strengthening communities through participation, which includes a useful set of downloadable modules. Website: http://www.scn.org/cmp/

The **Community Planning website** has clear advice on a whole range of ways and tools to get people involved. Website: http://www.communityplanning.net/index.php

The **FAO Participation Website** brings together a broad cross-section of stakeholders interested in participatory approaches and methods in support of sustainable rural livelihoods and food security. It also provides a wealth of resources and field tools for successful participation. Website: http://www.fao.org/participation/default.htm (last accessed 7 October 2010).

FAO (1990) *The Community Toolbox: the Ideas, Methods and Tools for Participatory Assessment, Monitoring and Evaluation in Community Forestry*. Website: http://www.fao.org/docrep/x5307E/x5307e00.HTM.

Friis-Hansen, E. and Sthapit, B. (2000) *Participatory Approaches to the Conservation and Use of Plant Genetic Resources*, IPGRI, Rome, Italy. Although dealing with the on-farm context, there is a lot of useful information in this book on participatory approaches, many of which are applicable to CWR conservation. There is a chapter that provides a brief review of participatory tools and techniques.

Louise Grenier (1998) *Working with Indigenous Knowledge: A Guide for Researchers*, International Development Research Centre (IDRC). Website: http://www.idrc.ca/en/ev-9310-201-1-DO_TOPIC.html

The online **Guide to Effective Participation** offers information on partnerships and participation, theory to practice including toolkits, ideas and other downloadable resources. Website: http://www.partnerships.org.uk/guide/index.htm

IIED Participatory Learning and Action is the world's leading series on participatory learning and action approaches and methods. Website: www.planotes.org/

IGNARM (Network on Indigenous Peoples, Gender and Natural Resource Management) shares experiences and knowledge within the field emerging at the intersection between indigenous peoples, gender and natural resource management. Website: http://www.ignarm.dk/

The **IUCN Indigenous and Community Conserved Areas** website contains many resources including a worldwide database and publications. Website: http://www.iucn.org/about/union/commissions/ceesp/topics/governance/icca/index.cfm

Lockwood, M., Worboys, G.K. and Kothari, A. (2006) *Managing Protected Areas: A Global Guide*, Earthscan, London, UK. This includes detailed chapters dealing with community conserved areas and collaboratively managed protected areas.

Martin, G. (2004) *Ethnobotany; A Methods Manual,* Earthscan, London, UK. Chapters 1, 4 and 8 contain useful information on participatory approaches.

Parque de la Papa (The Potato Park). Website: http://www.parquedelapapa.org/eng/03parke_01.html

Participatory Approaches: A Facilitator's Guide. Website: http://community.eldis.org/.59c6ec19/

Pretty, J., Guijt, I., Thompson, J. and Scoones, I. (2003) *Participatory Learning and Action: A Trainers Guide*, IIED. It is the standard reference on participatory PLA training and tools and is designed for both experienced and new trainers with an interest in training others in the use of participatory methods, whether they are researchers, practitioners, policy-makers, villagers or trainers.

Terralingua, an international non-profit organization, maintains a useful community of practice portal for exchange and sharing of information on biocultural diversity. The portal is an online companion to the book *Biocultural Diversity Conservation: A Global Sourcebook* (Earthscan, 2010). Website: http://www.terralingua.org/bcdconservation/

Tuxhill, J. and Nabhan, G.P. (2001) *People, Plants and Protected Areas: A Guide to In Situ Management,* Earthscan, UK. This book has a useful chapter 'Working with local communities', which provides detailed background information on the rationale for involving local communities in conservation. The chapter also has much information on participatory information gathering tools, the materials required, the advantages and disadvantages, and protocols for implementing. It includes information on preparing for community meetings.

[Links last checked on 28 May 2010]

Note

1. FAO Participation website: www.fao.org/particpation/default.htm (last accessed 7 October 2010).

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