

**Learning to evaluate capacity**  
development and collaborative learning  
about community-based natural resource  
management: lessons from Asia

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# Abstract

Community-based natural resource management (CBNRM) has made inroads in many Asian research and development organizations. Developing capacity for CBNRM among practitioners and organizations requires field-based action learning, networks and partnerships, institutional reform, and training and information support services. A major challenge has been to assess and document the role of capacity development in enhancing CBNRM outcomes. To address this challenge, nine CBNRM-oriented organizations from four countries in East and Southeast Asia established an informal regional platform to strengthen their ability to carry out such evaluation.

A key lesson that emerged is that evaluative learning frameworks contribute to understanding and enhancing capacity development strategies, including scaling up, sustainability, and institutionalization. Such frameworks consist of a clear definition of context, content, capacity, the capacitated, and capacity development. Collaborative learning provides a platform for those seeking to evaluate capacity development, by enabling them not only to conduct evaluation, but also to develop their capacity to evaluate. It also allows participants to draw on their individual and collective experiences to build a practice-informed theory on evaluating capacity development. The effectiveness of evaluation can be greatly enhanced if it is built into and becomes integral to the capacity development process and is fully embraced by all those involved. An adaptive mode of learning is likewise critical to successful evaluation, as continuous conceptual and methodological refinement occurs with increased understanding of the contexts and purposes of evaluation.

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# Learning to evaluate capacity development and collaborative learning about community-based natural resource management: lessons from Asia

## **USING EVALUATION FOR CAPACITY DEVELOPMENT**

In various part of Asia, organizations are attempting to document the processes and results of capacity development in community-based natural resource management (CBNRM). However, cross-learning and sharing of information have been limited. This has hindered the identification of lessons, as well as the design of pathways for scaling out and up.

In 2006, a new initiative — Evaluating Capacity Development (ECD) — brought together nine Asian partner organizations in an informal network to develop and pilot methods for evaluating capacity development processes and outcomes, promote the effective use of evaluation by organizations engaged in capacity development efforts, and facilitate wider learning and use of evaluation in capacity development. The nine partners, all working in the field of participatory natural resource management and all with links to the International Development Research Centre's (IDRC's) regional program as well as among themselves, responded to a call from the Centro Internacional de la Papa, Users' Perspectives with Agricultural Research and Development (CIP-UPWARD) to work together (CIP-UPWARD 2007; Campilan et al. 2009; Vernooy 2010).

Previous research on organizational development offers a number of analytical frameworks and methods for assessing capacity and related performance (Horton et al. 2003). The ECD initiative set out to build on that research and fill a gap by developing approaches that systematically assess both the processes and outcomes of capacity development.

The ECD initiative supported a variety of learning, collaborative research, and knowledge-sharing experiences within and among the partner organizations. Several intensive regional workshops or "writeshops" encouraged cross-learning to help participants assess capacities developed in themselves and each other and to draft case studies, which were revised several times later. Appendix 1 contains photographs of the ECD initiative.

The EDC research agenda addressed five questions, four to do with capacity development and one concerning evaluation:

- What are various stakeholders learning from their involvement in capacity development efforts, individually and organizationally?
- Are capacity development efforts contributing to more equal and learning-oriented relationships among stakeholders?
- Have capacity development efforts contributed to desired CBNRM outcomes in terms of improved livelihoods, more equal access to natural resources, more sustainable use of natural resources, empowerment, and supportive policy changes?
- What are the strengths and weaknesses of different capacity development modalities, such as working groups, learning communities, networks, organizational partnerships?
- How can CBNRM capacity development efforts be effectively and meaningfully monitored and evaluated?

This last question entailed a number of more detailed questions: How can multiple stakeholder perspectives be considered? How useful is self-assessment? How useful is participatory monitoring and evaluation (PM&E)? How useful is a theory of action about learning? What is an adequate time frame? How can adequate monitoring and evaluation (M&E) capacities be developed?

In this paper, we address these questions across the nine studies (Appendix 2) under the two main themes of the initiative: capacity development, and evaluating capacity development. A comparative analysis highlights the particularities of each study in terms of context, capacities developed, capacity builders, the capacitated, and capacity development strategies. At the same time, a number of similarities allow for some generalizations in the form of lessons learned. These lessons may inspire other capacity development and evaluation of capacity development initiatives, while avoiding simplistic prescriptions to be followed uncritically.

At the interface of the two central themes of the ECD initiative emerges the key insight that both the effectiveness and the meaningfulness of learning efforts can be greatly increased if evaluation is integral to the process and fully embraced by everyone involved. Although this is not a revolutionary insight (see, for example, Horton et al. 2003; Patton 2003; Vernooy et al. 2003), in the field of capacity development it is still not commonly recognized or put to good use (Engel 2007; Vernooy 2010). From the nine cases, we can see that there is no single way to integrate M&E into learning processes. However, it is worth experimenting with a variety of methods and tools, adapting one's practice along the way while keeping a critical eye on the time and energy spent

on M&E. Regular M&E can contribute to better outcomes, but, just as important, it can also improve the quality of the learning process.

## **BRIEF OVERVIEW OF THE NINE STUDIES**

The organizations involved in the ECD project represent three broad types: academic, regional network, and community-based. These categories were useful, generally, to facilitate certain types of cross-learning and comparison, but they do not portray a complete picture of what the organizations actually do.

The three academic organizations, from China and Viet Nam, also do research and work with community organizations. Their work reflects a broad range of changes in teaching approaches, student behaviour, and curriculum development, and, in some cases, includes assessment of community learning and impacts on farmers and policy.

The three research networks — Asia-wide, Philippines, China — are also led by a university or collaborate with one or more universities and sometimes include farmers' research groups. Their new learning includes changes in knowledge, partnering skills, and better-quality institutions or projects for end users including farmers and other stakeholders.

The three community organizations, in the Philippines and Mongolia, are NGOs collaborating with local communities and a national government ministry working closely with herder communities. They conceptualize and apply the CBNRM concept with some commonalities, but operate in three different, quite specific ecological and management circumstances, i.e., coast, forest, and nomadic-pastoral (mostly desert or semi-desert) areas. They indicated improved capacities in terms of understanding, developing, and implementing CBNRM-related policies and in establishing working partnerships and more formal organizational management systems or networks.

The nine studies represent a diversity of capacity development experiences, although the teams responsible for the studies have certain elements in common: an interest in community-based approaches, strong and long-term relationships with local communities, the use of participatory action research and development methods and tools, the forging of new forms of collaboration that include multiple social actors, an intention to link research to policies, and the exploration of new information and communication technologies. Each of the nine teams produced a comprehensive evaluation report on which this paper is based; the reports are being edited to be included in a monograph (Campilan et al., 2009).

The summary in Appendix 2 documents the nine partners' basic understanding of or assumptions about CBNRM and capacity development; as well as principal approaches or methods used to implement and evaluate CBNRM capacity development. It also highlights the principal changes — perceived or documented — in CBNRM and evaluation capacities for each case.

