Stocktaking of M&E and Management Information Systems
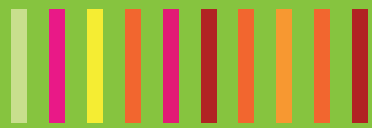
Selected agricultural and rural development projects in South Asia

FAO INVESTMENT CENTRE

BEST PRACTICES IN INVESTMENT DESIGN

FAO INVESTMENT CENTRE

Stocktaking of M&E and Management Information Systems

Selected agricultural and rural development projects in South Asia

K.C. Lai
Senior Economist
Monitoring and Evaluation Specialist

With Contributions by:

Jim Hancock
Natural Resources and Livelihoods Officer,
Investment Centre Division, FAO

Dieter Muller-Praefcke
Senior Economist

BEST PRACTICES IN INVESTMENT DESIGN
prepared under the FAO/World Bank Cooperative Programme

THE WORLD BANK

Food and Agriculture Organization
of the United Nations

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

---

1   K.C. Lai and Ai Chin Wee, respectively at the time of the stocktaking.
2   Dr Reddy is currently State Project Manager, M&L, Society for Elimination of Rural Poverty, Andhra Pradesh.

ABBREVIATIONS & ACRONYMS

Antrix	Commercial wing of ISRO (India Space Research Agency)
APCFMP	Andhra Pradesh Community Forest Management Project (World Bank)
APCTMP	Andhra Pradesh Community-based Tank Management Project (World Bank)
APRPRP/IKP	Andhra Pradesh Rural Poverty Reduction Project (World Bank)
ARD	Agriculture and Rural Development
BL	Baseline Study/Survey
BRLP	Bihar Rural Livelihood Project (World Bank)
CBO	Community-based Organisation
CEO	Chief Executive Officer
CIF	Community Investment Fund
CP	FAO-World Bank Cooperative Programme
CPM	Country Programme Manager (IFAD)
DFID	UK Department for International Development
FAO	Food and Agriculture Organization of the United Nations
GIS	Geographic Information System
IA	Impact Assessment
ICR	Implementation Completion Report (World Bank)
ICRR	Implementation Completion and Results Report (World Bank)
IDRC	International Development Research Centre (Canada)
IEG	Independent Evaluation Group (World Bank)
ISR	Implementation Status and Results (Missions/Reports of the World Bank)
KWDP	Karnataka Watershed Development Project (World Bank)
MLIPH	Meghalaya Livelihoods Improvement Project in the Himalayas (IFAD)
LFM	Logical Framework Matrix
M&E	Monitoring and Evaluation
ME&L	Monitoring, Evaluation and Learning (used interchangeably with M&E)
MfDR	Managing for Development Results
MIS	Management Information System
MTE	Mid-term Evaluation
NONIE	Network of networks for impact evaluation
OMR	Optical Mark Recognition
OPCS	Operations Policy and Country Services Division (World Bank)
ORAF	Operational Risk Assessment/Management Framework (World Bank)
PAD	Project Appraisal Document (World Bank)
PCR	Project Completion Report (Government/Borrower)
PDO	Project Development Objective
PIP	Project Implementation Plan
PMU	Project Management Unit
PRI	Panchayat Raj Institutions (in Indian context)
RF	Results Framework
RIMS	Results and Impact Management System (IFAD)
SASDA	Agriculture and Rural Development Department, South Asia (World Bank)
SEMF	Social and Environmental Management Framework
SHG	Self-help Group
TTL	Task Team Leader (World Bank)
ULIPH	Uttarakhand Livelihoods Improvement Project in the Himalayas (IFAD)
UPSLRP	Uttar Pradesh Sodic Lands Reclamation Project (World Bank)
VO	Village Organisation
VSS	Vana Samrakshana Samithi (forest protection committees)
WB	The World Bank
WUA/WUG	Water Users Association/Group

Introduction and conceptual framework

Recent reviews by the World Bank's Independent Evaluation Group (IEG) of M&E systems in Bank- assisted projects found that a significant number had quality issues. A review of Implementation Completion Reports (ICRs) by the FAO Investment Centre Division reached broadly similar conclusions. But it also noted instances of creditable performance among a number of recently completed projects in both East and South Asia, whose experiences could have cross-learning potential and wider applicability in guiding system design and application.

This report presents the main findings of a joint FAO Investment Centre and World Bank stocktaking of monitoring, evaluation and learning (ME&L) and management information systems (MIS) in selected agricultural and rural development (ARD) projects in South Asia. The stocktaking is based on case studies of eight ARD projects in India (six World Bank-assisted, two IFAD-assisted)[3], an electronic survey of World Bank-assisted ARD projects in the region, and a desk review of project reports and relevant literature. The stocktaking was initiated at a three-day Inception Workshop in New Delhi (October 2009), held in conjunction with the stocktaking of livelihood and water management projects in India. Key questions brought out at the Inception Workshop were: what ME&L approaches, methodologies and processes best serve projects in achieving results; and how to combine MIS and ME&L systems to ensure their usefulness for project management.

Given the range of operating environments, an ideal model applicable across all situations does not exist. While monitoring is generally concerned with regular collection and analysis of information to assist timely decision making and ensure accountability, and evaluation deals with the systematic assessment of achievement of project objectives, efficiency and impacts, adopting and tailoring of methodologies and approaches to local contexts is generally necessary. From a conceptual standpoint, an effective M&E system should at a minimum be capable of the following: support results assessment and its use for decision making; provide timely information to meet operational as well as strategic management requirements; trigger learning and adaptation; and elicit participation and buy-in among key stakeholders. These capabilities collectively dictate that various components of the M&E system be closely interlinked, in both time and space. Seen in such light, monitoring, evaluation, learning and action are conceived as an integral system, closely linked to the project MIS.

---

3   **World Bank-assisted projects**: APCFMP (Andhra Pradesh Community Forest Management Project), APCTMP (Andhra Pradesh Community-based Tank Management Project), APRPRP (Andhra Pradesh Rural Poverty Reduction Project), BRLP (Bihar Rural Livelihoods Project), KWDP (Karnataka Watershed Development Project), UPSLRP-II (Uttar Pradesh Sodic Lands Reclamation Project). **IFAD-assisted projects**: MLIPH (Meghalaya Livelihoods Improvement Project in the Himalayas), ULIPH (Uttarakhand Livelihoods Improvement Project in the Himalayas).

Findings from the electronic survey

The electronic survey sought to provide broader contextual information on M&E systems and help identify capacity and resource issues in the region, including adequacy of human and financial resources for M&E, skill gaps and training needs, and specific requirements on guidance materials. The relatively low response rate meant findings could be quantified only to a limited extent. It nonetheless identified some useful M&E design features among ARD projects in the region, including participatory, process monitoring, and formative evaluation elements and computerised MIS establishment. However, inadequate capacity to use the tools and implement designs and plans in an integrated and coherent manner, pose important constraints. Unclear or inadequate financial and staffing provision for M&E among some projects was also detected. A third of the respondents indicated full outsourcing of M&E activities to third party service providers. On what M&E areas needed strengthening, MIS and related aspects were cited most, followed by outcome/ impact assessment and survey design and sampling.

M&E experiences in case study projects

The stocktaking yielded a wealth of information on positive experiences of projects in addressing various challenges to M&E and MIS development and application. It revealed the benefits that may arise when projects give commensurate attention to adopting and utilising M&E as a tool for project management, rather than just for production of information. The case study examples demonstrated the importance of adopting a holistic approach in system design and the integrated use of M&E tools that cater for the multiplicity of routine and ad-hoc information needs of project stakeholders (APCTMP, KWDP, UPSLRP). They also brought out the contribution that participatory and externally-supported components make towards mutual learning and downward accountability (UPSLRP), and the role played by process monitoring and timely thematic studies in improving project strategies and implementation modalities (APRPRP, BRLP, KWDP). The effectiveness of ICT tools, GIS, and remote sensing for data capture, analysis and reporting by a number of projects (KWDP and UPSLRP) further illustrates the value added from adopting a combination of methods, field-based and technology-enabled, to support M&E processes.

M&E system design and implementation

The case studies yielded evidence of where a strong, integrated and internalised M&E system provided information and learning which directly enhanced the development of effectiveness of the project. In APRPRP, internal monitoring, complemented by a robust external process monitoring system, led to actions to improve community-based organization (CBO) functioning, including better coverage of target groups and internal lending by self-help groups (SHGs). A three-pronged approach in system design was followed by BRLP – an internal component focusing on input-output monitoring; an external component, focusing on outcomes and impacts, which included the baseline, medium-term and end-term evaluations; and process monitoring mechanism, which was outsourced. Its peer review learning approach, involving managers as well as communities, led

to decisions to take forward successful pilot interventions, providing the basis for addressing the priority needs of communities and up-scaling new initiatives.

In UPSLRP, M&E functions were effectively supported by a well-developed MIS and Geographic Information System (GIS). The participatory approach was given clear practical expression through Site Implementation Committees (SIC) and Water Users' Groups (WUGs). These empowered male and female community members in joint monitoring and review with project staff on adequacy and quality of project activities and outputs, encouraging downward accountability and providing a platform for mutual learning and decision making. A reinforcing element was the linkages between the different hierarchical levels. M&E as a shared responsibility was not confined only to members of the M&E cell. "Monitoring is nobody's monopoly" was the principle followed. Mandatory visits of the district level Project Managers to problematic villages gave additional boost to resolving problems quickly.

An important theme emerging from the case studies is the role of external M&E agencies in system design and implementation. KWDP fully outsourced M&E and MIS system design and implementation to a third party service provider. In UPSLRP, multiple agencies with specialised expertise provided substantive support in monitoring technical aspects of the project and in impact assessment studies. APCTMP relied extensively on grassroots support organisations in data collection and participatory performance assessments/rating of CBOs. Other projects utilised external agencies to various degrees, mainly in studies and assessments and process monitoring. Third party service providers had undoubtedly been instrumental in facilitating stakeholder participation in ME&L processes besides catalysing management decisions. Key here was identification and selection of competent appropriate external agencies, and involving them as development partners on a sustained basis, which was not without its challenges. Engaging external partners moreover cannot fully substitute for having a competent and strategically oriented internal capacity for M&E. This was recognised in the design of the second phase of KWDP - whilst there was continuing emphasis on sustained external agency support, provision was made for developing greater capacity for M&E within State institutions than was the case in the earlier phase.

Methodologies and tools
Both IFAD-assisted case study projects had developed logframe matrices and key indicators based on the RIMS (Results and Impact Management System) framework. These permitted articulation not only of immediate component outcomes and intermediate outcomes, but also for outputs specific to each component, accompanied by well-developed indicators. Logical framework matrixes were treated as live documents. This facilitated updating of indicators that became obsolete and revision of outputs and intermediate outcomes in line with project changes (MLIPH and ULIPH). The three earlier World Bank-assisted projects had included a logical framework in the "project design summary" of the PAD, while the three more recent ones (APCTMP, BRLP, UPSLRP-III) had each articulated a multiple-outcome levels results framework. However in places there remained some confusion as how to track key outputs in such a framework. There was moreover little guidance on when and how to amend/change indicators and targets.

Case study projects utilised a range of quantitative approaches and methods in baseline and impact assessment studies. Undertaking statistical sampling instead of attempting full coverage of all areas (KWDP,UPSLRP) and close linkage of baseline with impact assessment surveys to permit comparison of key variables between 'with and without project' situations and for difference-in-difference inference (APRPRP) were among the good practices documented. The combined use of statistical and qualitative tools as well as direct observations (e.g. changes in flora/fauna in reclaimed areas), and time series satellite imagery (changes in cropping intensity) furthermore enabled triangulation of findings on impact (UPSLRP).However some projects faced some practical difficulties in the design and utilisation of baseline and impact assessment surveys: baseline and impact assessment surveys were undertaken largely as separate exercises, and by different external service providers with little continuity in terms of datasets or analytical processes. Perceptions on the purpose of baseline surveys varied among projects – ranging from providing benchmark indicators for project evaluation, to supporting detailed implementation planning, and as a part of situational analysis of the project area.

Overall, the experience of the case studies in impact assessment suggest that quantitative approaches by themselves may not be suitable to all situations and 'rigorous' methods such as quasi-experimental designs need highly experienced agencies to be implemented effectively. Projects should consider a wide range of impact evaluation approaches, including complementary use of quantitative, qualitative and mixed methods. The increasing complexity of projects, and their integration with government programmes, mean that more innovative approaches for assessing project impact will be needed. Baseline and impact assessment surveys should be closely linked at the outset, as integral parts of the overarching project evaluation strategy. For baseline establishment, clarity of purpose, commensurate data collection instruments, and realistic time frames are vital for successful execution.

MIS and the use of ICT
Several projects put in place MIS systems delivering decision making information, including basic socio-economic and bio-physical data, implementation status and progress, and also data to track important outcomes, such as inclusion of target groups (KWDP, UPSLRP, APCTMP). They demonstrated the feasibility and utility of ICT technology by establishing MIS with capabilities for web-based data capture and communication across multiple project sites and levels (APRPRP, BRLP); and enhanced functionality from integration with GIS and remote-sensing tools and applications (KWDP, UPSLRP). At the same time, reliance on relatively less sophisticated systems is also in evidence (MLIPH). Arguably, not all projects can take full advantage of the technology available, especially the smaller projects. Apart from cost and capacity issues, lack of modern telecommunication infrastructure and/or limited access to competent technical advice and support services could restrict the use of ICT in MIS establishment in certain project contexts, but with fast developing connectivity and IT systems options this is a decreasing constraint.

KWDP's customized MIS package allowed users to query, analyse periodic field data, and prepare reports at different levels. Information was generated on

specific project components at state, district, taluka, sub-watershed and micro-watershed level on a weekly/monthly basis. The MIS was linked to a GIS-enabled solution which allowed analysis and graphical depiction on a cadastral map, and drilling down from State through district and sub-watershed layers to micro-watershed level. Although ME&L was fully outsourced to a third party service provider, the latter was treated as an integral part of the project management. In APRPRP the MIS elements have over time become more integrated with various microfinance and service support mechanisms, and increasing use of laptops and handheld devices for local data entry. Refinements to BRLP's system led to inclusion of a 'dashboard' of indicators covering analysis of trends and deviations from the norm for real time (on-demand) top management decision support.

The project case studies indicate that effective use of ICT requires strong commitment by project management at the outset, accompanied by sustained technical support spanning MIS design, development, deployment and roll-out stages. A number of weaknesses which pose further challenges in MIS design and development among the projects were nonetheless apparent, and include (i) systems being oriented more towards information management than management information for decision support; (ii) inadequate focus on information for making tactical and strategic policy decisions - MIS designs tended to focus on operational information rather than key decision variables at the strategic end of decision making; and (iii) poor integration of project financial management systems with the MIS.

Mainstreaming of M&E functions
The value of well thought-out and clearly defined institutional arrangements for ME&L, as demonstrated by BRLP and ULIPH, included: Provision for adequate personnel within the project organisation for ME&L at project headquarters and in the field; placement of senior and experienced staff at managerial level with oversight of ME&L development and implementation; clear job descriptions for line and field managers which ensured ME&L are well integrated into their normal work routines; and an inclusive system of periodic and structured reviews at state, district and local/community levels, involving key stakeholders.

APCTMP and BRLP showed how capacities in M&E skills were addressed through well-targeted M&E capacity building initiatives that were integrated with the broader capacity building strategies of the project. Good practices included: (i) targeting not only M&E staff but also other line and field management staff, personnel of support organisations, and functionaries and members of CBOs, helping widen appreciation of the value of ME&L (APCTMP); (ii) close collaboration between ME&L specialists and project departments responsible for human resource development and capacity building (BLRP); and (iii) underpinning capacity development by results-based management/ logical framework concepts, helping sharpen the focus of the M&E and direct attention of stakeholders towards achievement of results.

The project organisation structure and institutional arrangements for M&E in UPSLRP made for strong ownership of the system at all levels, and greatly facilitated information flows. Decentralized decision making ensured that information was generated where it was used, and ploughed back to where

it was generated. There was adequate resource allocation in terms of time, funds and personnel, which permitted fully institutionalising M&E rather than treating it as an addendum to project implementation. Regular sharing of external M&E agency findings with district staff helped build trust and partnership, minimising risks of the former being perceived as 'fault finders'. However, one possible drawback detected was a tendency for external service providers to be pressurised by some project counterparts to highlight positive achievements and downplay less palatable information. The instituting of transparent, unambiguous and highly inclusive mechanisms in supervising external agencies' performance provided one means of mitigating this.

Lessons and ways forward

Both the case studies and the electronic survey indicate that the project M&E quality cannot be achieved through addressing methodological and technical issues alone, but must consider a wider range of institutional, human resource and motivational factors. The case study projects showed how things could work well when there is good integration between system elements, tools and processes, accompanied by adequate capacities in place to manage such processes. As a consequence there was demonstrable management support for results assessment and decision making; with timely information and management response to such information at various levels – in several cases leading to changes in project procedures; and substantive engagement of stakeholders in identifying and resolving issues. These experiences provide a number of important lessons (elaborated in the main text) of which the following are key:

- Ensure there is an integrated M&E system that is oriented towards the needs of results monitoring and assessment and address practical needs of managers;
- Utilise the result framework as a flexible tool to monitor and assess the intervention logic;
- Employ a range of impact assessment methods to understand project contribution and intervention effectiveness;
- Put time and resources into MIS establishment, maintenance, adaptation and refinement;
- Incorporate capacity development for ME&L within the wider human resource development framework;
- See ME&L as part of wider institutional culture and implementation arrangements; and
- Secure management buy-in to the system through quick wins: pick the low-hanging M&E fruit.

In moving forward, it is important to emphasise the management and capacity required by individual M&E systems. Project managers and task team leaders (TTLs) should be closely involved in system design and implementation, to achieve quick wins in information gathering and feedback. Line managers, ME&L and MIS staff must appreciate the importance of involving users in design and implementation of the ME&L systems, including modular approaches to MIS. They should make strategic use of outsourced services, taking into account capacities and limitations, both their own and that of available external agencies. Project stakeholders generally must recognise that one size cannot fit all, hence

the need to tailor M&E and/or MIS to specific project contexts. They must ensure close integration between M&E and MIS design and development, balancing practicability and feasibility with comprehensiveness in data collection, taking advantage of but not overwhelmed by new technologies.

Findings of the stocktaking signal a need to increase efforts in capacity development and technical support to projects in the region, including enhanced access to practical guidance materials on a range of M&E themes. With regard to guidance materials, future attention is necessary at two levels: (i) enhanced official guidance on M&E for ARD projects at preparation and appraisal stages; and (ii) improved availability of and access to M&E learning materials, dovetailed into capacity development and technical support initiatives in the region.

Chapter 1 - Introduction

The FAO Investment Centre, in partnership with the World Bank, launched in late 2009 a stocktaking of agriculture and rural development (ARD) projects in the South Asia region. This is a continuing collaboration instituted under the FAO-World Bank Cooperative Programme (CP), whose activities include Investment Centre participation in sector analysis, project formulation, implementation support; Implementation Completion and Results Reports (ICRR)[4] processes, and more recently capacity development initiatives such as M&E Learning and Design Workshops organised from the World Bank's New Delhi Office.

The stocktaking was initiated at a three-day Inception Workshop in New Delhi (5 –7 October 2009) in which FAO and World Bank staff, project task teams, government officials, national M&E experts and consultants, and other development partners including IFAD, DFID and IDRC, participated. It covered three thematic areas: (1) impacts and lessons of livelihood projects; (2) productivity and equity of irrigation and agricultural water management projects; and (3) monitoring, evaluation and learning (ME&L)[5], including management information systems (MIS). This document presents findings and results of the third, M&E theme of the stocktaking.

In the context of ARD projects, monitoring is generally seen as a continuing function to provide management and stakeholders with information on implementation progress, while evaluation tends to be concerned primarily with assessment of design, implementation and results; and relevancy, effectiveness, efficiency and impact issues[6]. These functions are complemented by the project MIS, which should have in place manual and/or computerised means of data capture, storage and processing to generate information needed for managing day-to-day operations and forward/ strategic planning[7]. Increasingly, the role of both monitoring and evaluation in facilitating learning and accountability to project stakeholders is also recognised. Establishing M&E and MIS systems that cater effectively for these roles and functions and address local requirements is a necessary but often challenging task.

Objectives and scope

The purpose of the stocktaking was to review recent operational experience in ME&L and MIS of selected projects supported by the World Bank and other funding agencies in South Asia. It aimed to provide an understanding of what works and does not work; identify lessons and good practices; assess learning needs and opportunities; and contribute to the enhancement of ME&L and MIS as project management tools.

Two key questions for M&E of ARD projects brought out at the Inception Workshop in New Delhi were: (a) what ME&L approaches, methodologies and processes best serve projects in achieving results; and (b) how to combine MIS and ME&L systems to ensure their usefulness for project management[8]. This led to identification of four major challenges to ME&L system development and application around which this stocktaking is organised, namely:

---

4 Formerly referred to as Implementation Completion Reports (ICRs).

5 Both M&E and ME&L are used interchangeably in this report. The former is the generic term used in reference to the overall system, with the latter highlighting the learning dimension within the system.

6 There are different definitions of these terms – the ones adopted here are given in the Glossary, Annex 6.

7 An effective MIS should provide management at all levels with timely and reliable information to necessary for planning, controlling and coordinating activities for which they are responsible (see Glossary).

8 A discussion of the conceptual basis behind these questions is given in Chapter 2.

- Getting the design right, that is determining core requirements of the project ME&L system;
- Adopting appropriate ME&L methodologies and processes to provide relevant and reliable information to project stakeholders;
- Making effective use of ICT in the MIS in meeting development management and ME&L requisites;
- Mainstreaming ME&L functions and tasks at various levels of the project organisation.

Methodology

The stocktaking is based primarily on the findings from the following three processes:

- Case studies of eight ARD projects in India: six of them World Bank and two IFAD-assisted. The projects were identified during the Delhi Inception Workshop as better performing ones in terms of M&E, with potential for cross learning in terms of M&E system development and/or application (Map 1). Four were livelihood enhancement/poverty reduction projects, while the others were water, forestry and land resource management projects (summary details in Chapter 4). They included two recently completed World Bank-assisted projects, whose ICRRs rated the quality of M&E implementation and utilisation as excellent[9]. The case studies focused on documenting useful features and good practices with specific reference to the key issues and challenges brought out at the Inception Workshop. These were undertaken by three national consultants, who visited the projects between November 2009 and April 2010. This involved interactions with project management and staff as well as third party M&E service providers.

- An electronic survey of World Bank-assisted projects in South Asia. A questionnaire was sent by the stocktaking team via email to project directors of 42 projects listed as active in the World Bank South Asia rural projects database[10] (see Annex 1). This sought to provide broader contextual information on M&E systems in place, and help identify capacity and resource issues in the region. An attempt was also made to gauge perceptions on system performance. However, a low response rate compounded by some incomplete and/or unclear responses, limited the full utility of the survey (see below).

- A desk review of project reports, studies, administrative documents and other literature assembled during technical support and ICRR missions by FAO Investment Centre staff and consultants in the region, and materials from M&E Learning Design Workshops and Clinics conducted by the World Bank's New Delhi office.

The stocktaking exercise was undertaken with some budgetary and human resource constraints. This limited the time available for both the case studies and the electronic survey. Logistical considerations also meant these were undertaken in parallel, rather than sequentially. This precluded incorporation of more in-depth examination of issues emerging from the survey, and their follow-up in the project case studies. It was not possible to carry out quantitative assessment of the numbers performing well or poorly. Nor was it intended to undertake comparative analysis of implementation modalities between World Bank and IFAD-assisted projects within the present stocktaking. For logistical and resource reasons only projects located in India were included.

The case study projects were visited once by the national consultants, with each visit lasting 3 – 4 days. This restricted the extent of interaction with project stakeholders. Although interactions between the consultants and project personnel continued after the visits by email and telephone calls, more could have been gained by a longer stay in the project or making multiple visits - both of which were unfortunately not feasible for cost reasons.

---

9 Uttar Pradesh Sodic Lands Reclamation Project (ICRR in 2008) and Karnataka Watershed Development Project (ICRR in 2009). Both had satisfactory project development outcome ratings.

10 World Bank South Asia Agriculture and Rural Development Unit, New Delhi office of the World Bank.

In the electronic survey, only 15 out of the 42 ARD projects contacted responded within the survey period (project list in Annex 1). For those that responded, some questions were left unanswered or partially answered, necessitating caution in interpreting incidence and frequencies observed. Although questionnaires were addressed to project directors, it became apparent that these were often completed with the involvement of, or delegated to, project M&E staff. Given possible biases, the responses on perceptions of performance were not included in the findings[11]. These limitations notwithstanding, information from the respondents provided useful insights on the range of M&E arrangements in place and resource and capacity issues that merit attention.

Report contents
Following the introduction, a brief discussion of key concepts guiding the stocktaking is presented in Chapter 2. Chapter 3 provides further background on the stocktaking and draws attention to a number of contextual issues for M&E of ARD projects in the region. A synthesis of experiences captured in the project case studies is presented in Chapter 4. Useful features and good practices identified, and possible areas for improvement are highlighted, with further details set out in the Annexes.

Consultants' case study reports by project are available on file with FAO. Chapter 5 summarises key lessons learned, while the final Chapter 6 identifies a number of areas for future action. A glossary of M&E terms and concepts is provided in Annex 6.

The primary audience of the stocktaking report are anticipated to be project teams, including World Bank Task Team Leaders (TTLs), IFAD Country Programme Managers (CPMs) and country staff, Project Directors, ME&L and MIS staff, and line managers responsible for planning and implementing project components and activities. Investment Centre and other FAO staff and consultants engaged in project preparation, appraisal, and implementation support roles may also find this report of relevance. Key messages and lessons learned are expected also to be of interest to project steering bodies, development administrators, senior officers of sectoral ministries and government departments, and non-governmental service providers.

---

11 The use of separate questionnaires for project directors and M&E personnel, applied within the ambit of Project Implementation Support Missions in collaboration of project teams/TTLs, would have been more effective. Time constraints however precluded adopting this approach.

Map 1.
Location of project case studies
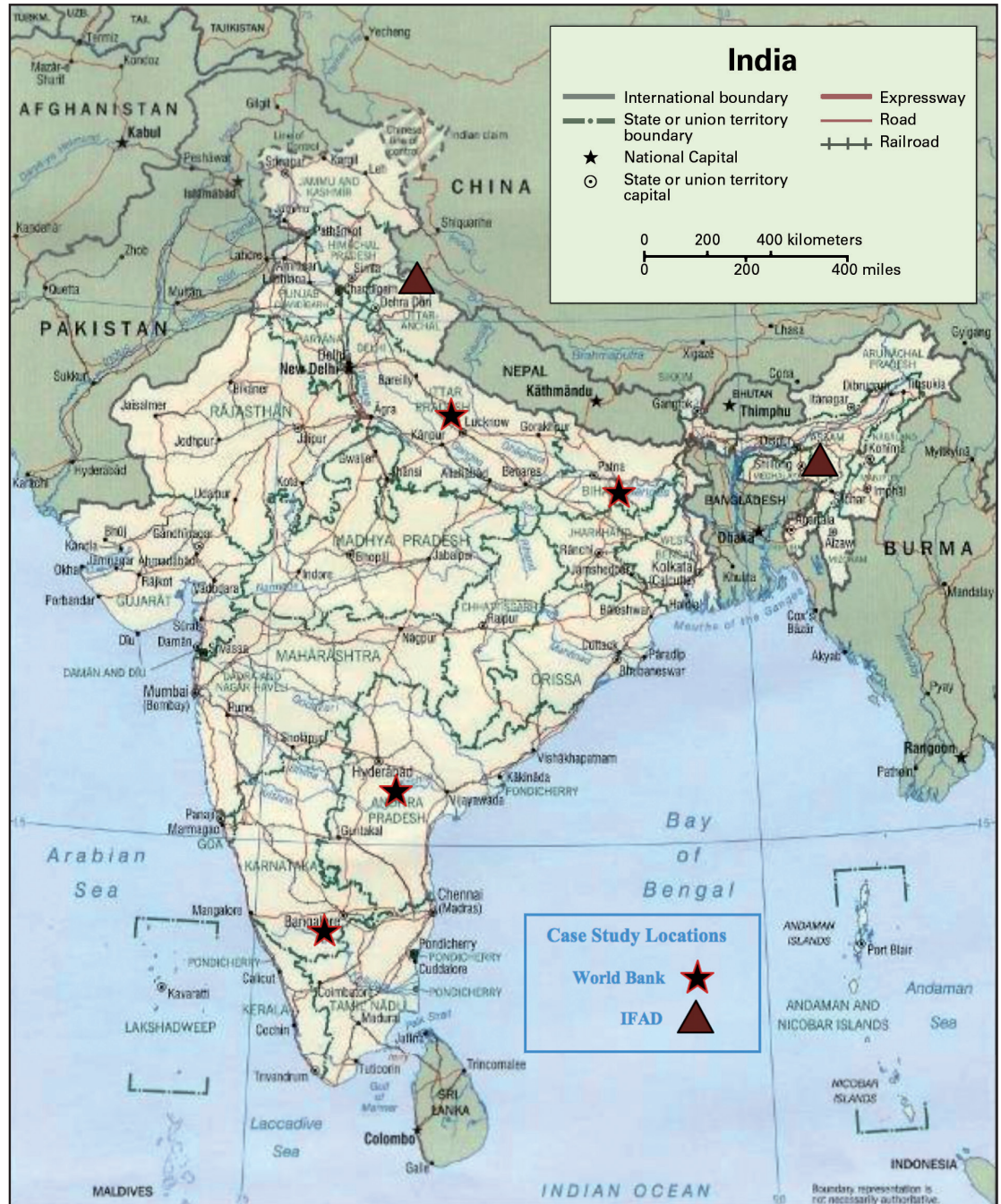
Chapter 2 - Key concepts underpinning the stocktaking

The 2005 Paris Declaration on Aid Effectiveness and successive Roundtables on Managing for Development Results (MfDR) committed international agencies as well as governments to mutual accountability in the achievement of better and verifiable development results. Global endorsement of the MDGs (Millennium Development Goals) and adoption of a global action plan for their achievement gave further impetus to the quest for results and demonstration of performance. Central to both agendas are M&E systems that would enable tracking and understanding of whether and how development interventions lead to real and sustainable improvements to social and economic wellbeing.