### **The nine evaluation reports**

Emilita Monville Oro, Reymondo A. Caraan, Magnolia Rosimo, Rosalio Fernando Jr, and Nelly Alzula. *Lighting the torch: promoting greater community participation in forest management in the Philippines*

Ho Dac Thai Hoan, Le Van An, Le Thi Hien Nhan, and Wayne Nelles. *Evaluating a decade of CBNRM capacity changes in a Vietnamese university, the extension system and communities*

H. Ykhanbai, B. Narantulga, Ts. Odgerel, B.Binye, with Ronnie Vernooy. *Unlearning old habits: an evaluation of CBNRM capacity development in Mongolia*

Lorna Sister, Lilibeth Laranang, Flora Mariano, Marietta Nadal, and Arma Bertuso, with contributions from Carlos Basilio, Precy Tangonan, Philip Ibarra, Maribel Ramales, and Mariel Caguioa. *Small changes reap big gains: developing the capacity of Tarlac College of Agriculture through partnering initiatives in agricultural research and development*

Lenore Polotan-Dela Cruz, Elmer M. Ferrer, and Cesar Allan C. Vera. *Toward an effective learning organization: evaluation of the CBNRM Learning Center's capacity-building program, the Philippines*

Lu Min, Cheng Huawei, Cheng Zhiqiang, Liu Lili, Huang Jingjing, Dindo Campilan, and Ronnie Vernooy. *A spring wind blowing: evaluating CBNRM capacity development at Jilin Agricultural University*

Ma. Stella C. Tirol and Winifredo Dagli. *Twist, twirl, and turn: learning with CBNRM knowledge weavers*

Mao Miankui, Li Xiaoyun, Qi Gubo, Xu Xiuli, Dong Hairong, Dindo Campilan. *A bright future comes through change: evaluation of the Farmer-Centred Research Network in China*

Qi Gubo, Li Chanjuan, Li Jingsong, Liu Yuhua, Long Zhipu, Lu Min, Mao Miankui, Song Yiching, Wang Liquan, Xu Xiuli, Yang Huan, Zhang Li, Zhang Ziqin, and Ronnie Vernooy. *Two know more than one: the use of monitoring and evaluation to strengthen CBNRM in China's higher education system*

### ***Academic organizations***

The China Agricultural University (CAU) study indicated substantial changes since 2004 among students and staff in terms of CBNRM knowledge, attitudes, personal behaviour, institutional reform, and practices. It used a variety of M&E methods, including questionnaires, focus group discussions, visual assessment tools, self-monitoring exercises, self-reflection papers, video/photo shows, role playing, peer reviews (Vernooy et al. 2008), and a major tracer study (Zhang Li 2008). The evaluation had a broad scope, from the university to the field, and included university staff, students, research partners, local officials, extension staff, and farmers.

The CAU's College of Humanities and Development (COHD), the lead group involved in the ECD initiative, reported that their academic approaches now incorporate a CBNRM course and "learning by doing," while the overall curriculum orientation has shifted substantially from older, doctrine-based knowledge to discovery-based teaching/study, which includes participatory action research. Now, students are given more opportunities for free thinking and taking the initiative, although top-down methods still exist in the political structures and education methods at CAU at large.

The changes brought about at CAU are a concrete example of the implementation of the broader higher education reform policy supported by the national government. The results include improved CBNRM capacities; improved research (and rural fieldwork) capacities of students and facilitators; greater confidence of individual researchers, team-leaders, and facilitators; and strengthening of CBNRM capacity in other organizations in Changchun, Hebei, Guangxi, Guiyang, and Kunming. CAU faculty and students also report greater capacity to use and evaluate a participatory curriculum development approach in their teaching and research.

Jilin Agricultural University (JLAU) had much in common with the CAU case, particularly as both universities carried out their work under the government-supported higher education reform effort with policy support as well as faculty and student enthusiasm. They both used a similar learning by doing approach to teaching and research; this, along with their common language and geographic proximity, provided more obvious opportunities for cross-learning and ongoing institutional cooperation. A broader context for change at JLAU (as well as CAU) has also been a trend toward a more liberal, learner-centred, democratic philosophy of education that views the student and teacher as equal (Lu Min et al. 2008; Vernooy et al. 2008). The JLAU team used methods similar to those of the CAU team, and the scope of the evaluation was similar as well. Egalitarian student-teacher relationships were noted as more important than teacher-led, spoon-fed, authoritative knowledge transfer.

At the same time, the JLAU case applied new forms of learning in a new graduate course in participatory rural development (PRD). It resulted in better student understanding of and capacity for PRD with positive impacts in the field, including better self-organization and collective problem-solving by farmers. The latter led to improved natural resource management practices and improved livelihood of farmers and local communities involved in the research related to the PRD course at three major agro-ecological sites in Jilin province. An important change that the JLAU team reported was new learning and evaluation capacities resulting from peer evaluation of the new PRD course.

The team at Hue University of Agricultural Forestry (HUAF), Viet Nam, used key informant interviews, focus group discussions, field observations, and document analysis, involving university staff, students, local government staff and extension agents, and farmers. It demonstrated an increase in CBNRM knowledge and practice in terms of professors' beliefs, behaviours, curricula, and course types due to more than a decade of government political reforms, local initiatives, and development cooperation.

These changes are further reflected in formal university extension programs and in less formal, indirect community or farmer influences and policies. In districts around Hue, agricultural officers in communes were trained and could apply CBNRM knowledge and skills as a result of the capacity development efforts. A group of about 30 lecturers and researchers have also improved their capacity for CBNRM and related research activities through field practice and study abroad.

In addition to the academic changes, one key result was that a small number of communities in the mountainous area west of the city, with whom HUAF researchers had worked, were better able to apply CBNRM tools and concepts to identify resources and carry out village-level natural resource management planning.

However, precise evaluation remains a challenge in this case, given the presence of other factors, such as multiple projects and related donor influences and a generally strong national policy intervention process.

### ***Research networks***

The ALL in CBNRM network based in the Philippines involved nine learning groups consisting of academic, government, and non-governmental organizations (NGOs) or projects in Lao PDR, Cambodia, Indonesia, Philippines, Thailand, and Viet Nam. The network used an approach

inspired by the work of Freire (2000). Main evaluation methods were document reviews, interviews, focus group discussions, questionnaires, participatory story-telling, and a technique known as most significant change stories. The participants included researchers, staff of NGOs and local organizations, and community members.

The network demonstrated multiple and diverse capacity changes with respect to individual learning about CBNRM; project team and organization learning; and community adaptations. Individuals and groups acquired new knowledge and skills in participatory development, such as stakeholder analysis, PM&E, developing partnerships, and communication. Improved or new capacities were better partner relationships, trust, respect, and women's participation, as well as changes in knowledge, attitudes, and field practices of local officials and church leaders.

The ALL in CBNRM study reported that all this, in turn, positively influenced advocacy programs, participatory planning, policies, ecology, and livelihoods. With respect to evaluation capacities, participants acquired new knowledge and skills, then specifically applied these in PM&E. Key PM&E lessons and principles that could be applied by all nine organizations in the ALL in CBNRM network were that learning should be experiential; occur in groups; and combine distance with face-to face contact.

The Farmer-Centred Research Network (FCRN) in China shares some of the political context, organizational features, and learning objectives of the two Chinese universities. However, whereas CAU and JLAU were responding directly to the need for reform in the academic system, the FCRN focused on a more egalitarian or democratic learning approach to build researchers' and farmers' capacities to conceptual and carry out agricultural research. The FCRN aimed to support a new agricultural research system that was less researcher-led or externally driven and more farmer-centred and locally led. The FCRN introduced CBNRM approaches and values as a means to facilitate these types of reforms.

The evaluation team used questionnaires, focus group discussions, key informant interviews, document analysis, and field observations to collect information. Covering individual researchers, research organizations, and rural communities, the case documented evident changes in understanding of CBNRM, for example, where researchers valued social (not only natural) sciences and gender concerns. Farmers and researchers also better understood the value of cooperation, self-organization, and partnerships for obtaining government research resources. The case also showed that stakeholders were better able to rethink and assess their interactions to be more effective and efficient.