The present chapter gives a short overview of important concepts and basic functions of an effective M&E system based on the authors' experience and key references (such as OECD, 2007). While they are premised on a clear distinction between monitoring (more a continuing function to track inputs and outputs) and evaluation (to objectively assess project achievement of objectives, especially impacts), key to understanding the effectiveness of the system is how these operate together. Moreover, it is important to see how they are supported by tools such as computerised MIS, to collect, process and analyse project data.

2.1 System functionality and capabilities

What constitutes an effective M&E system is often subject to different interpretations. Given the range of circumstances, and operating environments among ARD projects in South Asia, an ideal M&E model that is applicable across all situations simply does not exist. Adapting and tailoring of methodologies and approaches to local contexts and circumstances is generally necessary. Nonetheless in any consideration

of M&E effectiveness and quality, an important point of departure must be how well the system serves project stakeholders in achieving development results. From a conceptual standpoint (depicted in Chart 1), an effective M&E system should at a minimum be capable of performing the following functions:

Support results assessment and its use for decision making

This should form part of a management for development results (MfDR) strategy. At the core of this are the *results or logical frameworks* (see Box 1) embodying notions of goal-orientation; a causal chain linking inputs and activities to outputs, outcomes and impacts; and continuous improvement through periodically assessing results to provide a basis for adjustment and optimisation of outcomes[12]. This requires availability of suitable performance indicators, including baseline values, by which results can be measured. Provision during project implementation to re-appraise the intervention logic and continuing validity of assumptions and risks would also be essential.

Provide timely information to support operational as well as strategic management requirements

Over the project lifetime, information is needed to support day-to-day business processes, work planning and budgeting, physical and financial monitoring, and meeting impact evaluation requisites. M&E effort which focuses on only part of this continuum to the neglect of others is incomplete and risks losing the interest of project management in the system. Timeliness in information generation and communication to users is paramount.

---

12 OECD (2007). p. 9.

Since the mid 2000s, the logical framework structure used in World Bank- supported projects has been replaced by the results framework, which now forms part of the requirements for the preparation of the PAD (Project Appraisal Document). It covers outcome statements, performance indicators, target values, use of the outcome information, and data collection instruments and responsibilities. Codified in the operational policies of the World Bank, the results framework emphasises the need for verification of progress toward and the achievement of results, besides supporting learning from experience, and promoting accountability for results. Other international agencies, including IFAD, the EU and DFID, utilise to varying extents the logframe approach in defining the project logic and determining M&E requirements. For IFAD, this has been developed as a Handbook for a Results and Impact Management System (RIMS) to guide projects in the measurement and reporting of results (outputs and outcomes) and impacts. This considers results at three hierarchical levels: activities and outputs (level 1), outcomes (level 2) and impacts (level 3), which includes mandatory indicators for child malnutrition and household assets.

Chart 1. M&E system capability and key concepts

Systems Theory
Informatics

Provide timely information to meet multiple managment

Action/Experiential Learning
Formative Evaluation

M&E System Capability

Support results assessment and decision-making

Provide for learning and adaptation

MfDR
Logic Model/LFM
Theory of Change
Summative Evaluation

Elicit Stakeholder buy-in and responsiveness.

Stakeholder Participation
Gender Mainstreaming
Rights-based Approaches
Outcome Mapping

Source: Stocktaking Team

Trigger learning and adaptation

In addition to tracking activities and results, the system should also support internal learning as a basis for adaptation and fine-tuning of project interventions. This applies in particular to projects which are process-intensive, such as those following a CDD (Community Driven Development) approach. M&E can only be useful if it also answers questions of *why, so what and now what* will be done about the situation[13]. This calls for an operating environment, supported by interactive learning processes, that stimulates interest on performance, critical questioning and reflection, and provides a feedback loop to the action system.

Elicit participation and buy-in and responsiveness among key stakeholders

Keys here are *inclusiveness in participation* and a clear sense of ownership of the system by project stakeholders. The latter encompasses not only project staff and partner organisations, but also target communities and other project affected parties, who should be facilitated in accessing, analysing and utilisation of information generated by the system. Institutional arrangements should provide adequate incentives for these. To be useful and indeed used, the system must be sufficiently user-friendly, with measurement and reporting kept manageable, and permits good communication.

2.2 ME&L as an integrated system

The above capabilities collectively dictate that various components of the system be closely interlinked, both in time and space. In particular, baseline establishment should not be viewed in isolation from subsequent impact assessment strategies and methodologies, while judgements on the effectiveness and relevance of project activities and outputs should not be held back till mid-term or end-of-project evaluation exercises. Discontinuities caused by undue separation of implementation and monitoring functions from that of evaluation and learning is undesirable, as this risks hampering timely course correction and/or decisions for scaling-up successful

experiences. The following helps highlight the philosophy behind the approach[14]:

> *"When driving and monitoring the speed indicator, it is necessary to simultaneously evaluate the appropriateness of our speed relative to the road and traffic conditions. Leaving evaluation to later would be downright dangerous."*

Seen in such light, monitoring, evaluation, learning, and action are conceived as an integrated system, closely linked with the project MIS. Subsumed here are *on-going evaluation processes*, such as thematic or diagnostic studies[15], undertaken to enhance implementation tactics and/or devise more effective strategies. This goes beyond *summative evaluation* which traditionally is concerned primarily with assessing outcomes and impacts for purposes of upward accountability to project sponsors. Rather, a more practical concept for managers is that of *formative evaluation,* or c*oncurrent monitoring and evaluation* - aligning monitoring information to support evaluation, and helping optimise project results during implementation. This would form a main plank of an MfDR strategy, increasingly being adopted across projects in the region.

The importance of the above for the stocktaking is thus to see whether such evaluative and learning elements were incorporated into the M&E system, and how these help manage for development results and decision making, and in engaging project staff and other stakeholders in M&E processes.

---

13 Woodhill (2007).

14 See: Woodhill (2007).

15 For a discussion on the role of diagnostic studies in monitoring, see Casley and Kumar (1987, Chapter 5).

Chapter 3 - Project-based investment operations in South Asia

3.1 World Bank and IFAD-supported projects

Much of The World Bank's assistance to countries is provided through project-based investment lending instruments. Currently, project lending accounts for some 70% of the combined IBRD and IDA active lending portfolios. Between 1995 and 2010, the World Bank had around USD11.7 billion of IBRD/IDA lending and over USD40 million in grants for ARD projects in the South Asia region alone. While on a smaller scale, IFAD had also been active in project lending in the region, with over 30 on-going projects and approved loans and grants of the order of USD1.0 billion.

Agriculture and rural development projects in South Asia embrace a broad spectrum of interventions which inter alia may be technology-driven, community focused, or resource-based. These address specific development issues like rural poverty reduction, agricultural productivity enhancement or sustainable natural resource management. Sub-sectoral divides had blurred in recent years, as various combinations of interventions (e.g. formation and/or strengthening of farmer groups and community organisations, alongside improvements to agricultural water management and rural infrastructure and services) within the same project entity.

Increasingly, the CDD approach, emphasising the role of social and human capital transformation in improving livelihoods, is infused into a range of ARD projects[16]. This generally entails a sustained period of community level interaction and capacity development support, building self-sustaining institutions of the poor, and linking them to public and private sector services. Experience shows that planning and implementation require a high degree of flexibility, best done in an evolutionary rather than blue-print manner. Projects following this approach are by nature *process-intensive*[17], incurring various rounds of piloting, learning and adaptation, and scaling-up, to cope with changes to the operating environment over the project lifetime – with consequent demands on the M&E system.

3.2 M&E quality issues

Since the-mid 2000s, the World Bank has introduced various enhancements to its M&E policies, procedures and guidelines[18]. These give strong emphasis to the role of M&E in investment operations, with explicit focus on achievement and measurement of results. A review of ICRs/ICRRs of over 240 World Bank-assisted projects in 2008 by IEG (Independent Evaluation Group) of the World Bank however judged that two thirds still had systems that were of negligible or at best modest quality[19]. Issues related not only to M&E design, but also in implementation and/or utilisation. An internal review by the Investment Centre around the same time of 74 World Bank-assisted ARD projects in East and South Asia which it had assisted in ICR/ ICRR preparation came to broadly similar conclusions[20]. Summary findings of the Investment Centre review showed that at design stage, systems had typically suffered from one or more of the following:

---

16 CDD may broadly be defined as an approach that gave control of decisions and resources to communities based on such principles as accountability, transparency, social inclusion and participatory planning and monitoring.

17 Processes may be best seen as a complete end-to-end set of activities that together create value. They encapsulate the way in which activities transform inputs into outputs, and how other internal or external factors facilitate or inhibit realisation of desired outcomes.

18 Besides OP 13.60, new requirements were for ISRs (Implementation Status and Results Reports, from 2005) and ICRRs (Implementation Completion and Results Reports), which included a breakdown of M&E quality according to design, implementation and utilisation aspects.

19 Reported in Annual Reviews of Development Effectiveness (World Bank, 2009 and 2008). IEG used a four-point scale in rating overall M&E quality: negligible, modest, substantial and high. Systems with high rating were expected to strongly influence project performance; provide sufficient information to satisfactorily assess the stated project objectives; and contribute to testing the underlying development model.

20 FAO Investment Centre has to-date participated in around 105 ICR/ICRRs missions in East and South Asia (50 in the latter alone). The internal review covered 59 ICRs of projects completed between 1995 and 2006, and 15 ICRRs of operations completed between 2007 and 2009: findings are reported in Muller-Praefcke (2010).

- Primary focus on production of financial and physical progress reports, falling short of informing on results;
- Unduly large number of indicators that are not sufficiently specific in relation to project objectives;
- Little or no linkage of performance indicators to the project's logical hierarchy of objectives;
- Poor use of results framework and/or logframe; and
- A general lack of provision to address the issues of limited local capacity for M&E as part of project design and inadequate stakeholder orientation.

The ICR review found that the main weaknesses encountered during project implementation included:

- Planned M&E systems and procedures were delayed or not operationalised;
- Attention primarily on physical achievement, to the neglect of project outcomes;
- Monitoring largely undertaken to meet donor requirements, rather than as an internal management tool;
- Information generated by the M&E system not effectively used by project management.

In many of the ICRs reviewed, impact assessment activities were poorly or not carried out as planned. Baseline studies/surveys were generally late and lacked focus on the use to which the data was to be put.

The factors contributing to poor operationalisation and use of M&E identified included lack of institutional capacity, paucity of competent staff, misunderstanding on the role and utility of M&E and at times inadequate mandate of those charged with M&E.

The Investment Centre review however also found evidence of creditable performance among the more recently completed projects in both East and South Asia. These included the timely application of M&E to assist decision making, supported by effective management information systems that contributed to achieving of project results (Box 2). Although the overall picture is mixed, there had undoubtedly been progress on the M&E front - and project experiences that could have cross-learning potential. This merits a closer look, beyond the information available in the ICRRs, at the types of approaches and practices adopted, and their utility and wider applicability in guiding M&E systems design and application.

Box 2: **Effective Use of M&E: ARD Projects in East and South Asia**

China - Guangzhong irrigation improvement project

The M&E system provided timely information for project management and the World Bank to track key indicators and take continuous corrective actions during implementation. M&E results were also instrumental in convincing the provincial government of the advantages of the water users association (WUA) model over the other reform models being piloted, leading to adoption of a provincial WUA policy. At time of the ICRR, the M&E system provided important data for assessing project outcomes and impact on the direct project beneficiaries.

Nepal - Poverty Alleviation Fund (PAF) Project

The Management Information System (MIS) operated by the M&E Unit of the secretariat proved crucial to enable PAF and the Bank to track progress in meeting the core project development objective. At the Community Organisation level, a monitoring sub-committee tracked each development activity implemented, with findings presented in regular meetings for discussion and corrective actions. Besides delivering timely information to the management team, the system generated automatic alerts in cases where rules were not observed. This helped reduce the risk of the project's benefits going to the non-targeted groups.

Project outcomes in both projects were rated satisfactory or highly satisfactory, with risks to outcomes rated moderate or negligible.

Source: Project ICRRs undertaken in 2007 and 2009, respectively.

Overall, lessons from the ICR review called for greater simplicity in M&E, and for it to be better integrated into project management processes; that M&E design needs to be more formalised in appraisal procedures and implementation support (i.e. a more structured approach to design); and conceptual and methodological advances in M&E in recent years, such as for impact assessment, must be complemented by commensurate attention on practical issues.

3.3 M&E arrangements in South Asia: findings of the electronic survey

As part of the stocktaking, the electronic survey of was undertaken to deepen the understanding of M&E needs of on-going ARD projects in the region and the approaches taken to address some of the issues raised above.

As projects responding to the electronic survey cannot be considered to be fully representative of ARD projects in the region (possibly more confident M&E staff responded), and the case study projects (see Chapter 4) were not strictly selected according to success criteria, a quantitative analysis of how many projects performed well in terms of M&E was not attempted. By way of comparison, however, although the majority of projects responding to the survey exhibit some useful features and core M&E tools in the system design, the better performing case study projects (as seen later in Chapter 4) stand out by actually using these in a more coherent and integrated manner, backed up by adequate expertise and resources, and strong managerial support.

System design
The electronic survey provided a preliminary overview of the type of M&E arrangements in place and related resource and capacity issues that merit future attention. Of the 15 projects which responded to the survey, commonalities in approach and system components across a good number of projects are evident, as seen from the following.

The vast majority of respondents (two thirds or more) reported:

• Adherence to an M&E framework or plan;
• Participatory monitoring is undertaken at community level;
• Externally supported process monitoring;
• Undertaking thematic/ special studies;
• Use of customised computer software for MIS operations.

A high proportion (between half and two thirds) of respondents reported:

• A concurrent monitoring and evaluation approach;
• Conducting internal learning forums and review workshops for project staff;
• Environmental and social safeguards are monitored;
• Web-enabled MIS.

A smaller number of projects (a third of respondents or less) reported:

• Conducting internal learning forums and review workshops at community level;
• Project MIS relying primarily on computer spreadsheets such as MS-EXCEL;
• GIS tools integrated into project MIS.

Despite the low response rate, the above survey findings brought out some useful M&E design features in a significant number of projects in the region. The participatory, process monitoring, and formative evaluation elements noted can all potentially add value to interventions and help shape future project design. The incorporation of customised computer and web-based software in the MIS among many of the respondents also reflects wide appreciation of the role of ICT in information management and communication.

On the other hand, there is an apparent lack of coherence in system components among a good number of projects e.g. those which had internal learning mechanisms for project staff but not at community level; or adopting a concurrent M&E approach without providing for thematic or special studies. A small number of the projects also indicated current dependence on computer spreadsheets as the main basis of the MIS: this could at best provide short term solutions for data storage and analysis, with possible risk to

data quality and integrity over time[21]. In-depth review of individual project contexts would be necessary to understand more clearly whether these observations were symptomatic of design weaknesses or simply local adaptation to specific project circumstances. This is a task best incorporated within the scope of Implementation Support Missions early in project life.