The Tarlac College of Agriculture (TCA) in the Philippines also shared some contexts and challenges with other academic and research organizations. Since the early 1990s, TCA has been a key partner of CIP-UPWARD, collaborating on various activities, such as farmer field schools. The TCA applied the CBNRM concept to agricultural research and development using integrated crop management to improve sweet potato production. TCA applied a participatory, partnership-oriented approach to develop and introduce innovations.

The evaluation team collected information in focus group discussions, informal interviews, network mapping, and most significant change stories, with a focus on the staff of both organizations and their immediate partners. The results confirmed a variety of organizational and institutional changes, including more programs, funded projects, and donors providing government and private support. They also showed that partnering and joint learning resulted in increased TCA research output as well as improved methods and facilities; farmers' productivity, marketing activities, and social behaviour also improved. In terms of individual capacities, TCA staff engaged in more cooperative activities, worked more efficiently, improved skills, and had a more positive outlook, more confidence, and a greater willingness to tackle tasks beyond their disciplinary training.

Two of TCA's most important evaluation tools were most significant stories and network mapping. The study concluded that strategic partnering, although often slow and challenging, also facilitated greater organizational and individual capacities for ongoing reflection as well as better evaluation of work and projects.

### ***Community organizations***

The CBNRM Learning Center in the Philippines applied the CBNRM concept to community-based coastal resource management (CBCRM) aiming to transform power relationships and governance by building the capacities of marginalized coastal communities. It implemented an organizational capacity development project focusing on ability to be (perspective), ability to do (structure and technical skills), and ability to relate (processes and partnerships).

This study team's main methods were key informant interviews, focus group discussions, case study analysis, and a tracer study. Participants included researchers, staff of NGOs and local community organizations, and people in local communities. The team reported enhanced self-confidence among partners, better relations with local government units, and greater ability to implement coastal laws as resource management concepts were more familiar and institutionalized. The team also reported enhanced skills in collaboration with partner



organizations, greater understanding of others, and broadened perspectives of leaders in engaging with local government. Increased or new abilities in strategic planning were also noted in organizations and in developing local teams and trainers. Evaluation capacities, in particular, were enhanced; lessons were applied and institutionalized, facilitating future organizational assessments.

The International Institute of Rural Reconstruction (IIRR), also in the Philippines, applied the CBNRM concept to community-based forest management (CBFM). IIRR faced many of the challenges, perspectives, and national or political contexts for forestry management that the CBNRM Learning Center did for coastal management. IIRR views itself largely as a capacity development institution, focused on developing the organizational and management capacities of rural development institutions, managers, and practitioners; developing partner communities' capacities to understand issues affecting them as well the knowledge and practical skills to respond; and systematically learning from this work. IIRR also views capacity development as a means to reshape a dysfunctional CBFM policy environment.

The evaluation team analyzed documents (especially policy documents) and held key informant interviews, focus group discussions, and a writeshop. Participants included researchers, staff of NGOs and community-based organizations, local people, and policymakers. The team reported improved knowledge, skills, and attitudes regarding CBFM. Multistakeholder processes allowed better application and democratization of CBFM policies. Community voices were better heard at the regional and national level and contributed to amendments to CBFM policies and programs. This led to positive changes in relationships with peoples' organizations as well as improved CBFM implementation. One lesson learned was that continuous learning processes and systematic evaluation should be embedded within capacity development efforts and that IIRR now has a greater capacity for doing such work because of this project.

Although Mongolia's Ministry of Nature and the Environment (MNE) is a national government organization, it shares some similarities in approach and function with the other community and research organizations. It is not a community organization, but it helped build community and farmer/herder capacities for understanding and undertaking sustainable management of common natural resources. The MNE evaluation team, which includes several policymakers, collected information through key informant interviews, focus groups discussions, document review, and a "community book" — a tool used by local herders to document and analyze changes in their environment as well as in individual and organizational capacities. Involved were researchers, university staff, local government staff, and herders and their leaders. A major

CBNRM challenge was how to better understand and manage changing social, economic, and demographic factors contributing to overgrazing, desertification, and resource exploitation. New concentrated settlements were competing with the traditional nomadic herder and pastoral agriculture systems, which were less ecologically harmful.

The MNE aimed to facilitate the creation of new management tools and environmental protection processes to enable local communities to resolve land-use conflicts while encouraging the development of more sustainable livelihoods. It applied a participatory evaluation approach including field research and targeted training in evaluating capacity development efforts among herders, local government staff, and researchers. Participants learned and applied participatory rural appraisal, social and gender analysis, and PM&E techniques. The team reported impressive results with over 90% of herders believing that their knowledge of pasture and natural resource management improved because of their new skills. Community capacity for restoring or protecting pasturelands and natural resources also improved, and people felt better able to discuss and resolve issues jointly with local authorities. Communities applied those capacities more systematically by learning about and adopting new rules as well as evaluation procedures, using innovations such as the community book to map progress, study, and sustainably manage natural resources and the environment.

## **ABOUT CAPACITY DEVELOPMENT**

### ***Context***

In Asia, natural resource management problems are often very obvious and dramatic. Political situations and policymaking processes are changing. In general, new opportunities seem to be arising for CBNRM-inspired and focused efforts although CBNRM is still far from being a mainstream concept, except, perhaps, in Mongolia, where CBNRM-oriented policies and laws now exist. Those involved in the case studies are all trying to encourage policy change.

The context in each country is clearly different and the various capacity development processes cannot escape from concrete realities. At the same time, the initiatives presented here contribute to changing realities, in some cases quite dramatic changes, and, as such, simplistic causal models and explanations are inadequate for understanding and deeper analysis. Even projects in the same country do not necessarily experience the wider context in the same way, although there are certainly commonalities, as the cases from the Philippines demonstrate.

However, some interesting similarities appear; e.g., Mongolia, China, and Viet Nam have gone through (or are experiencing) an “opening-up,” which evidently is providing space for some

courageous experiments in capacity development and research — efforts that are, in turn, contributing to the change process.

Since the early 1990s, Mongolia has been undergoing great change — transitioning to a market economy, developing new policies, pushing for decentralization, and strengthening civic society. At the same time, it faces serious environmental and socioeconomic problems. Supported by the government, the CBNRM team introduced the concept of comanagement as a novel CBNRM practice, representing a real development challenge. Interestingly, the MNE, not traditionally a capacity development institution, is playing a lead role in promoting, pioneering, and assessing comanagement — recently in close cooperation with three leading universities to integrate the concept into higher education.

Since 1990 in Viet Nam, a CBNRM approach has been applied gradually in a range of rural development policies, programs, and projects, made possible due to the government's opening-up (*doi moi* or innovation) policy. Here, HUAF has been a pioneer in introducing participatory methods and CBNRM into higher education, first in the field and then in the classroom, in a range of disciplines and faculties, from agronomy to rural extension.

History plays an important role in understanding today's capacity development initiatives. For many decades, "governance" has been top-down, without any meaningful involvement of the social actors or stakeholder groups in management of natural resources, education, agricultural extension, or other forms of service delivery. Now, broad changes are occurring — globalization, commoditization, and marginalization — in all of the countries covered by the nine case studies. But these broader processes are experienced and given shape through everyday practices, not in a linear manner, but rather through ups and downs, and reverses, uncertainties, and crises. More open and flexible learning strategies appear to be an effective way to respond to, cope with, and reshape this new reality — although gradually and not without challenges. All nine cases are examples of the search for more solid, dynamic, and, ultimately, useful and meaningful learning processes. The descriptions that follow are two examples of this search.