Capacity weaknesses and constraints

In the IEG review referred to above, low M&E quality was attributed to poor system design, including in many instances *a weak results framework*, and inadequate attention to implementation. Main weaknesses highlighted in the Investment Centre review of ICRs were over-ambitious or unworkable methodologies; poor operation of planned systems; lack of monitorable indicators; and inadequate stakeholder focus. Clearly while a wide range of analytical tools were being employed, the key concerns are about the capacity to use these effectively. Both reviews however presented little information on the type and nature of constraints facing projects in M&E system development or application on the ground. To throw some light on these issues, the electronic survey included questions concerning adequacy of human and financial resources for M&E, skill gaps and training needs, and specific requirements on guidance materials. This led to the following observations:

Human resource situation. Lack of skilled M&E personnel, especially at the field level (reported by two thirds of respondents) were an important constraint, exacerbated by lack of M&E training either at pre-service or post-entry (more than half reporting). Problems articulated ranged from service conditions issues to the lack of a proper M&E structure and low priority given to M&E. Nearly all respondents indicated the need for additional training of one type or another (see below). When asked on difficulties faced in building capacities for M&E, the most significant ones reported were: lack of suitable training institutions; lack of suitable staff to be trained; lack of incentives; and time constraints (in sparing staff for training).

Outsourcing M&E services. Projects depended to greater or lesser extent on external agencies to help undertake various M&E activities, with a third of the respondents indicating full outsourcing to third party service providers. This appears related to the difficulty of identifying and establishing long-term staff covering the requisite range of skills within the project organisation. But it may also reflect the increasing availability of private sector or quasi-government M&E service providers within countries. Responses in the electronic survey on satisfaction levels for outsourced services were however mixed (around half moderately satisfied, and about equal numbers of the rest very satisfied or not satisfied), raising questions about the quality and/or adequacy of services provided to some of the projects. Further insights on the specific areas and causes of dissatisfaction or the link between satisfaction and performance were however not possible given to the limited scope of the survey.

Financial resources. Most respondents did not indicate that funds were a constraint to M&E operations. For projects which responded to the question on size of the M&E budget, this worked out at less than 0.5% of the total project cost for nearly half the respondents. While there are no hard and fast rules on what the norm in percentage terms should be, this would appear to be somewhat on the lower side for a significant number of projects. Even where the project managements overall do not appear to perceive that funds were a constraint, the possibility of some degree of under-provision for M&E could not be ruled out, and bears further examination[22]. Around a quarter of the respondents did not or could not provide information on the size of the overall M&E budget. One explanation offered was that some M&E costs came out of project management costs, and specific breakdowns were not readily

---

21 Where ICT services and support are not readily available, computer spreadsheets provide an initial improvement over fully manual systems of recording and reporting. However, absence of appropriate database architecture and tailored-made computer applications severely restricts the functionality, reliability and utility of the system.

22 Absolute amount required may vary according to type and size of project e.g. larger projects may require a smaller % of the total project budget. Nonetheless, some agencies from past experience had placed a lower bound of around 2%-3% of overall project cost. See for example Chaplowe (2008) and IFAD (2002), Section 7.

available. Lack of clarity and transparency on M&E budgetary allocations, especially from the government's contribution, could impact negatively on M&E planning and implementation over the project life. It could also be symptomatic of a lack of priority accorded M&E. But further insights into these issues will require a separate investigation on M&E budgetary issues, outside the scope of the survey.

Skill gaps and training needs. To the question on what M&E areas of project needed strengthening, nearly half of the respondents cited MIS and related aspects, including improved ICT and web-functionality, and how to use the MIS effectively for monitoring. Other areas were outcome and impact monitoring; survey design and sampling methodologies; reporting and follow-up. Areas where knowledge or skills were considered lacking included: the application of results-based management and logical framework approach; MIS development and the use of ICT; data collection and analysis; and documenting lessons to help improve project performance. Staff training was considered necessary in these areas as well as in impact assessment methodology; web-based application for MIS; participatory M&E; and field studies/data collection and analysis.

Requirements for guidance materials. There appears to be a general lack, awareness of or access to M&E guidance and reference materials among the projects surveyed. To the question on what materials were available for guidance on areas concerning the results framework, baselines and impact assessments, and MIS development and use, the only documents cited were the PAD, Project Implementation Plans or consultants' reports[23]. Factors behind the lack of recourse to other guidance materials are unclear at this stage. But what is apparent from the survey is a felt need across projects for M&E guidance and reference materials on a range of M&E and MIS related topics, in particular on methodologies relating to impact assessment,

project results framework, MIS, as well as capacity building aspects and managing the design of M&E systems (see Table 3.1).

The foregoing indicates that factors of an institutional, human resource and motivational nature could pose significant risks to M&E quality and utility. They underscore the challenges to M&E/MIS system development and application outlined in the introductory chapter. They also suggest a continuing need for a clear project vision on resources to be allocated for M&E, capacity building, and focused technical support for M&E on several fronts, including improved availability of and access to practical M&E guidance materials by project teams in the region. These should build on and dovetail into existing capacity building initiatives for M&E in the region[24] drawing where possible on lessons and good practices of projects with relatively better developed systems and processes. Experiences from a number of such projects are examined in the next chapter.

---

23 Project Implementation Plans (PIPs), where they include a well developed section on M&E (approach, arrangements and processes), may offer useful practical guidance. But existing guidelines, prepared by the World Bank's Management Thematic Group in 1999, are outdated, especially on the M&E aspects. The current version of the PAD template/guidelines (July 2010) also provides only limited guidance on M&E aspects.

24 See Chapter 6 for examples of such initiatives.

Table 3.1:

Needs and priorities for practical guidance materials, by survey respondents

Theme	Priority
Project results framework and indicators	Highest
Using and communicating MIS information outputs	
Baseline and impact assessment methodologies	
Capacity building for ME&L	
Developing comprehensive project ME&L framework/strategy	High
Planning the design and roll-out of project MIS	
Planning for monitoring, evaluation and learning	
Integrating ME&L into routine functions of project staff	Medium
Imparting ownership and mainstreaming ME&L as management tool	
Using thematic studies as a management tool	
Participatory monitoring	Lower
Designing community based M&E	
Community score card technique	
Planning for project closure	
Learning through exposure visits	

Percentage respondents indicating high priority - Highest: >90% of respondents;
High: 80 % - 90%; Medium: < 80%; Lower – other.

Chapter 4 - M&E experiences in case study projects

The present chapter synthesises experiences from the eight project case studies (summary details in Table 4.1) relating to several major challenges for M&E system development and application, identified at the start of the stocktaking, further underscored by survey findings in the previous chapter, namely: (a) getting the system design right; (b) adopting methodologies and processes that provide relevant and reliable information; (c) effective use of ICT in the MIS; and (d) mainstreaming ME&L functions and tasks throughout project management. It focuses on how these challenges were being met; what has worked well and good practices displayed; and further challenges and issues which needed addressing. Observations on individual case study projects are set out in Annex 2; their significance and usefulness are further highlighted in Annex 3.

4.1 M&E system design and implementation

An effective M&E system should be capable of not only tracking results and evaluating impacts, but also support learning and adaptation and find utility among key stakeholders. The project case studies provided useful examples of how these considerations were incorporated into the M&E system design, which in the wider pool of ARD projects (Chapter 3) had been insufficiently or only partially addressed. The case study projects to a large degree were consistent in including features which reflected sound design such as:

- Overarching M&E framework covering concurrent monitoring and evaluation of inputs, processes, outputs and outcomes, and periodic assessment of impacts, using a range of tools, and information anchored in the MIS. Information from beneficiary communities often formed part of this framework;

- Mutually reinforcing blend of internal, external and participatory system components, leading to commonly reported upward and downward accountability, which also contributed in several cases to important changes in procedures to make projects more effective;

- Substantive role of evaluation in improving project performance was recognised, for example through timely thematic studies, to improve project targeting and develop new initiatives (see more below);

- Learning was emphasised as a core project value across the entire project entity in several cases, using and further fostering a peer-to-peer review approach at different levels, creating an environment and ideas for instigating important changes;

- Monitoring of environmental and social safeguards and plans was in some of the projects placed within purview of the project ME&L system. This was important for ensuring that key unexpected changes were accounted for and tracked;

- Clearly documented and time-bound M&E plans and budgets, which greatly facilitated operationalising the system, in particular the allocation of resources and implementation responsibilities.

The case study examples demonstrated the importance of adopting a holistic approach in system design and the integrated use of M&E tools that cater for the multiplicity of routine and ad-hoc information needs of project stakeholders (e.g. APCTMP, UPSLRP, KWDP)[25]. They also brought out the contribution that participatory and externally-supported components make towards mutual learning and downward accountability (UPSLRP); and the role played by process monitoring and timely thematic studies in improving project strategies and implementation modalities (APRPRP, BRLP, KWDP).

_____
25 The project names are given throughout in abbreviated form – full names in Table 4.1.

Table 4.1:
Case study projects and key features

Project Name and Type *	Project Development Objective[26]	Components/Outcomes
APCTMP: Andhra Pradesh Community -based Tank Management Project (WRM,WB)	Selected tank based producers improve agricultural productivity and water user associations manage tank system effectively.	1. Institutional Strengthening 2. Minor Irrigation Systems Improvements 3. Agricultural Livelihoods Support Services 4. Project Management
BRLP: Bihar Rural Livelihoods Project (RL,WB)	Enhanced social and economic empowerment of the rural poor in Bihar for improved livelihoods through community managed self sustained and institutions	1. Community Institution Development 2. Community Investment Fund 3. Technical Assistance Fund 4. Project Management
APRPRP/IKP: Andhra Pradesh Rural Poverty Reduction Project (RL,WB)	To enable the rural poor in AP, and particularly the poorest of the poor, improve their livelihoods and quality of life	1. Empowerment and capacity building of community and support organisations 2. Livelihood enhancement and development 3. Livelihood support 4. Effective project management
UPSLRP-II: Uttar Pradesh Sodic Lands Reclamation Project (NRM,WB)[27]	To increase agricultural productivity in 10 districts of Uttar Pradesh through sustainable reclamation of sodic lands and prevention of further increases in sodicity.	1. Land reclamation & on-farm development 2. Main Drain Remodelling 3. Technology Dissemination system: 4. Upgrading Farm to Market roads 5. Human Resource Development and Capacity Building 6. Adaptive Research: 7. Project Management
KWDP: Karnataka Watershed Development Project (NRM, WB)	Improving the productive potential of selected watersheds and their associated natural resource base in predominantly rainfed districts.	1. Participatory Watershed Development and Protection 2. Farming System Intensification 3. Income Generation Activities 4. Institutional Strengthening
APCFMP: Andhra Pradesh Community Forest Management Project (NRM,WB)	To reduce rural poverty through improved forest management with community participation	1. Establishing Enabling Environment for Community Forest Management 2. Forest Management 3. Community Development
MLIPH: Meghalaya Livelihoods Improvement Project in the Himalayas (RL, IFAD)	Improve the quality of lives and livelihoods of identified vulnerable groups in the rural sector, through promotion of sustainable business opportunities/ strengthening of local institutions for maintenance and improvement of community resources (Project Goal).	1. Empowerment and Capacity Building of Community and Support Organisations 2. Livelihood Enhancement 3. Livelihood Support Systems 4. Project Management
ULIPH: Uttarakhand Livelihoods Improvement Project in the Himalayas (RL, IFAD)	Sustainable improvement in the quality of lives and livelihoods of disadvantaged rural households in mountain areas of Uttarakhand by 2022 (Project goal, as stated in revised project logframe).	1. Empowerment and Capacity Building of Community and Support Organisations 2. Livelihood Enhancement & Development 3. Livelihood Support Systems 4. Project Management

* WRM = Water Resource Management; NRL = natural resource management;
RL = Rural Livelihood Enhancement; WB = World Bank assisted project; IFAD = IFAD assisted project.

---

26 In World Bank projects, the project development objective (PDO) is a statement of what will be the principal outcome for the primary target group, and for which the project is accountable. IFAD project goals are articulated in the project logframe.

27 Phase three of this project was starting up at time of this stocktaking, with largely similar PDO. Project components consisted of land treatment and on-farm modernisation; drainage system improvement; agriculture support services; and institutional strengthening and capacity building for market access.

In UPSLRP, M&E functions were effectively supported by a well-developed MIS and GIS. Multiple agencies with specialised expertise provided substantive support in monitoring technical aspects of the project. Site Implementation Committees (SICs) and Water Users' Group (WUG), empowered both male and female community members in joint monitoring and review of the adequacy and quality of project activities and outputs, providing a platform for mutual learning and decision making. There were strong linkages between the different hierarchical levels. Well-capacitated Assistant Managers acted as local resource persons, providing support to SICs/WUGs in three to four villages each. Mandatory visits of District level Project Managers to problematic villages gave additional boost to resolving problems quickly. Externally executed studies and SICs permitted triangulating of information, providing direct and timely feedback to community members and project management. This greatly facilitated the country's own PCR and subsequent ICRR processes, and the preparation of follow-on project phase.

The effective use of ICT tools, GIS, and remote sensing for data capture, analysis and reporting by a number of projects (e.g. KWDP and UPSLRP) further illustrates the value-added from adopting a combination of approaches and methods, field-based and technology-enabled, to support M&E processes. Significantly, the project experiences documented demonstrated the practical feasibility of putting in place systems that permitted:

- Good integration of monitoring, evaluation (formative as well as summative) and learning components;
- Inclusive stakeholder participation and ownership across different M&E processes;
- Effective partnership between project staff, beneficiaries and competent external service providers.

While specific requirements may vary from project to project, such capabilities go towards meeting the core system requirements outlined in Chapter 2 and some of the concerns identified in the survey of ARD projects in Chapter 3.

Importantly, M&E had played a significant role in project management as a whole. This ultimately should be a system design objective. Examples of where a strong, integrated and internalised M&E system provided information and learning which directly enhanced the development effectiveness of the project include:

- In APRPRP internal monitoring, complemented by a robust external process monitoring system led to actions to improve CBO functioning, including better coverage of target groups, and increased internal lending by SHGs (further elaborated below, see also Box 6). Results from well-focused thematic and diagnostic studies in KWDP led to policies and actions for enhancing participation of landless labourers in soil and water conservation activities; re-balancing investments between physical and biological interventions; and introducing new initiatives to enhance incomes. This type of concurrent monitoring has also been recognised under the 2008 National Guidelines for Integrated Watershed Development Programmes;
- A peer review learning approach in BRLP, which included managers as well as communities. This led to decisions to take forward successful pilot interventions, providing the basis for addressing the priority needs of communities and up-scaling new initiatives e.g. use of new crop varieties, systems of rice/ wheat intensification, and health risk fund.

Despite the positive features observed, a number of further challenges to system M&E development and application are apparent. One system design feature seen across the case studies is the heavy reliance on quantitative approaches in baseline and impact assessment surveys. Although the use of qualitative and mixed methods is also evident, the predominant evaluation strategy adopted is one grounded largely in quasi-experimental designs (QEDs) with control groups, and before and after project intervention data from large, quantitative surveys. This had proved difficult to implement in several of the projects, weakening the utility and reliability of the information gathered. Practical difficulties encountered and methodological

issues associated with baseline and impact assessment studies are examined in Section 4.2.

A common theme emerging from the case studies is the role of external M&E agencies during system implementation and utilisation. One project (KWDP) fully outsourced ME&L and MIS design and implementation to a third party service provider. Another (APCTMP) relied extensively on grassroots NGOs in data collection/MIS and assisting in participatory performance assessments of CBOs[28]. Other projects utilised external agencies to various extents, mainly in studies and assessments and in process monitoring. The evidence suggests that while external partners and service providers can have a positive and necessary role in system implementation and utilisation, there could also be risks and pitfalls, which need to be factored into design, a point which we return to later in the chapter.

A number of the case study projects (APCTMP, UPSLRP, APCFMP) included the monitoring of environmental and social safeguards and actions within the ME&L framework - a feature which merits consideration in future designs[29]. This is an area often accorded rather cursory attention in M&E system designs. Whilst not all projects require such safeguards and plans, it needs little reminding that ARD projects can incur unintended environmental and social impacts, often not reflected in the results framework, which can undermine their development impact. Box 3 shows how one project, through independent studies, verified the absence of negative environmental impacts from project interventions, providing the confidence for further expansion of similar project interventions.

Box 3: **Findings of environmental assessments, UPSLRP**

The quality of ground water in the reclaimed areas was similar to the un-reclaimed areas indicating that the leaching of salts has not produced any adverse effect on the water resources. Similarly the quality of surface waters in the link drains, and at the outfall points where these drains join the main drains was found to be within the permissible limits for irrigation quality standards. Reclamation improved soil quality in the surface (0-15 cm) soils with significant reduction in pH and electrical conductivity. The floral diversity increased from 12 to 81 species, and the faunal diversity from 52 to 250 species as a result of reclamation. Microbial biomass increased from 52 to 418 milligram/gram soil after 10 years of reclamation.

Source: Project ICRR, p.49.

4.2 Methodologies and tools

Information generated by M&E processes has not only to be timely but also useful and indeed used by project stakeholders, including top and line managements, field staff and targeted communities. Timely availability needs however to be accompanied by reliability and credibility i.e. able to stand up to scrutiny in terms of methodological rigour and consistency. These present important challenges throughout the project life, from articulating the intervention logic and baseline establishment to end-of-project impact assessments. While a majority of ARD projects in the electronic survey indicated adoption of important methodological approaches and tools, the case studies provide further insights as to how to enhance their effectiveness, especially in the following key areas:

- Results and Logical Frameworks;
- Baseline and Impact Assessment Studies;
- Internal and External Process Monitoring;
- Participatory Assessment of Performance.

---

28 APCTMP covers 21 districts of the state, with some 2150 community tanks/Water Users Associations (WUAs), supported by some 250 Support Organisations, each working with around 9 WUAs.

29 Some ARD projects include ESMFs (Environmental and Social Safeguards Frameworks or Plans) as a statutory requirement triggered by various safeguards policies to mitigate negative project effects on the environment and/or livelihoods and well-being of project affected parties.

Table 4.2:

Developing appropriate outcome indicators, project examples *

Statement of Outcomes	Outcome Indicators	Significance & Usefulness
Project: APCTMP *Component: Minor Irrigation Systems Improvements* **Outcome**: Improved water distribution in command areas of rehabilitated tanks	1. % area fully irrigated under normal rainfall conditions 2. % o f middle and tail-enders reporting improved water availability 3. % increase in value of crop output per unit of water in command area of rehabilitated tanks	Verify that tanks are effectively rehabilitated, as per design, and operation and maintenance are satisfactory. Also helps monitor irrigation efficiency in command area of the tanks.
Project: BRLP *Component: Community Investment Fund (CIF)* **Outcome**: Establishment and use of Community Investment Fund for food security, social services, livelihood assets and service sector investment.	1. At least 60% of the investments on livelihood's CIF is made on productive assets and generating sustained income 2. At least 50% of SHG members reduced debts from money lenders 3. At least 5,000 jobs directly created through project facilitation and at least 75% of them are getting sustained income	Help evaluate: (a) livelihoods financing strategies and their adequacy towards greater financial self-reliance; and (b) effectiveness of youth placement and capacity building strategies and signal any need for revision of processes.
Project: UPSLRP-III *Component 1: Land treatment and On-farm modernization* **Outcome**: Degraded land reclaimed	1. Soil quality improved (pH, EC level and organic content) 2. Area reclaimed (ha) 3. Area reclaimed through press-mud treatment (ha)	*Some indicators are not well formulated and largely reflect delivery of project activities and outputs. Inadequate for informing on whether systems performance had improved or if farmers responded in terms of increased economic activity. Begs questions like: the land and drains are rehabilitated - so what?*
Component 2: Improvement of drainage systems **Outcome**: Improved drainage network	1. Length of main drains rehabilitated (km) 2. Length of main drains maintained (km)	

* Excerpted from Annex 3 of the respective Project Appraisal Documents (PADs).

Results framework and logframes

Given their pivotal role in the M&E system, developing a robust results framework or logframe, including appropriate and manageable performance indicators, ranks amongst the more pressing tasks to be tackled by any project. Out of eight case studies, the three more recent World Bank-assisted projects[30] (i.e. BRLP, APCTMP and UPSLRP-III) had each articulated a results framework, while the three earlier ones had included a logical framework in the 'project design summary' of the PAD. The two IFAD-assisted case study projects had both developed logframe matrixes and key indicators based on the RIMS framework[31].

Adoption of the results framework in the more recent World Bank-assisted projects is a useful departure from earlier practice, helping focus attention on the outcome level of the intervention logic. Two projects provided clear narrative statements of immediate outcomes, along with specific and measurable indicators (Table 4.2), permitting monitoring of changes in systems performance and behavioural responses. The third project however showed laxity in specifying some component outcomes, with indicators of physical outputs being used (erroneously) as indicators of outcome[32]. It reflects a general problem with the use of the current results framework template for the PAD, where only the PDO and intermediate outcomes of project components are to be documented, leading to confusion about where key outputs (such as main drains to be constructed) are to be articulated[33].

30 i.e. BRLP, APCTMP and UPSLRP (third phase).

31 As outlined in para. 16; see also IFAD (2007).

32 This applied to two of the four project components; more appropriate outcome indicators were used for the other components e.g. % seed replacement ratio as indicator of improved crop management practices.

33 Such confusion between outputs and outcomes is not new, as noted in Muller-Praefcke (2010).

In both IFAD-assisted projects, the logframes provided for articulation not only of immediate component outcomes and intermediate (purpose level) outcomes but also outputs specific to each component. These were accompanied by well developed indicators, which appeared measurable and monitorable (Annex 2, Table B). LFMs were treated as live documents that were revisited and updated over the course of the project, with participation of project staff and community representatives/CBOs. This permitted the updating of indicators that became obsolete and the revision of outputs and intermediate outcomes in line with project design changes (e.g. incorporating new value-chain approach in ULIPH; introduction of Village Development Fund in MLIPH).

Current procedures on the use of the results framework in World Bank-assisted projects on the other hand cast it in a largely static setting. There is moreover no explicit guidance on identifying and monitoring risks and operating conditions affecting the validity of the underlying intervention logic over time[34]. Lack of provision for structured review of the results framework detracts from its utility both as an M&E and planning/re-planning tool[35]. Some weaknesses and drawbacks noted were:

- Reduced scope and opportunities for re-validating the indicators decided at time of project appraisal and making necessary adjustments in light of project circumstances;
- Results arising from interventions that were not specified in the original project design (such as the new initiatives for income generating activities for landless groups in KWDP; and up-scaling of successful activities piloted e.g. health insurance in BRLP) were not readily amenable to systematic monitoring;
- Bottlenecks arising from the performance and behaviour of key external actors/ duty bearers whose performance might be vital to achieving project outcomes were more difficult to detect;

- Monitoring of project outputs for which project and line managements are accountable was not given commensurate M&E priority.

More dynamic use of the results framework, encompassing outputs and outcomes and their causal linkages is necessary, which should be possible with little additional project effort. This should also provide for monitoring of indicators of key risks and assumptions, including responses of internal and external actors and partners whose actions and/or performance are critical to project outcomes[36].

Baseline and impact assessment studies

Case study projects utilised a wide range of *quantitative* and *qualitative* approaches and methods in baseline and impact assessment studies (details in Annex 2, Table B). The former were predicated mainly on quasi-experimental designs (QEDs)[37]. This involved constructing the counterfactual[38] through pre-test/post-test quantitative surveys as a basis for attributing and measuring project impact, involving baseline and subsequent formal surveys, with or without comparison groups. Qualitative methods included field-based informal information gathering and participatory evaluation tools, often combined with the formal surveys, supplemented in some instances by remote-sensing and GIS data.

Project experiences in the use of quantitative methods, however, had been rather mixed. While good practices were evident among some project cases (APRPRP, KWDP, UPSLRP, see Box 4), practical difficulties in the design and utilisation of baseline and impact assessment surveys were also apparent. A detailed analysis of the methodological issues and the practical implications of impact assessments is given in Annex 4. These revolved around the following:

---

34 PAD guidelines under the 'risk based' approach (July 2010) contain a tabular template for the results framework, covering the PDO and intermediate outcomes. Instructions are however sketchy, with little guidance on dealing with risks in the intervention logic nor indication of scope for review and modification.

35 This may be due in part to the results framework and indicators in the PAD being perceived as part of the legal agreement between lender and borrower, revision of which requires administrative effort for both parties.

36 Reference should also be made to the Outcome Mapping methodology, developed by IDRC. This focuses on changes in behaviour, relationships, actions, and activities in the people, groups, and organizations the project/programme works directly with (see Earl, Carden and Smutylo, 2001). This is particularly useful where the basic premise about projects is about institutional change, which in fact does underlie the assumptions of many ARD projects.

37 Also known as constructed matched comparison group design. Bamberger et al (2006) lists seven such designs, of which the pre-test/post-test (before and after with comparison groups) rank amongst the strongest, and pre-test/post-test without comparison group among the least robust.

38 i.e. what would have happened to the population in the absence of the project.

Comparison groups. Difficulties arose from the lack of suitable comparison groups, poorly identified or too small comparison samples, and non-inclusion of comparison groups in either baseline or impact assessment surveys.

Sampling methodology. Sampling designs generally lacked rigour or were unclear, and posed risks of selection bias. Although some projects were being implemented in stages across the project area, the opportunity to utilise a pipeline approach, by staggering baseline and impact studies over time, was not taken up by any of the projects.

Linkages between baseline and impact assessment studies. With few exceptions (e.g. APRPRP and KWDP), baseline and impact assessment surveys were being undertaken largely as separate exercises, and by different external service providers, with little continuity in terms of datasets or analytical processes. This renders problematic the application of difference-in-difference analyses for statistical inference of project impacts.

Scope and utility of baseline surveys.
Perceptions on the purpose of baseline surveys varied among projects – ranging from providing benchmark indicators for impact evaluation, to supporting detailed implementation planning,

and a part of situational analysis (socio-economic/ecological conditions) of the project area. It is unlikely that all these could be achieved using a single survey methodology. Lack of clarity in terms of their scope and utility could compromise their role within the impact assessment strategy.

The above issues detract from the QED approach its potential utility as a tool for establishing the counterfactual and attribution of project impacts. This is exemplified in one of the recently completed projects (KWDP). Here, weaknesses in the sampling procedures and likelihood of selection bias observed in the baseline and impact assessment surveys rendered it difficult to attribute with full confidence the observed income changes to the project - even though trend data on cropping intensities and crop yields, and the high quality of land treatments observed, suggest that positive income effects were plausible. Inclusion of qualitative tools and participatory methods that permit more in-depth examination of stakeholder experiences and perceptions would have been an appropriate complement to the more quantitative large surveys. These would also help understand whether, why and how project interventions made a difference to farmers' incomes and productivity. Nonetheless, quantification and attribution of impacts is often necessary, such as in support to cost effectiveness and/or cost-benefit analyses of development interventions. But whilst QED and

Box 5: **Use of qualitative and mixed methods for baselines and impact evaluation, two case study examples**

ULIPH Baseline and impact assessment studies involved the use of a QPA (quantitative participatory assessment) approach, which provided a quantitative means of assessing and summarising qualitative parameters. This essentially combines PRA with an ordinal scoring system to permit translation of findings into scores that can be compared over space and time. Information was gathered at household, SHG, and village Panchayat levels on a range of economic, social/gender, and organisational variables, including attitudinal and perceptional responses.

UPSLRP-II Evaluation methods consisted of: (a) combination of statistical surveys with informal surveys/PRA tools to assess changes in agricultural land use and socio-economic status (e.g. cropping intensity/yields over successive crop seasons, poverty status/incomes); communities' perceptions of impacts (e.g. from improved road and drainage infrastructure); and (b) direct observations (e.g. traffic volume/ composition; changes in flora/fauna on reclaimed areas); and c) use of satellite imagery to assess changes in cropping intensity and ecology/quality of affected areas e.g. wetlands. The studies drew on expertise across various disciplines (e.g. agronomy, economic, ecology, management science) and specialised institutions.

other quantitative 'rigorous' approaches have a place here, these need to be done selectively and only where adequate technical support in survey design, sample selection, and implementation can be assured[39].

One criticism of qualitative methods is the difficulty of aggregating and generalising findings from a large number of community qualitative exercises. But this issue can be addressed as through mixed methods combining qualitative information with quantitative analysis[40]. One of the eight case studies (ULIPH) adopted this integrated approach for impact evaluation, while another utilised a combination of quantitative and qualitative methods that proved useful for triangulation of findings (Box 5). Both provide a possible indication of possible ways forward.

Overall, the experience of the case studies in impact assessment suggests that:

• Quantitative approaches like randomised control trials and quasi-experimental designs may not be suitable in all situations and need to examined carefully, after in-depth consideration of the scale and nature of project interventions, and characteristics of the project area. Perhaps most importantly,

is the availability of sustained and competent technical support in such areas as statistics and econometrics. Failing these, large amounts of resources may be spent on baseline and impact assessment studies without commensurate returns in terms of analytical capability and/or practical utility;

• Projects should consider opportunities for combining a wider range of impact evaluation approaches, inclusive of quantitative, qualitative and mixed methods that could help inform on why and how things happened (e.g. Contribution Analysis, based on Theory of Change approaches)[41] rather than with a single minded preoccupation with statistical inference of impacts. The increasing complexity of projects and their integration with government programmes, mean that more innovative approaches for project attribution will be needed;

• Baseline and impact assessment surveys should be closely linked at the outset, as integral parts of the overarching project evaluation strategy. Involvement of the same project professionals and external service providers throughout in several of the case studies had provided an important means of ensuring continuity and consistency;

---

39 For a useful discussion on the ongoing debates on impact evaluation approaches, see: Howard White (2009).

40 Such methods are increasingly being applied by M&E practitioners and added to the M&E toolkit; see for example, A.J. James (2005), and Bamberger et al (2010), which provides useful suggestions on the use of mixed methods for M&E.