*FCRN China:* Although some experience in participatory research has been built up across China (since the late 1980s) and receptiveness to farmers' interests has been growing, a huge gap remains in terms of introducing and experimenting with, let alone mainstreaming, participatory and farmer-centred approaches in China's huge and diverse agricultural and natural resource management systems. Bridges between scientists,

universities, and the interests and needs of farmers (especially in poor, remote and marginalized regions) are few and fragile. Among practitioners of participatory approaches, often a more technical, tools-oriented method prevails. However, some opportunities for change exist, and many interested researchers and students are looking for a chance to do things differently.

*IIRR Philippines:* In the Philippines, community-based forestry management (CBFM) has spread very slowly; 90% of those using CBFM still live in poverty and sustainable forest management is threatened. This is due to multiple perspectives in combination with an imbalance of power among stakeholder in the forest sector. It is also because CBFM and its policies remain skewed in favour of those far from the community forests. Community forest users and dwellers lack a voice in policymaking. Existing policies have hindered CBFM implementation. The Community Forestry Interlocking Project (CFIP) is an example of democratic policymaking where community voices are heard and local interests are incorporated into forest policies. The goal is to release the potential of communities to manage their own forests.

### ***CBNRM capacities and the capacitated***

Through the cases, we see that identifying clear and attainable capacities is important to success — independent of the nature of the particular objective. Attainable objectives emerge from a focus on practice. Improving practice has long been neglected in many higher education organizations as well as in many other forms of training.

Identification of capacity development among individuals is much easier than among organizations and communities. Each case developed different sets of capacities according to the context — local needs and interests, previous efforts, resources at hand, the policy situation. The more precisely these capacities are defined, the easier it is to monitor and evaluate their realization.

In the case of IIRR, the main focus of capacity development was community-based organizations and their individual members. The capacities to be developed included how to do community-based/participatory field research, how to learn from and with community members about CBFM policies, how to support advocacy processes, and, by facilitating multistakeholder communication platforms and publications, how to accelerate pro-community changes in forest policy and institutional and inter-institutional reform. At an aggregate level, the aim was to develop and strengthen

experiential training and learning to enhance the capabilities of professionals to enable them to respond to the contemporary challenges that community forestry presents.

In Mongolia, the focus was on the introduction of and experimentation with a CBNRM approach, embedded in a broader perspective of human development and empowerment. In the context of a “new” Mongolia, it meant addressing the challenge of “unlearning” a centrally planned society, handling a transition process, and developing sustainable natural resource management practices. The team operationalized this broad capacity development goal through a three-pillar framework including ecological, economic, and social variables. The main partners and participants were the research team, the comanagement teams at the local level, and community members (men and women herders) at three (now four) research sites. Learning how to practice participation (in a broad sense), as a process of collective analysis, action, and learning, has been central to the approach.

In the Chinese university cases, capacity development was aimed at students and teachers and, secondarily, farmers and decision-makers at universities and ministries. The core capacities to be developed included the ability to listen to different voices from different perspectives (i.e., to work with interdisciplinary and multistakeholder groups), to integrate these perspectives into teaching and research (working together as a team), to establish the local practice base and build sound relations with local people, to apply a participatory approach to teaching and related research activities, to use participatory methods to monitor and evaluate learning processes, and to understand research and development using a systemic and dynamic learning framework.

Despite differences across the cases, a number of core CBNRM-focused capacities were central to all:

- Identifying and addressing rural development issues coherently, dynamically, from multiple perspectives, and grounded in reality
- Working with other stakeholders (in activities from research to advocacy) and bridging worlds of knowledge, expertise, points of view, aspirations, and interests
- Conducting participatory action/CBNRM research, addressing key challenges, or exploring new opportunities
- Designing and supporting viable CBNRM strategies in the local context, where relevant, in connection with policies and laws
- Designing and using effective PM&E strategies that reinforce the learning — both process and outcomes

In all nine cases, one or more of these capacities was developed or strengthened, but as each case set its own objectives, it is not easy to measure progress on a common scale (which was also not an objective of the ECD initiative).

### ***Beyond individual capacities***

When moving from individual to organizational capacity development, things seem to become more complicated. Although a few cases have addressed organizational capacity, the studies have not systematically dealt with this dimension. In the CBCRM case, organizational capacities were defined as the ability for an organization to “be,” i.e., to maintain its specific identity, values, and mission; its ability to “do,” i.e., to perform functions and achieve stakeholder “satisfaction”; and its ability to “relate,” i.e., to manage external interactions while retaining autonomy.

Thus, it seems that there are some difficulties in clarifying what CBNRM means in terms of organizational change. From the studies, there is no clear definition of what capacities are required to anchor CBNRM in higher education organizations, in rural communities, or in the world of policymakers. This is not to say that this issue is not being addressed in some cases, as we know, for example, from the work underway in China (Vernooy et al. 2008; Zhang Li 2008).

In terms of organizational changes, generally, organizations adopted more participatory decision-making processes, their strategic direction became clearer, and some created new elements, such as a course. The impact at the organizational level is more obvious in some cases than in others. The mainstreaming CBNRM project in China has resulted in some changes in participating organizations: improved management, stronger leadership, renewed programming, novel incentives and rewards, and more effective networking. In the CBCRM case, the organizations use specific tools and knowledge — organizational assessment, appreciative inquiry, PM&E — to change their long-term perspectives on organizational development. In other cases, such as Mongolia, CIP-UPWARD, and HUAF, the influence is not as clear.

Communities incorporated CBNRM elements into their development strategies; e.g., in the HUAF case, community members used CBNRM elements in land-use decisions and in promoting community-based resource rights. In Mongolia, community members used the CBNRM approach to identify local issues, to better understand ecological changes, and to improve nutrition. In Jilin, farmers’ self-organizing abilities were enhanced and farmers have started to manage their nature resources through more effective links to the market. But in other cases — FCRN and ALL in CBNRM — there is no clear impact on communities or it is too difficult to assess.

We also see different ways to influence policy: in the IIRR case, some community-based organizations participate in national policymaking and their ideas have been incorporated into policy changes. In Mongolia, efforts have already produced new policies and laws. But the impact is yet to be seen.

In terms of outcomes and impact, there seems to be a need to do a better job of assessment and to make the cases richer, as details are often missing from documents and explanations.

It is also difficult to attribute impacts to specific factors; development is not linear, and various components of capacity are often strongly interrelated. Perhaps this highlights the strength of multi-component strategies, which seem to have greater potential (e.g., mainstreaming CBNRM in China).

Several issues emerge in the dilemma of individual versus organizational capacity development. First, there is often no clear goal to work toward for an organization, except in the CBCRM case. What appears across the cases is that individual capacity development is not enough and it does not lead to organizational development. We also see the limitation of networking. The network is not a substitute for its individual members; although networking can strengthen weaker members, it is not enough.

### ***Learning strategies***

In all nine cases, there was an emphasis on and a strong commitment to learning collaboratively in and from the field — to make research more relevant and to learn through practice. This principle appears crucial to build capacities for CBNRM, which simply cannot be learned from a book or by applying a blueprint. In all cases, we also noted the key role played by “champions” or change agents, who showed, opened, and led the way, although these champions did not receive due attention in all cases.

No two cases were exactly the same. From the beginning, some put specific resources into organizational development (e.g., CBCRM and mainstreaming CBNRM in China), but the results, insofar as they can be tracked and analyzed, vary considerably.