41 These include Theory of Change approaches like Contribution Analysis and others like 'Most Significant Change' methods. See for example John Mayne, 2008, on contribution analysis.

APRPRP External process monitoring procedures include periodic interactive workshops to review findings and recommendations of the contracted field agencies (FAs). Following field visits to each district, FAs submit a list of process issues requiring corrective action. These are presented to a full meeting of District Project Management Units (DPMUs) for discussion, to arrive at a list of 'Agree to Do' actions. DPMUs prepare an action plan, which are reviewed at subsequent rounds of workshops. An 'Actions Taken Report' indicating actions proposed and taken, including reasons for divergence from FA recommendations is prepared and discussed in regular State PMU meetings and through video conferences chaired by the CEO.

Led to actions to improve project operations as well as CBO functioning, including better coverage of target group for Community Investment Fund, increased internal lending by SHGs, and enhanced role of Village Organisations in sub-project implementation.

Emerging good practices were also identified and put forward for replication e.g. modalities for bank linkages; and collective marketing of agricultural/forest products by CBOs.

BRLP External process monitoring in each quarterly cycle covered not only project operations and business processes but also community institution building, CBO functioning and effectiveness, and participation of the poor and poorest of the poor. Feedback is provided to the district teams on a monthly basis and to the HQ every quarter. Other critical emergent issues identified by the MIS and/or arising from monthly (district) and quarterly (state) reviews are also flagged for discussion and action.

Led to strategic decisions on: (a) universalisation of the food security and health risk fund; (b) revising the SHG rating tool; and (c) enhanced targeting and going the 'extra mile' for inclusion of the left-out poor through devolving responsibility for SHG formation to Village Organisations (i.e. SHG federations at village level).

Source: Project case studies; see Annex 2, Table B for further details.

- For baseline establishment, clarity of purpose, appropriate data collection instruments, and realistic timeframes are vital for successful execution. This may require undertaking separate information gathering exercises to serve different purposes. Project management needs also to be sensitised on the purpose and utility of such surveys, as well as participate in their design, to ensure these are not seen merely as a bureaucratic step imposed by funding agencies - undue haste ought to be avoided at all cost.

Process monitoring

An important element of the project intervention logic are the processes linking specific interventions to outputs, outcomes and impacts[42].

Understanding and tracking of these processes is important towards *optimising project results*, through helping ensure activities and implementation modalities are being carried out as designed, while informing on where modifications and refinements are warranted. Several case study projects had put in place internal and externally supported process monitoring arrangements that had proved highly effective in informing and influencing management decisions (Box 6). Good practices in process monitoring discerned from the case studies included:

- Regular and structured interaction between external and internal project personnel in review mechanisms that fed into decision making and action systems;
- Monitoring was not confined to operations and internal business processes of the project but encompassed core processes and governance practices of CBOs that are often critical for effective functioning, social

---

42 Processes may also be defined as a series of related activities aimed at achieving a set of objectives in a measurable, usually repeatable manner (see Chapter 2). They encapsulate the way in which activities transform inputs into outputs, and how various internal or external factors facilitate or inhibit realisation of desired outcomes. They require particular attention in projects which include interventions of an institutional and capacity development nature, for which a high degree of piloting and fine-tuning of processes according to local contexts are essential.

Box 7: **Use of participatory performance assessment tools, project case study examples**

APCTMP Quantified Participatory Assessment Tool. A combination of quantitative and qualitative approaches was incorporated into this tool for quarterly self-monitoring performance of Water User Associations (WUAs) by the primary stakeholders. This utilised a user-friendly scoring system and colour-coded rating criteria for recording and summarising WUAs own performance on: participation and dialogue; technical performance; self-management; and innovations/adoption. Main steps comprise: (a) WUAs' assessment of own performance; (b) Support Organisations (SOs) also assess WUAs and provide inputs for their improvement; (c) SOs performance is assessed by the DPU/ PMU on the basis of the WUA ratings; and (d) performance of DPU/PMU is gauged from the consolidated WUA assessment results. It contributed to community empowerment and accountability across all levels. Involving WUAs in evaluating one another's performance

provided a useful means of promoting cross learning and constructive competition among WUAs.

APCFMP Social Audit Tool. A participatory, multi-stakeholder 'social audit' approach used in assessing performance and functioning of the VSS (Forest Protection Committees) towards sustainability of the community forest management system. OMR (optical mark reader) sheets were used in recording responses of 'social auditors' comprising a panel of the VSS general body, management committee representatives, community extension workers, NGOs, and government staff. Overall assessment was based on weighted scores on 25 weighted criteria in assessment areas for: (a) organisational effectiveness; (b) social equity; (c) economic benefits to members; (d) natural resource sustainability; and (e) environmental benefits.

Source: Project case studies; further details in Annex 2, Table B.

---

inclusiveness (e.g. gender equity), and institutional sustainability;

- Strong linkages between process monitoring and the project MIS were used in several cases, and responsiveness to issues flagged by the latter;
- Besides identifying shortcomings and corrective actions needed, good/ exemplary processes were also captured, permitting feed-forward of useful practices for replication and/ or scaling-up.

Participatory performance assessments

Various participatory assessment and review mechanisms were in use across the case study projects. These included periodic review workshops and learning forums (APRPRP, KWDP, BRLP) and participatory quality assurance arrangements like transect walks and site implementation committees e.g. UPSLRP (see Annex 3). These were generally supported by CBO records and village displays e.g. wall charts on project activities and CBO achievements.

Quantitative tools for participatory assessment of CBO performance had also been developed. Some relied to various extents on third party assessments during application e.g. the SHG rating tool (BRLP, APRRP)[43]. A number also came across as highly participatory and inclusive in approach, permitting qualitative information to be quantified, summarised and compared (APCBTM, APCFMP, see Box 7).

Both these examples (Box 7) have good potential for self-monitoring and analysis. However, the Social Audit tool, focusing on sustainability of the village forest protection committee (VSSs) system was designed to be used only once, at the end of the project, limiting its usefulness as a routine monitoring tool. The Quantified Participatory Assessment tool used in APCTMP on the other hand had far greater utility for periodic self monitoring

---

43 Usually by the Village Organisation/federation or project staff. SHG rating tools are generally based on Critical Rating Index of NABARD (National Bank for Agriculture and Rural Development) which tended to be used more for establishing credit worthiness of the group than for self assessment and learning.

APRPRP A web-enabled MIS was developed with the help of an external agency with a sound track record in system development, including the highly successful automated system of the NREGS employment guarantee scheme already rolled out across 65,000 villages in the state. Modules for SHG bank linkages, micro-insurance, and jobs have been integrated within the system, which permits routine tracking of data on SHG's financial performance and key livelihoods activities. User-friendly front-end devices such as palm tops and computer netbooks for data entry and uploading to the MIS by Community Bookkeepers are being piloted. Biometric-based Smartcard technology is also being developed to support around 5,200 Village Organisations as correspondent agents for commercial banks in delivering financial services to the rural community.

MLIPH The project has in place a low-cost MIS, using computer software developed in-house by the Monitoring and Evaluation Officer. Data are entered at block level using EXCEL worksheets and analysed at Project headquarters using SPSS. This is done quarterly and is used for monitoring purposes. Data quality is managed by regular training of the Village Level Group Promoters (GPs) and the SHGs, who are also rated regularly for their book keeping and other group management skills. This provides an incentive for the SHGs in ensuring accuracy of their books.

Source: World Bank Project Paper On 'A Proposed Second Additional Financing (Credit), for APRPRP', November 23, 2009. Washington, D.C.; and Annex 2, Table C of this report.

and learning, including cross-learning. Both examples demonstrated that:

- Self assessment tools used on a structured and regular basis could be very effective for community empowerment and encouraging downward accountability, especially where the ratings are also used systematically by project managements for assessing their own performance;
- When supported by well designed and readily understood scoring and aggregation techniques, such tools could also greatly assist in objective analysis of otherwise subjective information;
- Capacity building and learning rather than top-down monitoring should guide the design of such self assessment tools and mechanisms.

4.3 Use of ICT in the MIS

Projects, no matter their scale or complexity, require a systematic and reliable flow of management information for their smooth functioning[44]. Rapid developments in ICT have presented new opportunities for computerised MIS establishment, permitting more effective information management in support of project operations and ME&L. Most of the case study projects have demonstrated the feasibility and utility of such technology and have put in place project MIS with capabilities for web-based data capture, reporting, and communication across multiple project sites and levels, integrated in some instances with GIS and remote-sensing tools and applications. At the same time, however, reliance on relatively less sophisticated systems is also in evidence. Box 8 illustrates systems at both ends of the technology spectrum.

Resource and technological demands of information systems
The first example of MIS establishment in Box 8 is much more demanding in time, resources and organisational effort than the second low-cost alternative. It would invariably require higher investments and greater involvement of external ICT agency support in design and development. However, these costs are far outweighed by the greater functionality and utility of ICT supported systems, including better assurance of data integrity and security, scope for adaptation and refinement, and better

---

44 Such information is needed for control, planning, decision making and coordination, covering operational, tactical and strategic levels.

Box 9: **Functionality and utility of the MIS, case study examples**

KWDP A customized MIS package (*Sujala Mahithi*) was designed and developed by the ME&L Unit of Antrix (the outsourced ME&L agency) for physical and financial monitoring at the different levels. This package helped provide a systematic database which allowed users to query and analyze periodic field data, and prepare reports on specific project components at state, district, taluka/block, sub-watershed and micro-watershed levels.

Various refinements to the software were made over the project period. Initially, financial reports provided by the MIS did not tally with the project's Financial Management System (FMS), due to double counting and other issues. This was later rectified through a 'transaction-based' system, permitting merging of the FMS with the MIS. The GIS enabled software (*Sukriya Nakshe*) allowed different levels of analysis on a cadastral map. A complementary GIS map viewer tool *Nakshe Vivara*, helped display the different resource maps e.g. land use and soil type and allowed overlay of user-defined layers for spatial depiction on cadastral maps, with specific query facility. This enabled documentation of changes over the life cycle of the project such

as field bunding and farm pond implementation, untreated and treated watersheds, with 'before' and 'after' images.

BRLP The MIS gives special attention to recording and reporting of activities and functioning of the SHGs, including provision and repayment of loans, and linkages to banks. It has an utilisation-cum-validation mechanism for SHG data pertaining to savings and credit. This involves generation and use of a Digitized Demand Information Sheet, indicating 'demand' that each SHG makes of individual members over different weeks of the month, covering compulsory and voluntary savings, meetings attendance, loan disbursements, and repayments.

There is built-in capability in the software to modify repayment terms by specific SHGs as and when the need arises. Such flexibility was added following discovery in the field by project staff that poor repayments in some SHGs indicated by the MIS stemmed from factors outside the control of SHG members, such as destruction of crops from unusually severe flooding. A socially-sensitive approach in microfinance operations was thus facilitated.

Source: See Annex 2, Table C of this report.

---

prospects for sustainability[45]. This becomes absolutely essential for larger and more complex projects e.g. APRPRP and KWDP. Box 9 provides further examples of how adequately funded and technically supported MIS had worked well for several of the case study projects.

Arguably, not all projects can take full advantage of the technology available. Apart from cost and capacity issues, lack of modern telecommunication infrastructure and/or limited access to competent technical advice and support services could restrict the use of ICT in MIS establishment in certain project contexts. However, in light of e-governance initiatives, improvements in rural communication

infrastructure, and increasing number of private sector ICT service providers across the region, it is anticipated that such impediments would ease over time, rendering ICT far more accessible and affordable. Experiences of the case study projects in MIS establishment and utilisation could thus prove instructive for other projects embarking on similar exercises.

Useful features and good practices in system establishment and utilisation

The project case studies indicate that effective use of ICT requires strong commitment by project management at the outset, accompanied by sustained technical support spanning MIS design, development, deployment and roll-out stages. Other useful features and good practices observed include:

45 Through careful identification and contracting of competent MIS agencies in system design, development, and subsequent refinement, it also reduces the risks posed by dependency on in-house ICT staff, the most experienced of which tend to difficult to recruit and retain under government service conditions.

- Adopting a user-centric and participatory approach in identification and validation of information and reporting requirements;

- Using a modular structure in the MIS design, permitting flexibility and manageability in establishment and roll-out;

- Developing relational databases within system architecture for capture, storage and integration of static and dynamic data, permitting a transaction-based system design, and greatly facilitating analysis and reporting;

- Linking information for work planning, budgeting, and monitoring of progress and performance and communicating these in transparent and readily accessible manner;

- Clear institutional arrangements for deployment and roll-out of the system, including its sustainability beyond the project implementation period.

Examples of good practices adopted and their significance and usefulness are further elaborated in Annex 5. They highlight the essential role which a well-functioning MIS can play in supporting monitoring and evaluation as well as in planning, coordination and communication functions. Importantly, they bring out the need for MIS establishment and utilisation to go hand in hand with that of the ME&L system.

Issues and weaknesses

A number of weaknesses and potential pitfalls among the case study projects were also apparent, which pose further challenges in MIS design and development. They include:

Systems more oriented towards information management than management information for decision support. A large amount of numerical data are being recorded and reported in some projects. This reflects a general problem faced by projects where there are large numbers of user communities, all pressing for inclusion of operational data that may be of limited utility for decision making[46]. Important management issues risk being buried under the data. It also places heavy demands on CBO personnel and project field staff in record keeping and data entry, often with consequent loss of quality. There is a general need for greater selectivity and prioritisation of data and indicators.

Inadequate focus on information for making tactical and strategic policy decisions. MIS designs tended to focus on operational information rather than on key decision variables at the strategic and tactical ends of decision making. MIS-generated alerts and Exception Reporting were not much in evidence. There is however growing recognition of this inadequacy – one project has already embarked on introduction of an 'Executive Dashboard' to display relevant information for managers at various levels, including CEO level. The challenge here is to be able to limit and devise decision variables appropriate to the tactical or strategic levels, rather than mere aggregation of unprocessed transactional data relating to day-today operations.

Poor integration of project financial management systems (FMS) with the MIS. This tends to happen when MIS design lags behind the FMS and/or fails to take into proper account issues of integration and synchronisation of databases and reference periods. This presents problems of reconciling financial data from different sources, limiting the capability to link monitoring of financial and physical aspects of project performance. While it is often possible to devise work-around solutions after both the different systems are in place (as seen in the project example in Box 8), it would be preferable to address the issues of integration and synchronisation as early as practicable to minimise risks of incompatibility between systems.

Needless to say these issues point to the capacity of project managements to determine and articulate their information requirements, as well as availability of experienced MIS advisors and designers who can provide support in the whole process, from identification of needs, through software design and testing, to capacity building and roll-out - without imposing inflexible software in a one-off manner.

---

46 e.g. BRLP and UPSLRP-II. In the former, the Monthly Planning and Progress Report alone generated by the MIS contains over 180 indicators and sub-indicators. For the latter, the stocktaking team considered that less than half of MIS records and registers were well maintained.