In other cases, there was no apparent plan for organizational development or what we could call a theory of action (Patton 2003) — an envisioned pathway to change, from the individual to broader levels. Rather, they pursued a pragmatic way of doing things, most notably in the HUAF and Mongolia cases. HUAF integrated CBNRM into every area — training, research, and

community development work — in a desire to give practical meaning to the *doi moi* policy, and in Mongolia, the team incorporated lessons learned in the field directly into new policies and laws, without any apparent clear or comprehensive theory of how individual learning leads to broader outcomes and impact.

From both case studies, it is hard to decipher specific changes in organizational development, of Hue University at large or of the key departments involved, or of the MNE in Mongolia or the department responsible for the work. It is likely that such changes occurred, but they were not duly documented.

Common among the cases, however, are a number of methods and tools, such as learning together with different stakeholders, learning by doing, fieldwork, selective use of training, ongoing use of M&E (for most, starting before becoming involved in the ECD initiative), regular sharing and exchanges, using virtual methods, such as the website of the ALL in CBNRM program, experimenting with new forms of mentoring and facilitation, and, in a few cases, using theoretical insights explicitly (i.e., learning theories), as in the ALL in CBNRM, mainstreaming CBNRM in China, and CBCRM cases. All cases were also grounded in research, based on a participatory action framework of action–reflection, albeit with different foci (comanagement of forests, grasslands, or sweet potatoes or curriculum development in the mainstreaming CBNRM, ALL in CBNRM, and Jilin cases). All cases experimented with new forms of networking or partnering, new forms of mentoring, integrating social and gender analysis (to various degrees), and some kind of advocacy.

The cases suggest that multi-component efforts lead to better results, as they create synergy and also address individual learning needs and interests, which are usually diverse. Key people or entrepreneurs (champions) played an important role in the whole process, keeping it going and following it through in the “right” direction.

It seems that the clearer the capacity development strategy, the better the results. Learning together is also a good way to build capacities. Integrating PM&E into the process can keep the team on track and allow it to make timely adjustments; PM&E also helped with the documentation. Targeting is very important, as well as the use of some sort of action framework, to make moving toward organizational capacity development easier.



### ***Emergent features***

The open and dynamic processes used in the nine cases have produced interesting and what we consider important, unforeseen, and unplanned results. They include identity development in the mainstreaming CBNRM case (COHD and JLAU, and to some degree the FCRN as well); the role of PM&E as a way to empower people in the Mongolia case; the value of CBNRM practice to provide feedback to professional practice and direction (outcomes and impact feeding into capacity development) at HUAF and in Mongolia; and the impact of the mainstreaming CBNRM efforts on other parts of higher education, e.g., the undergraduate program at CAU. It is tempting to speculate that these results would not have come about otherwise, but a deeper analysis is required to be able to confirm this. If validated, however, it would confirm that effective capacity development strategies are those that are more open, flexible, and dynamic.

## **EVALUATING CAPACITY DEVELOPMENT**

### ***Challenges***

Some teams (e.g., CAU) found that development or strengthening of the internal capacities of partners and organizations was more difficult to measure than individual capacities. Other cases focused more explicitly on organizational capacity development as a strategic objective and managed to produce useful evaluation results (e.g., CBNRM Learning Center, Philippines). This, in turn, increased the abilities of the organizations involved to do strategic planning (and evaluation). Still others (MNE in Mongolia) focused on developing and evaluating community capacities through various novel reporting and assessment tools (e.g., the community book). The ALL in CBNRM and FCRN networks strengthened the evaluation capacities of their members through the use of a mix of tools. In still other cases (IIRR) community-based organizations as well as government institutions strengthened their capacity for policy consultation, reform, and implementation processes through the effective use of PM&E.

The breadth and complexity of the studies with their diverse types of partners across many different types of organizations in various countries poses some challenges. Mapping commonalities and differences was also impeded by the fact that not all teams provided the same quality of documentation. Some of the work reported on and evaluated has a long history, and it not necessarily a result of the more recent activities carried out as part of the ECD initiative. Looking ahead, for some cases we do not know if there are clear administrative systems in place with identifiable resources or plans to further assess if or how the changes can or will be sustained.

There are perhaps at least two main reasons for the differences among the studies. The first was intentional in design and was based on a local, partner-driven, participatory approach, which valued a bottom-up rather than a top-down process. This design favoured self-reporting and evaluation with less imposed structure or opportunities for conducting external assessments. The second was partly due to the types of partners involved. Partner diversity was one of the strengths of the ECD initiative, but it also meant less shared thematic content as a basis for comparison or similar outputs and outcomes that could be evaluated. Instead, the overall ECD design allowed for considerable flexibility in the way partners did their work, still guided by the main research questions listed at the beginning of this paper.

The ECD initiative offered an egalitarian, partner-driven, open-learning approach and a responsive support system to empower all partners. This was its strength. However, the absence of a shared, explicit change model or models as a guide for action and learning hampered the development of more robust assessment strategies. This shortcoming or challenge is not unique to the ECD initiative, but, for example, was also one of the main findings of a recent review of IDRC's capacity development efforts around the world (Taylor and Ortiz 2008). Considering that one of the longer-term aims of this type of capacity development and evaluation initiative is to strengthen specific capacities for CBNRM, then a deeper conceptualization of possible trajectories of change would be very useful. Building on the work reported here, partners might together develop even better methods for assessing processes and outcomes.

A key element of a refined strategy might be "content"; for example,

- Staff expertise among core and subsidiary partners to improve and sustain organizational performance and policy impacts
- Content for platforms that can help facilitate scaling up or cascading of results to achieve a broader impact
- Policy content for understanding and promoting policy change as a means to more effective social, economic, and environment impacts
- Applied learning content to institutionalize M&E systems to help individuals, organizations, and networks better understand, improve, and sustain their capacity investments and activities

### ***Some lessons***

The ECD initiative generated several useful lessons. A key lesson that emerged is that evaluative learning frameworks contribute to understanding and enhancing capacity development strategies including scaling up, sustainability, and institutionalization. Such frameworks consist of

a clear definition of five “Cs”: context, content, capacity, the capacitated, and capacity development. These frameworks are most meaningful and effective when developed and shared by all actors in the learning process. If they remain in the hands of a few “specialists,” there is a risk that learning once again becomes a top-down, non-dynamic steered effort.

However, evaluation of capacity development, both in general and as applied to CBNRM, remains a relatively new area in the general field of evaluation. The pool of conceptual and methodological knowledge is limited and requires better systematization. Moreover, the value of using evaluation to support more effective capacity development is yet to be fully recognized by those involved in this field — universities, research organizations, and NGOs.

Another main lesson is that collaborative learning provides a platform for those seeking to evaluate capacity development by enabling not only the conduct of evaluation per se, but also developing the capacity to evaluate. It also allows participants to draw from their individual and collective experiences to build a practice-informed theory of evaluation of capacity development. The use of case studies provides a rich base for peer review and learning, even when the cases do not use a common assessment framework, which is, given the strong influence of context, perhaps not a necessary feature for a multiple case study such as the ECD initiative.

In the case of CBNRM, it is useful to think not only in terms of changing capacities but also of changing relationships — among individuals, organizations, and networks. This needs to be recognized in evaluation planning because the capacity to work together with diverse stakeholders, who often have divergent goals, is crucial to CBNRM success. But changing relationships or building new ones takes time and effort. Unfortunately, with changing agendas (including those of donor agencies supporting CBNRM work) and staff on the move, it is not easy to pursue capacity development for CBNRM.

The learning effectiveness and meaningfulness of evaluation can be greatly enhanced if it is built into and becomes integral to the capacity development process, and is fully embraced by all social actors involved in these efforts. An adaptive mode of learning is likewise critical to successful evaluation through continuous conceptual and methodological refinement, based on an increased understanding of the contexts and purposes of evaluation. Learning through evaluation thus becomes a guiding principle!

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## Appendix 1: Photos of the ECD initiative

**Photograph 1.**  
Presenting evaluation ideas during the planning workshop in the Philippines.  
(Photo: Ronnie Vernooy, June 2006).



**Photograph 2.**  
Exchanging evaluation progress results in China (first exchange meeting of the university cluster).  
(Photo: Ronnie Vernooy, January 2007)







**Photograph 3.** Field workshop in the uplands of Hue, Vietnam. (Photo: Ronnie Vernooy, September 2007)



**Photograph 4.** Field visit during the second regional workshop, the Philippines. (Photo: Courtesy of UPWARD, April 2008).

**Photograph 5.**  
Field work of the  
TARLAC-UPWARD team:  
working together with  
the Sapang  
Sweetpotato Farmers'  
Multipurpose  
Cooperative.  
(Photo: Courtesy of  
UPWARD)



**Photograph 6.**  
Regional workshop,  
Los Baños,  
Philippines  
(Photo: Wayne  
Nelles, May 2008)







**Photograph 7.**  
Final Regional Workshop,  
Jilin, China  
(Photo: Wayne Nelles,  
October 2008)



**Photograph 8.**  
Members of the 9  
ECD teams at the  
final workshop in  
China.  
(Photo: Ronnie  
Vernooy, October  
2008)

## Appendix 2: Summary of the evaluation studies

Case	Baseline assumptions and concepts	Approaches and methods for implementing CBNRM and evaluating capacity changes	Capacity changes
<i>Academic organizations</i>			
<b>China Agricultural University, China</b>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>Some baseline CBNRM knowledge; university course started in 2004</li> <li>CBNRM implies multidisciplinary learning and knowledge capacities (in course curriculum and research methods)</li> <li>CBNRM viewed as an approach to participatory rural development</li> <li>CBNRM is holistic and interdisciplinary, combining natural and social science knowledge and methods</li> <li>Mainstreaming of CBNRM needed (into higher education system, policies, society at large) for better adoption of CBNRM values and tools as normal practice</li> </ul> <p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>Stakeholders' new CBNRM capacity would improve knowledge, attitudes, and skills for rural/agriculture development to analyze/solve community problems</li> <li>Changing (individual) attitudes, knowledge, and skills might improve organizational stakeholder practices and mainstream CBNRM</li> <li>Continued or new financial support would sustain or strengthen CBNRM (capacity) mainstreaming beyond IDRC project</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>Learning by doing ("discovery" through practice beyond traditional classroom lectures/methods)</li> <li>Research fieldwork linking theory to practice</li> <li>Student/learner-centred teaching and participatory curriculum development (PCD)</li> <li>Students facilitate learning/teaching activities such as small group discussions</li> <li>Equality in student-teacher relationship (lunch seating, friendship, research partnerships, etc.)</li> <li>Teamwork/partnerships with universities and communities</li> <li>Fellowships support</li> <li>Nurturing of "champions"</li> <li>New course modules for CBNRM content/learning</li> <li>Collective action (applied learning approach influences social and political transformation)</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>PM&amp;E techniques for PRD and PCD</li> <li>CBNRM tracer study to assess longer-term impacts on participants</li> <li>Questionnaires, interviews, and focus groups of course participants/fellows</li> <li>Participatory rural assessment-type tools used, such as score-cards, mood meter and community wall</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>Shift from doctrine-based knowledge to discovery-based teaching/study with participatory action research</li> <li>Attitude and behaviour changes</li> <li>Improvements beyond CBNRM capacities alone (better personal, social, and community relations)</li> <li>Improved research (and rural fieldwork) capacities among students and facilitators</li> <li>Increased confidence of individual researchers, team leaders, and facilitators</li> <li>Other organizations' or locations' (e.g., Beijing, Changchun, Hebei, Guangxi, Guiyang, Kunmin) CBNRM capacities strengthened; evident by supportive policies (but more difficult to measure than individuals' capacities)</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>Greater capacity to apply (and assess) a PCD approach in teaching and research</li> </ul>
<b>Jilin Agricultural University, China</b>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>In 2006, all four JLAU colleges began with no knowledge of participatory rural development (PRD) or CBNRM theory</li> <li>CBNRM (or PRD) multidisciplinary teaching and research could be learned and applied with the four natural and social sciences colleges</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>Learning by doing</li> <li>New graduate PRD course designed/delivered using PCD methods</li> <li>Participatory learning methods applied to teaching and research</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>For students, perceived change in capacities to define key PRD concepts and methods; cooperate/communicate with others; differentiate between various action-learning methods; draft proposals; link theory to practice; do multidisciplinary problem-solving; speak/write confidently</li> </ul>

Case	Baseline assumptions and concepts	Approaches and methods for implementing CBNRM and evaluating capacity changes	Capacity changes
	<p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>Traditional education model with students as passive recipients of theoretical knowledge without application is not adequate to develop PRD capacity</li> <li>New capacities for rural development require skills in participatory communication, teamwork, multidisciplinary perspective in problem identification and stakeholder analysis, etc.</li> <li>A new participatory approach in teaching and research would improve individual and organizational capacities and have a positive impact on institutions and local communities</li> </ul>	<p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>PM&amp;E team established to assess effects of course on individuals, institutions, and community</li> <li>Course review meetings to assess, strengthen, and improve next round of courses to advance CBNRM adaptation process at JLAU and build capacity in terms of PRD course objectives</li> <li>Questionnaires, knowledge, attitudes, practices analysis, interviews, individual reports, etc.</li> <li>Post-evaluation to track impact of PRD course on participants' future</li> <li>Peer evaluation of JLAU extension courses</li> </ul>	<ul style="list-style-type: none"> <li>Improved student capacities for rural development and assisting farmers</li> <li>Improved farmer self-organization and collective problem-solving involving students</li> <li>Improved natural resource management practices and livelihoods of farmers and local communities</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>New learning (and evaluation) capacities evident from positive peer (institutional and national/external) evaluation of new JLAU course on PRD with others</li> </ul>
<p><b>Hue University of Agricultural Forestry, Viet Nam</b></p>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>CBNRM built on new social, political system after 1990 as natural resources property shifted from government to local communities</li> <li>Theories of CBNRM suitable to Vietnamese style must be identified</li> <li>Community-based concept presumes people who use a natural resource and have first-hand knowledge should manage it</li> <li>CBNRM contributes to environmental protection, sustainable development, resource tenure, and capability building.</li> </ul> <p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>CBNRM practices empower and build capacity of individuals, governments, and communities to develop skills/experiences for managing future</li> <li>CBNRM research/teaching capacity development assumes four key dimensions: a human resources development strategy; curriculum development/teaching capacity; technology transfer; and propagation to practice for local communities</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>In some courses CBNRM is discussed or applied as a knowledge or skill, in others a tool/method for conflict and natural resource management.</li> <li>Learning by doing</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>Evaluation study of capacity to teach and train in CBNRM at HUAF</li> <li>Analysis of reactions, adaptation, acceptance, and subsequent impact of CBNRM on stakeholders</li> <li>Case study of local officers and farmers at Hong Ha commune to assess local communities' CBNRM capacity</li> <li>Survey indicating almost all HUAF faculties have introduced CBNRM issues into their curriculum (as course components or chapters)</li> <li>Focus-group discussions among CBNRM researchers, lecturers, and field officers highlighted difficulties in community implementation, timing, complexity of law/policy, land tenure, partnerships, traditional relationships, and ecology.</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>Many lecturers and researchers have strengthened capacities (quantity and quality) in CBNRM and research through field practice and study abroad</li> <li>Local communities apply CBNRM tools and concepts creatively to identify resources and do village-level natural resource management planning</li> <li>Many agricultural officers in communes trained and apply CBNRM knowledge/skills</li> <li>Learning new knowledge and learning by doing are important stakeholder results</li> <li>Change in behaviour of stakeholders in natural resources management and subsequent impact on organization</li> <li>Common strategies, publications, services, and joint research</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>New CBNRM (and evaluation) capacities evident from case study, faculty survey, and focus groups</li> </ul>