Box 10: **Institutional Arrangements for ME&L, Case Study Examples**

BRLP M&E functions are well integrated into the project management structure, which includes a State Programme Manager for M&E, with seniority on par with Sector Heads, reporting directly to the CEO. The incumbent has clear mandate to lead, guide and provide technical support on ME&L to other sections of the project, supported by Programme Managers for M&E/MIS and for Research and Documentation. M&E are specified as functional responsibilities of staff across technical units and levels, and articulated in job descriptions of Sector Heads and district staff. M&E Officers had not been recruited at district level, but responsibility for this function rests with District Project Managers (DPMs) and reflected in their job descriptions. DPMs are accountable to sector heads for programme delivery and also report project progress and achievements to the district Programme Management Coordination Committee, providing motivation for M&E and MIS implementation and utilisation.

ULIPH The integration of M&E within the routine functions of project staff had been facilitated by carefully drafted job description of field level personnel that included specific mention of their ME&L roles and responsibilities. For District PMUs, these included the conduct of and support to monthly and quarterly review meetings with project stakeholders, as well as "At least 12 working days/month dedicated to field visits and feedback loops to be followed, to relay field observations and issues to colleagues for timely and comprehensive action".

4.4 Mainstreaming ME&L functions and tasks throughout the project

The case study projects showed ME&L systems can be implemented and utilised as planned only if they elicit adequate buy-in and participation across the spectrum of project stakeholders. The latter include not only staff of M&E units but also senior line managers, field staff, CBOs and target communities. A number of the case study projects demonstrated how this could be facilitated through:

- Putting in place workable institutional arrangements for ME&L;
- Inculcating a culture of shared responsibility and inclusive participation in ME&L processes amongst stakeholders;
- Addressing ME&L capacity development needs in an integrated and inclusive manner;
- Harnessing the catalytic role of external partners in system implementation and utilisation.

Institutional arrangements
Several projects (Box 10) demonstrated the value of well thought-out and clearly defined institutional arrangements for ME&L. These are essential elements to incorporate within the project design, as they set out the requisite capacity and processes of a project to effectively manage its M&E system. The projects showed that this is quite achievable with the right will and effort, of which the following aspects are exemplary:

- Provision for adequate personnel within the project organisation for ME&L at project headquarters and in the field;
- Placement of senior and experienced staff at managerial level with oversight of ME&L development and implementation, whose responsibilities include building capacities of both subordinates and peers on M&E;
- Job descriptions for line and field managers which ensured ME&L are well integrated into their normal work routines, alongside duties such as preparation of work plans and budgets;
- An inclusive system of periodic and structured reviews at state, district and local/community levels, involving key stakeholders.

Shared responsibilities and participation
We saw earlier how various participatory performance assessment processes and tools (such as the QPA tool of APCTMP shown in Box 7) were instrumental in empowering communities in ME&L processes and encouraging downward accountability for project

results across various levels of the project. The importance of inculcating a work culture which promotes shared responsibility for ME&L is further reflected in the declared principle in one project (UPSLRP) that 'Monitoring is nobody's monopoly'. The stance taken by top management of that project was that all project personnel, from the highest to the lowest level of the organisation, were to be 'eyes and ears' of the project - M&E, as a distributed responsibility, was not confined only to members of the M&E cell. The project examples demonstrated in all instances the importance of:

- Strong leadership by project management in all the projects in providing the necessary motivation for project staff in treating M&E as a valued project function that has relevance and utility for all;
- The close engagement of top management in the development and utilization of M&E information, both on a day to day basis, but also in regular review of results;
- Delegated accountability for performance in terms of achievement of results, and decentralised responsibility for ME&L, based on the subsidiarity principle[47], as major incentive for M&E implementation and utilisation, which was also found across several of the projects.

Capacity development in ME&L

Limited capacities in ME&L skills as well as poor awareness of their potential uses can pose major threats both to system implementation and utilisation, as was noted in Chapter 3. Even with staff in place and a good distribution of responsibilities the project must have people with the knowledge and skills to implement it effectively. Practically all of the case study projects showed how these skills were addressed through well targeted M&E capacity building initiatives that were inclusive and integrated with the broader capacity building strategies of the project (examples in Box 11). Good practices included:

- Targeting not only M&E unit staff but also other line and field management staff, personnel of support organisations, and functionaries and members of CBOs (APCTMP) helps widen appreciation of the value of ME&L, making it more accessible to key stakeholders, and improving prospects of utilisation;
- Close collaboration between ME&L specialists and project departments responsible for human resource development and capacity building (BRLP). This puts into practice the sharing of M&E responsibility and helps ensure sufficient priority is given to ME&L training and sensitisation, from induction of new staff to top-up and refresher training in specialised topics;
- Underpinning capacity development strategies by results-based management and/or logical framework concepts (both examples in Box 8). This helps sharpen the focus of the M&E and direct attention of stakeholders towards its role in supporting achievement of results.

Catalytic role of external partners

Case study projects had to greater or lesser extent, and by design, involved external partners in supporting M&E and MIS, as noted in section 4.1. Clearly, external M&E partners had played an important role in several key technical areas, in particular: M&E system design; establishing and ongoing technical support for the MIS; undertaking baseline and impact assessments, and in process monitoring. With limited project lifetimes and specialism required for many M&E tasks, the use of external partners - 'outsourcing' - will remain a necessity, although this had at times posed practical issues.

Box 12 shows examples of both fully and partially outsourced M&E services. They reflect different approaches and modalities – one with greater independence accorded the external service provider, and the other showing a more collaborative approach at the local level. Both have advantages and disadvantages in terms of objectivity of the information and learning value for staff and communities.

---

47   i.e. doing the work at the lowest possible level of implementation and management.

Box 11: **ME&L capacity development initiatives, case study examples**

APCTMP The capacity building strategy of the project emphasises results-based management (RBM) principles, which include: access to information; stakeholder participation; subsidiarity (doing the work at the lowest possible level of implementation and management); and flexibility. This covers management functions at three implementation levels: state, district and WUA levels. It includes training programmes on overall approach on monitoring, learning and evaluation (MLE), results-based management, participatory monitoring and learning, and process monitoring. The main focus is on creating and facilitating mechanisms and instruments promoting analysis of data gathered and generating learning from MLE processes. Orientation training is provided to project staff at state and district levels, staff of the Irrigation and Command Area Development Department, support organisations, WUA management committees and members.

Specific skill training such as on MIS and participatory tools is given to MLE and MIS staff and WUA committee members.

BRLP All newly recruited staff of the project undergo a 15-day induction programme which includes: (a) the logframe and results framework; (b) the different components of the project and associated M&E requirements; (c) complementary roles of the MIS and M&E; (d) linkages between process monitoring and routine MIS; and (e) data collection methods. They also undergo a one month 'village immersion' programme, working as Cluster Coordinators at village level, whose duties include data collection and reporting. They are later provided top-up and refresher training on the MIS. Development and implementation of these programmes are done collaboratively between the state M&E/MIS staff and the Institution Building and Capacity Building staff at state and district levels, including the district training cell headed by a Training Manager.

Despite possible advantages in having an external independent view, not being perceived as an outsider interested largely in fault finding would be an important factor in fostering cooperation between the M&E agency and project staff in the second case example in Box 12. However, informal discussion with some M&E service providers indicates that from time to time they are put in a quandary when pressure is applied by project counterparts to highlight positive achievements and downplay less palatable information. This reflects an inherent tension between independence on the one hand and cooperation and learning on the other, which could compromise the role of the external partner. Whilst difficult to eliminate, such tension might be mitigated by putting in place arrangements for supervision of the performance of external M&E agencies that are unambiguous, transparent and inclusive - as was apparent in the second case example in Box 12. This also helps reinforce the value of openness and results orientation within the management and staff culture, noted in other sections above.

Overall, experiences documented on the role of external M&E partners indicate that:

- Third party service providers presented an important means of facilitating stakeholder participation in ME&L processes and catalysing management decisions and actions, while bringing with them an outsider view to help enhance project operations and functions e.g. through facilitating learning and planning workshops;

- Projects had benefited from services of competent external agencies through enhanced access to skilled and experienced people to manage and provide ongoing technical support to essential tasks such as establishing computerised information systems and process monitoring. Key here was identification and selection of the appropriate agency, and involving them as development partners on a sustained basis;

- There is need for strong support of top management in promoting a culture of mutual learning that values objectivity and quality, and is receptive to both good and bad news;

- The value added from external M&E service providers might be enhanced through adopting quality assurance arrangements that involve multiple stakeholders, including CBOs and peers in performance review and signing off of the deliverables.

Nonetheless, engaging external partners cannot fully substitute for having a competent and strategically oriented internal capacity for M&E, which can make full use of external agencies support. Poor selection of agencies and/ or lack of proper guidance and supervision moreover can lead to poor M&E quality, as apparent from some of the responses in the electronic survey (see Chapter 3). The authors are also aware of a number of cases of poor agency performance in the region, for example in impact assessment. More importantly, outsourced M&E services may be difficult to sustain in the longer term, especially when projects scale up into programmes.

With size and scale, and ultimate accountability for delivery lying with state and national institutions, more and more of M&E capabilities would need to be internalised within project and programmes. Much also depends on the availability, quality and acceptability of the external agencies, and possibilities for ensuring continuity e.g. to permit systematic linkages between baseline and impact assessment surveys[48]. In the design of the second phase of KWDP (undertaken in 2011), whilst there is continuing emphasis on long term support from third party service providers, provision had also been made for developing greater internal capacity for M&E within the state institutions than was the case in the earlier phase. This underlines the importance of arriving at a judicious blend of mutually reinforcing internal as well as external M&E elements in the system design, rather than sole reliance on either.

---

48 For instance, even between different states in India, language limitations can be an issue in setting up and delivery of baseline and impact assessment surveys.

Chapter 5 - Lessons learned

5.1 Evidence of strong performance and contributing factors

The findings of the electronic survey give cause for cautious optimism that ARD projects in the region have, to various extents, progressed from situations where M&E is given cursory or little attention, towards establishing systems that had potential functionality as both a management and learning tool. Nonetheless, for the majority of the projects that responded to the survey, *inadequate capacity* to use the tools and implement designs and plans in an integrated and coherent manner poses important constraints to realisation of such potential. Although the need for addressing skill gaps and limited access to guidance materials was generally articulated, an under-appreciation of the effort and financial and human resources required to make the systems work was also apparent.

In contrast, the case study projects showed how things could work well when there is good integration between system elements, tools and processes, accompanied by adequate capacities in place to manage such processes. In relation to the system functionality issues outlined in Chapter 2, there had clearly been positive achievements which may be summarised as:

Demonstrable support for results assessment and decision making
Key here was the use of qualitative as well as quantitative means of documenting results from project operations and processes, not just mechanistic reporting of physical performance. Importantly, there was consistency in that managers at different levels used such information directly for decision making, requiring follow-up actions from staff and service providers.

Timely information and management response to such information
The case study projects, especially those with more developed MIS systems, provided information in close to real time, for reporting and use by managers at different levels.

Triggering learning and adaptation
Issues identified through the MIS, participatory processes, or thematic studies led not only to instituting corrective measures such as better targeting of poorer households, but also in feeding forward lessons and up-scaling successful approaches and interventions.

Eliciting participation and stakeholder responsiveness
Clearly defined M&E functions and responsibilities at various levels, combined with participatory processes, permitted close engagement of project staff at different levels as well as service providers and target beneficiaries to support project delivery, problem solving and addressing upward and downward accountabilities.

These are indeed important achievements in terms of both system design and application. They are attributable to a number of enabling factors, including:

- Project work flows that catered for and supported concurrent monitoring and evaluation processes - drawing from monitoring data to inform and enhance outcomes during implementation, and the related capacity to use and cross-analyse data from multiple sources;
- Joined-up thinking, permitting development of an institutional memory within the project entity that helped deepen understanding about results and likely impacts over time, rather than ticking the procedural boxes on M&E tasks, such as baseline studies commissioned/ completed;
- Project institutional arrangements which provided adequate clarity on M&E responsibilities at various levels of the project organisation and across stakeholder interests, including especially target beneficiaries,

with ample provision for developing internal capacity to discharge these responsibilities;

- Experienced M&E managers at senior level and/or good use of competent external agencies, who were treated as partners rather than as mere service providers, making possible consistency and continuity in specialised technical support.

These factors in turn clearly reflect considerable *management commitment* to M&E. Evidence from the case studies also points to this being driven by a real desire for responding to substantial operational issues and managing for results. Perhaps the single most important element is placing M&E at the heart of management, at senior level. To what degree this can be influenced by donor agencies such as the World Bank or IFAD is a case for reflection. Certainly it will be important to dialogue with partner governments and government departments on expectations and commitments with regard to M&E, both at the outset of any project or programme, and as a part of technical support modalities over its implementation period.

5.2 Broad lessons learned

In the wider context of ARD projects, the experiences documented in the project case studies provide a number of broad lessons for making M&E more effective, including:

Strong integration between components, activities, and tools
As well as a clear appreciation by project staff on triangulating information from different elements to measure progress and assess results.

Utilising the results framework as a flexible tool
To monitor and assess the intervention logic, and adapt it to changing circumstances, including behaviour of those actors and partners whose responses are critical for project success.

Adopting a range of outcome and impact assessment
Methods to understand project contribution and intervention effectiveness, not just at the end of the project but also during project

implementation, to fine-tune and adapt their implementation.

Allocating adequate time and resources to establish an effective MIS, and for maintenance, adaptation and refinement
Including requisite expertise for technical and staff training support. Risks of truncating systems development prematurely need to be guarded against, as demonstrated by the instituting of multi-year maintenance and technical support contracts by several of the projects.

Securing management buy-in to the system through quick wins i.e
Picking the low hanging ME&L fruit. Rapid turn-around of thematic and process monitoring studies was key to assuring relevancy and credibility of the system in the case studies reviewed.

Incorporating capacity development for M&E
Within the wider ambit of institutional and human resource development. This complements well the approach taken by some of the case study projects in promoting an organisational culture of shared responsibility and mutual learning in the work place. It includes the capacity to ensure external agencies deliver high quality work.

5.3 Specific lessons: promising approaches and good practices

The following section synthesises a number of specific lessons from the case study projects in how to approach the core challenges identified at the beginning of the stocktaking process.

ME&L system design
Develop and sustain an integrated M&E system for results reporting, which also directly provides outputs useful to managers and stakeholders. Projects demonstrated pragmatic approaches in developing a multi-layered and integrated ME&L system, using interlinked M&E tools and methods (see more on the tools below). But perhaps more importantly, they used these tools to provide a triangulated analysis both of progress and as well as emerging outcomes, as exemplified by the following:

- A comprehensive M&E system framework and plans that catered for a multiplicity of routine and ad-hoc information needs of project stakeholders, which were designed or refined with implementation reality in mind;

- Outcome and impact assessments were not just mandated activities undertaken at the mid-point or end-point of the project, but formed an integral part of the regular project management system, enabling triangulation of information from various internal and external sources;

- Participatory and externally-supported M&E components encouraged downward accountability and mutual learning. The feedback loop was completed by concrete follow-up actions, facilitated by self-assessments and learning/ planning workshops;

- Process monitoring and thematic studies were accorded a key role in improving project strategies and implementation modalities;

- The value-added from adopting a multiplicity of approaches and methods, field-based and technology-enabled such as remote sensing, ICT and GIS to support M&E processes. This was most effectively demonstrated where the analytical outputs had clear management implications. Where they linked MIS with financial management systems (FMS) this further helped the credibility of data in the eyes of managers;

- In a number of few cases data on environmental, social and gender perspectives were usefully integrated within M&E frameworks to cater for wider stakeholder interests. This could become a more consistent feature, as part of overall project quality tracking.