Case	Baseline assumptions and concepts	Approaches and methods for implementing CBNRM and evaluating capacity changes	Capacity changes
<i>Research networks</i>			
<p><b>ALL in CBNRM network, Asia-wide, Philippines-based</b></p>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• CBNRM is a process of empowering local communities and partners to manage natural resources sustainably</li> <li>• Local development organizations viewed as social learning groups involved in “adaptive learning” and “cross-learning” partnerships to help mainstream participatory approaches</li> <li>• Established in 2006, network values a community-driven, process-oriented, participatory approach to strengthen local communities to set their development needs and manage their resources</li> <li>• CBNRM linked to 10-step participatory development communication process in four main stages (diagnosis, planning, intervention, evaluation) of R&amp;D cycle</li> </ul> <p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>• Capacity-building, learning, and networking partnerships (regional, but also local and international) can influence policy processes and strengthen CBNRM</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>• Orientation workshop in 2006 with stakeholders/learning groups</li> <li>• Capacity development strategies linked to adaptive learning as a social process</li> <li>• Innovative multiple learner groups, workshops, or small grants at different stages of CBNRM work in different ecosystems facing different challenges</li> <li>• Continuous learning person-to-person: e-forum/online learning groups; sharing/collaborative production of learning resources, such as manuals/books; mentoring; and knowledge bank/management system</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Evaluation study of collective learning processes/methods and content discussion.</li> <li>• Questionnaires and metacards (face to face)</li> <li>• Storytelling as evaluation</li> <li>• PM&amp;E plan developed with surveys and other instruments to assess learning and capacities developed</li> <li>• Mid-term (2007) and final (2008) workshops</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Multiple capacity changes evident: individual learning about CBNRM; project team and organizational learning; and community adaptations</li> <li>• Individuals acquired new knowledge and skills in participatory development, e.g., stakeholder analysis, PM&amp;E, developing partnerships, and communication</li> <li>• Stakeholders honed skills in CBNRM</li> <li>• Better partner relationships, trust, respect, women’s participation</li> <li>• Changes in knowledge, attitudes, and field practice of local officials and church leaders</li> <li>• Influence on advocacy programs, participatory planning, policies, ecology, and livelihoods</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• New knowledge and skills in PM&amp;E specifically acquired (and applied)</li> <li>• Evaluation yielded key principles: i.e. learning should be experiential, in groups, and combine distance with face-to face sessions</li> </ul>
<p><b>Farmer-Centered Research Network, China</b></p>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Gap growing between research initiatives and farmers’ real needs (despite 20 years of using participatory action research methods and IDRC support since 2001)</li> <li>• Existing agricultural research system must shift from researcher centred to farmer centred (CBNRM can help)</li> <li>• Need to change top-down research system, to better understand farmers and promote their participation in agricultural research and bring them more practical, accessible, and affordable skills and technologies</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>• Small grants important capacity-building tool</li> <li>• Grants facilitate a learning process integrating FCRN approach with existing projects,</li> <li>• Other capacity-building activities include: workshops, training, study tours, publications, and cross-visits for mutual learning (or evaluation) and communications.</li> <li>• Among organizations some activities viewed as less important than others (e.g., trial, teaching, awarding, self-learning reading almost useless, but workshops,</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Significant changes (perceived by interviewees) in knowledge and attitudes of FCRN individuals.</li> <li>• Some improvements in researchers’ skills and capacities in terms of human resources, project management, and social network</li> <li>• Some researchers valued social sciences and gender concerns more (rather than just natural sciences)</li> <li>• Farmers realized their capacity to improve their livelihoods without outside assistance</li> <li>• Farmers understand the importance of cooperation and self-organizing</li> <li>• Understanding FCRN methods helped partners obtain more</li> </ul>

Case	Baseline assumptions and concepts	Approaches and methods for implementing CBNRM and evaluating capacity changes	Capacity changes
	<p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>• Researcher–farmer gap results from a failure of capacity development among institutions, universities, government officers, farmers, and others</li> <li>• Capacity requirements and interventions needed for various stakeholders (individuals, organizations, communities) differ</li> </ul>	<p>training, cross-visits, and field study more effective)</p> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Individual questionnaires</li> <li>• Focus-group discussions</li> <li>• Key informant interviews</li> <li>• Field survey</li> <li>• Comparative study</li> <li>• Self-evaluation case studies for partner institutions</li> </ul>	<p>government research resources</p> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Helped stakeholders’ self-assessment, leading to better interactions and improved effectiveness/efficiency</li> </ul>
<p><b>Tarlac College of Agriculture, CIP-UPWARD, Asia, Philippines</b></p>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Integrated crop management needed to improve sweet potato livelihood systems as well a contribute to CBNRM</li> <li>• Complex goal of achieving sustainable agriculture requires integrated, holistic, and knowledge-intensive innovations</li> <li>• Agricultural R&amp;D should apply a participatory, collaborative approach to developing and introducing innovations</li> </ul> <p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>• “Capacity for partnering” (mobilize different actors for a collective good) is critical for building sustainable agriculture capacities and enhancing agricultural R&amp;D performance</li> <li>• Partnering capacity is intrinsic to participatory R&amp;D</li> <li>• Partnering capacity can help effectively respond to changing needs in sweet potato R&amp;D evaluation</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>• Applied integrated crop management (ICM) to integrate various research efforts, projects and institutions; facilitate participatory research with farmers, and enable researchers and farmers to achieve key goals, such as sustainability, capacity development, and field-level impact</li> <li>• ICM applied in livelihood systems analysis, farmer field schools, and farmer participatory research as well as technical and socioeconomic evaluation activities</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Case study approach</li> <li>• Participatory methods designed by study team and stakeholders; multi-perspective, internal and external to organization; results and recommendations usable by stakeholders; mixed methods, qualitative and quantitative</li> <li>• Five phases: planning workshop; field data collection; data collection workshop; data analysis; sharing and validation workshop</li> <li>• Activities/types: focus groups, individual interviews, guided interviews, network mapping, brainstorming, storytelling</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Realization that partnering is a slow process linked to: resources in stock, latent resources in networks, and resource flows</li> <li>• Organizational/institutional changes: more programs, donors, government and private support; more projects funded; requests for seminars, workshops, training; increased (research) output; improved methods and facilities; farmers assisted in productivity marketing</li> <li>• Individual changes: more cooperative staff; improved efficiency, skills; positive outlooks; confidence and ability to tackle tasks beyond disciplinary training</li> <li>• Production of more clean planting materials</li> <li>• From farmer anger/violence to peace and desire for sweet potato production</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Two most important tools are significant stories and network mapping</li> <li>• Partnering facilitated greater capacity for ongoing reflection and improvement in evaluation of work and projects</li> </ul>

Case	Baseline assumptions and concepts	Approaches and methods for implementing CBNRM and evaluating capacity changes	Capacity changes
<i>Community organizations</i>			
<b>CBNRM Learning Center, Philippines</b>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Appropriate coastal resource management (CRM) is only possible through community transformation to ensure social and economic equity, holistic and integrated management, and sustainable livelihoods</li> <li>• CRM transforms power relations by building capacity of marginalized sector of community</li> <li>• CBCRM programs are only as strong as institutions leading and implementing them</li> </ul> <p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>• Autonomy of community-based organizations from NGOs organizing them requires adaptation and capacity building</li> <li>• Need for increased capacity in organization development and learning</li> <li>• Organizational capacity development project facilitating three capabilities: ability to be (perspective), ability to DO (structures and technical skills), ability to RELATE (processes and partnerships)</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>• Organization development fellows, a flexible multidisciplinary pool of experts and channel for cross-program learning and exchange among partner groups and other CBNRM practitioners</li> <li>• Research (case studies)</li> <li>• Training, workshops, and mentoring</li> <li>• Documentation: research reports, workshop proceedings, and learning materials in addition to case studies</li> <li>• Modular series of learning materials</li> <li>• Mind mapping</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Evaluation study (as a participatory and learning exercise) conducted toward end of project using various tools including: tracer study; key informant interviews; focus-group discussions; and case study analysis</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Enhanced self-confidence; better relationships with local government units; inspiration; greater sense of responsibility in implementing coastal laws; diverse views now taken for granted by social change agents</li> <li>• Relationships changed: enhanced skills in relating with people; change in relational styles; more self-control and greater understanding of others; and broadened perspective of leaders in engaging local government units</li> <li>• Increased or new ability to do strategic planning for organizations</li> <li>• Development of local organization development teams/trainers</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Learning was applied to immediate concerns by conducting organizational assessments</li> <li>• Internal PM&amp;E system/culture of learning</li> </ul>
<b>International Institute of Rural Reconstruction, Philippines</b>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• CBNRM concept applied in relation to community-based forest management (CBFM)</li> <li>• Stakeholders have multiple perspectives and undemocratic imbalance of power in community management of forest resources</li> <li>• CBFM and policies remain skewed in favour of the interests of those far from community forests</li> <li>• Action research linked to Community Forestry Interlocking Project (CFIP) can help explain dysfunctional CBFM, policy environment</li> <li>• Government policy has hindered CBFM implementers' forest development activities</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>• Learning community/participatory field research on CBFM policies</li> <li>• Advocacy to accelerate pro-community changes in forest policy and institutional and inter-institutional reform</li> <li>• Experiential training and learning to match challenges of community forestry</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Input-output framework adopted for CFIP evaluation; goals and objectives of the project were assessed against actual outputs by measuring outcomes and impact</li> <li>• Individual and organizational levels</li> <li>• Learning spiral framework —</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>• Increased knowledge, attitudes, and skills in CBFM and multistakeholder processes</li> <li>• Democratization of policy helped community voices be heard</li> <li>• Increased/meaningful partner organization participation in CBFM policy processes and changes</li> <li>• Community-based organizations represented in regional and national platforms, contributing amendments to CBFM policies, programs, strategies with positive changes in relationships with partner organizations</li> <li>• Improved CBFM implementation</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Writeshop as an evaluation method has also become a capacity development tool</li> <li>• Case study confirmed that continuous learning (evaluation)</li> </ul>

Case	Baseline assumptions and concepts	Approaches and methods for implementing CBNRM and evaluating capacity changes	Capacity changes
	<p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>Capacity development is a means to reshape dysfunctional CBFM policy environment</li> <li>Communities/organizations have valuable knowledge and insights but need processes and tools to facilitate</li> <li>Improved individual capacities contribute to enhanced organizational capacity</li> <li>Increased capacities result in greater participation in CBFM policy processes and better CBFM policies</li> </ul>	<p>an action–reflection–action approach</p> <ul style="list-style-type: none"> <li>Focus group discussions</li> <li>Key informant interviews</li> <li>Participatory documentation of experience/learning through evaluation writeshop to produce impartial and objective report</li> <li>Analysis of case stories</li> <li>Policy process review</li> </ul>	<p>through a reflection process should be embedded within the capacity development process</p>
<p><b>Ministry of Nature and Environment in Mongolia</b></p>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>CBNRM concept builds on IDRC-supported “Sustainable management of common natural resources in Mongolia” study (2000–2007)</li> <li>CBNRM in pastoral agriculture required because of overgrazing and desertification with increasing cashmere prices and number of goats at study sites</li> <li>CBNRM implies need to “unlearn” a centrally planned society, handle economic and political opening up, and develop a sustainable pasture and natural resource management system</li> <li>New conflicts/disagreements about using pastureland collectively</li> </ul> <p><b>CAPACITY DEVELOPMENT</b></p> <ul style="list-style-type: none"> <li>Conflicts and pressures make sustainability of pasture management and introduction of CBNRM approaches more difficult (new CBNRM capacity development needed)</li> <li>CBNRM capacity development implies three components: ecological capacity, social capacity, economic capacity</li> </ul>	<p><b>IMPLEMENTATION</b></p> <ul style="list-style-type: none"> <li>Training meetings and workshops on participatory rural assessment methods, pasture and natural resource management, and CBNRM</li> <li>Herder learning through experience-sharing at intersite seminars and meetings, farmer-to-farmer exchanges, community information days, and exhibitions, cross-study visits</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>Participatory evaluation approach</li> <li>Evaluation activities included: field research, targeted training for herders, local government staff, and researchers (in participatory rural appraisal, social and gender analysis, and PM&amp;E)</li> <li>Community book with indicators provided/mapped</li> </ul>	<p><b>CBNRM</b></p> <ul style="list-style-type: none"> <li>91.5% of herders believed their knowledge of pasture and natural resources management improved with CBNRM</li> <li>Community capacity improved with respect to restoration and protection of pastureland and natural resources</li> <li>Community capacity improved in terms of discussing and resolving issues jointly, in expressing opinions to local authorities,</li> <li>Changing community rules linked to new procedures regarding nature and environment</li> </ul> <p><b>EVALUATION</b></p> <ul style="list-style-type: none"> <li>Researchers more comfortable conducting participatory field research (including use of different evaluation activities/tools)</li> <li>New capacity for PM&amp;E of resources/ecosystems, despite participation difficulties, lack of evaluation skills, and need for more training</li> </ul>

**Note:** CBFM, community-based forest management; CBNRM, community-based natural resource management; CFIP, Community Forestry Interlocking Project; CRM, coastal resource management; FCRN, Farmer-Centered Research Network; ICM, integrated crop management; JLAU, Jilin Agricultural University; R&D, research and development; PCD, participatory curriculum development; PM&E, participatory monitoring and evaluation.



#### **CIP's Mission**

The International Potato Center (CIP) works with partners to achieve food security and well-being and gender equity for poor people in root and tuber farming and food systems in the developing world. We do this through research and innovation in science, technology and capacity strengthening.



#### **CIP's Vision**

Our vision is roots and tubers improving the lives of the poor.

CIP is supported by a group of governments, private foundations, and international and regional organizations known as the Consultative Group on International Agricultural Research (CGIAR).

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