Core Methodologies and Tools

While most projects nowadays employ a range of M&E methodologies and tools, the good practice projects did so consistently and effectively, with strong emphasis on tracking outcomes, covering: the results framework, baseline and impact assessment, process monitoring, participatory monitoring, thematic studies, and the MIS.

Ensure results frameworks are used as a flexible tool to monitor and assess the intervention logic. The Results Framework and Logical Framework formed the central reference point for M&E systems, and were actively used as such by the case study projects, but with some areas requiring strengthening. More dynamic use could have been made of the results frameworks, treating them more as a live document, as was done under the IFAD-assisted projects. ARD Projects often cannot be designed and delivered according to strict blue-prints. The project experiences and their limitations suggest important approaches:

- Results and/ or logical frameworks used in ME&L need to be re-examined as the project evolves, but with very clear signals when significant changes are made;
- The re-examination applies especially to reviewing the feasibility and relevance of key processes, which may change with time, and the continuing validity of assumptions and risks (and their related indicators);
- Consistently and separately collect and report component outputs as sub-sets of the main results framework to enhance its utility as a planning and monitoring tool;
- Provide for structured and participatory review of intervention logic on a periodic basis;
- The results framework and M&E Plan must be an integral element of project planning processes at the outset and over the project life - a point too easily neglected during annual planning and programming processes.

Use a range of impact assessment methods to understand project contribution and intervention effectiveness. Statistical surveys were consistently used, and were recognised as essential to demonstrating progress and achievements. However experiences were mixed, and there were lessons for improvements. Impact assessment strategies should not be restricted to quantitative methods such as quasi-experimental designs that focus narrowly on measurement and comparing with control samples. This is especially important where evaluation questions and objectives, besides addressing upward accountability, include determining whether the intervention logic has or has not worked,

how and why things happened (i.e. reassessing the project's Theory of Change – the broader attribution), and deciding what next ought to be done. Key messages include:

- Quantitative assessments need to be well timed and funded to produce credible results, as they form a key pillar of outcome and impact assessments, but they do require highly specialised skills;
- More innovative and cost-effective approaches in the use of qualitative, quantitative and mixed methods should be encouraged and promoted as appropriate methodologies. These could especially help address evaluation questions on why and how things happened. In the case study projects thematic assessments were important in getting some of this type of information during the project period. Process and participatory monitoring (see below) can also provide important information in the final analysis;
- Baseline and impact assessment survey methodologies must be closely linked at the outset, to get effective impact assessments, a factor which was notable where there had been a good consistency in staffing and survey agency;
- It is worth distinguishing between baselines for impact evaluation, implementation planning, and situational analysis, as they may require different information and are used at different times. In most projects such a distinction is not made.

Process and participatory monitoring have their own specific purposes but also provide vital information on processes influencing outcomes. Process Monitoring was used creatively to examine the often complex intervention processes typical of ARD projects, and provided management quick information to respond. The projects showed that process monitoring:

- Could include not only operations and internal business processes of the project but encompass core processes and governance practices of CBOs;
- Besides identifying shortcomings and corrective actions was also be an important

tool to capture good/exemplary processes, and identify possible innovations;
- Worked particularly well when linked to the project MIS, following up issues flagged by the latter.

Participatory Assessment Tools helped projects to use more qualitative information, and were important for engaging stakeholders, especially at community level, and to increase transparency. They demonstrated that:

- Self-assessments tools used on a structured and regular basis could be extremely useful for community empowerment and encouraging downward accountability, especially if the ratings were also used by project managements for assessing their own performance;
- When supported by well-designed and readily understood scoring techniques, this could greatly assist in objective analysis of otherwise subjective information;
- Capacity building and learning rather than top-down monitoring was important in the design of such self-assessment tools and mechanisms.

Developing and managing the MIS
As projects increased in size and complexity, so too were the resource and technological demands on the MIS. In the case study projects these demands were nevertheless generally well addressed. However, without a strategic outlook this could result in systems producing large amounts of data, with inadequate attention on information processing for decision, and weak integration of financial and physical data.

Put time and resources into MIS establishment, functionality and maintenance. The hard lesson learned by many ARD projects, is that arriving at a fully functioning MIS is an iterative process, which requires an extended period of design, development, and testing prior to system roll-out. Also it is not a one-off development - rapid developments in ICT may present increasingly cost-effective and reliable technological options over time. With project changes and scaling-up, provision for adequate flexibility both in information content and ICT

use, and the commitment of adequate financial and technical resources for modification and/or enhancement during implementation, are essential. The case study projects showed that:

- Strong commitment of top management is needed for MIS establishment as an integral part of the ME&L system, spanning: design, development, computer hardware and software deployment, and roll-out stages. Specialist and experienced MIS developers (not just software designers) need to have an input into very early stages, as well the longer process;

- A user-centric and participatory approach in identification and validation of information and reporting requirements helps ensure relevance, adequacy and manageability. Author experience has shown that inadequate attention to data entry and quality from the start has made many MIS systems unusable for years. Web-based systems with offline capability, designed according to developing internet and mobile phone networks are increasingly practicable, as demonstrated by some of the case study projects;

- A modular structure in the MIS design permits flexibility and helps build confidence in development and using of the system. As noted above where projects closely linked the MIS with FMS and planning and GIS systems, it helped credibility in terms of underlying data and the visualising power of maps and targeting;

- A proper balance between functionality of the MIS in information management and its capacity to provide management information is important to achieve, especially at strategic levels of decision making. Measuring outcomes, displaying these and being interactive, and also helping managers to simplify reporting was critical for utility and reducing data overload;

- It is critical to develop a relational database management system within the MIS architecture especially with increasing project complexity. This categorization of data in different tables is important for capture, storage and integration of static and dynamic data to permit a more transaction-based system, greatly facilitating analysis and reporting;

- Clear institutional arrangements for deployment and roll-out of the system is essential, including sustaining its use beyond the project implementation period i.e. there is need for an exit strategy. Clearly the scope and effort to go into the MIS must be in accordance whether it is merely a project based tool, or will serve a longer-term purpose to any implementing stakeholder group. For example in APRPRP, the MIS is also useful to other agencies and Banks, which makes it more sustainable and justifying investments.

Institutional arrangements and capacity development for ME&L

Capacity development for M&E must be part of wider human resource development. The case studies showed examples of how the projects recognised that in order to implement the above, responsibilities and capacities for M&E needed to be embedded within the project organization:

- Several of the projects addressed ME&L capacity development needs in an inclusive manner, targeting not only M&E staff but also other line and field management staff, personnel of support organisations, and functionaries and members of CBOs;

- ME&L skill development and knowledge enhancement should also be undertaken as part of broader institution building and human resource development programmes of some projects, as an essential management and attitudinal capacity (see below) rather than as ad hoc exercises confined to M&E-designated staff;

- These capacity building efforts apply regardless of the extent to which ME&L functions and responsibilities are outsourced. Even where projects outsourced large parts of M&E ('third party M&E'), such as in Karnataka, there were also clear regular reporting functions built in across staff and implementing NGOs, which were cross checked and refined with the assistance of the external agency;

- The very close link between M&E and regular project planning responsibilities must be

identified at the outset, to avoid planning seen as mere budgeting exercise, but concretely tied to realistic outcome expectations (see link to results frameworks above);

- Capacity of M&E staff must include the ability to identify, commission and maintain partnerships with capable and experienced external agencies.

ME&L as part of wider institutional culture and implementation arrangements.

The case study projects showed that technical rigour and sound methodology, whilst necessary were insufficient for ensuring M&E quality. Also required were robust and workable institutional arrangements that provided the enabling environment, mandates, and motivation for effective system functioning, within an organisational culture with strong indications of shared responsibility and mutual learning. Examples of the seriousness by which ME&L was taken by management under the various case study projects was shown by: the rigorous training provided to all staff; use of weekly video conferencing between top managers to follow-up on M&E issues; insistence on the use of MIS information as the sole source of monitoring data for status reporting (e.g. in Bihar); and tying M&E recommendations to management follow-up actions. To achieve this, the case study projects showed some significant initiatives:

- They put in place workable institutional arrangements for ME&L, including placement of senior and experienced staff at managerial level with oversight of ME&L development and implementation; job descriptions for managers and staff which spelled out M&E roles; and periodic review mechanisms at all levels;

- Strong leadership was shown by top management (M&E often chaired by a senior manager, as in APCBT and BLRP), inculcating a culture of shared responsibility and inclusive participation in ME&L, with considerably delegated accountability for performance and decentralised responsibility for ME&L. The responsibilities often ranged from community groups to the top – with clear understood responsibilities - taking on board recommendations and acting on them (UP). Even when most of M&E was largely outsourced like in Karnataka;

- Managers were key in harnessing the catalytic role of external M&E agencies/ partners in system implementation and utilisation of externally generated reports and knowledge, through instituting a learning culture that could accept both good and bad news.

Get management buy in to the system through quick wins: pick the low hanging ME&L fruit.

Bearing the above lessons in mind, the utility and credibility of the ME&L system can be most effectively demonstrated through rapid turn-around of information gathered on issues of immediate concern to managers, planners and target beneficiaries, as noted in several cases. Process monitoring and thematic studies especially offer opportunities for quick wins in improving project operations. They should be introduced early and focus on joint concerns – such as implementation bottlenecks or key innovations – identified by managers and stakeholders.

Chapter 6 - Ways forward

The stocktaking of selected ARD projects in South Asia yielded a wealth of information on how projects addressed various challenges to ME&L and MIS development and application. Case study experiences demonstrated the kinds of benefits that may arise when projects value the importance of ME&L and give commensurate attention to adopting and utilising it as a tool of project management. They also revealed limitations and weaknesses in some current approaches and practices, which require addressing if the utility of ME&L is to be better asserted and potential pitfalls avoided[49]. Lessons synthesized in Chapter 5 can have wider applicability for other projects in the region and key stakeholder groups.

Further, the findings from both the case studies and the electronic survey, despite limitations in the latter, support the premise that M&E quality at the project level cannot be achieved through addressing methodological and technical issues alone, but must consider a wider range of institutional, human resource and motivational factors. The survey signals a need to redouble efforts in capacity development and technical support to projects in the region, including enhanced access to practical guidance materials on a range of M&E themes.

6.1 Key messages for different stakeholder groups

The previous chapter has set out a number of possible lessons and key messages for ME&L and MIS design, implementation and utilisation. Different messages however have specific relevance for different stakeholder audiences. The latter include not only designated M&E/MIS staff but also line and area managers, project directors/

CEOs, Task Team Leaders, and external partners/service providers. Sensitisation of government development administrators, rural sector ministry officials, and Project Steering Bodies to these messages would also be important as their actions and decisions can often impinge on M&E functioning and operations. To facilitate communication, key messages organised according to user audience are shown below.

Project directors, task team leaders (TTLs), country programme managers (CPMs)
These high-level staff members oversee project design and implementation as a whole and can play a key role to ensure:

- The value of ME&L in supporting performance tracking, project design and learning, upward and downward accountability; and the need to assign appropriate resources (financial, human, capacity);
- Project stakeholders, particularly users (project managers, TTLs), to be closely involved in the design and implementation of ME&L to achieve quick wins in information gathering and feedback to management e.g. diagnostic/thematic studies, and in decision support e.g. MIS dashboards;
- The importance of target group feedback (e.g. client/community satisfaction) for projects that seek to be responsive and accountable to their beneficiaries;
- The importance of establishing a 'learning culture' for ME&L within projects (that accepts good/bad news as core value), integrated into the capacity development strategy of the project, beyond cadre of M&E-designated staff;
- Consider more innovative approaches in M&E and MIS (e.g. ICT use in the MIS, GIS tools, qualitative/participatory impact assessments tools) - to broaden the menu of options available;

---

49 This corroborates findings from the other stocktakings i.e. on rural livelihood and agricultural water management projects in India, undertaken concurrently with the present exercise, which detected similar M&E methodological and implementation issues among some of the projects reviewed. Synthesis reports on these two themes have been produced by FAO Investment Centre, in collaboration with the World Bank/SASDA.

- Help identify and build up a pool of experienced and specialised M&E agencies that can assist with ARD projects.

ME&L and MIS staff, and line managers

These staff members have to deal with day-to-day planning and management of information for decision making and should appreciate:

- The importance of involving users in design and implementation of ME&L systems - including modular approaches to MIS and dashboards for executive decisions;
- The need to separate and distinguish between baselines for impact evaluation and the collection and storage of data for situational analysis or implementation planning;
- The need to explore different (innovative) approaches to impact evaluation, including their customisation to particular contexts and project requirements;
- Make strategic use of outsourced services – taking into account their capacities/limitations, roles, and options for contracting/outsourcing; how to guide these with a checklist for propriety and quality assurance;
- Integrate ME&L within a capacity development strategy of the project or as part of overall organisational development process;
- Adoption of more innovative approaches and methodologies (e.g. ICT use in MIS, participatory assessment tools, quantitative/ qualitative and mixed methods in impact evaluation);
- Integration of social, environmental and gender assessments into the ME&L.

Other stakeholders

All other stakeholders (i.e. project steering bodies, senior officers of sectoral ministries and government departments) should consider:

- The value of ME&L in terms of project design and fine-tuning, learning lessons for projects and programmes, scaling-up, institutional performance, accountability, and the need to appreciate the need to assign appropriate financial and human resources;
- The importance of involving stakeholders and feedback from the target groups. Different options, roles and responsibilities for different levels of administration and types of duty bearers e.g. irrigation department on water services, rural development department on rural bank linkages;
- Utilisation of outsourced services for different purposes; the catalytic role of competent agencies; and importance of quality assurance system involving peers and key stakeholders such as community representatives/beneficiaries. Here again to help promote building capacity of local agencies and service providers to provide consistent and quality support in M&E;
- The importance of procurement procedures that facilitate continuity of technical support of competent service providers e.g. to permit integration of baseline and subsequent impact assessment studies over project life.

Other service providers

Non-governmental and technical service providers who provide support to project implementation agencies on ME&L and MIS development and implementation should:

- Recognise that one size cannot fit all, hence the need to tailor M&E and/or MIS approaches and methodologies to specific project contexts;
- Provide catalytic influence in use of M&E/ MIS information (both good and bad news), as credible external partner in development;
- Strong focus on the project development objective and the results framework, and tailor information outputs and products to the needs of project management at strategic level of decision making;
- Ensure close integration between M&E and MIS design and development, balancing practicality and feasibility with comprehensiveness in data collection;
- Consider and introduce innovative, field-tested approaches and methodologies (e.g. ICT use in MIS, participatory assessment tools, quantitative/qualitative and mixed methods in impact evaluation).

6.2 Addressing M&E capacity development needs

Taking on the messages and lessons arising from this stocktaking and moving forward should build on various M&E capacity development initiatives

Box 13: **Capacity development initiatives in South Asia**

Recent efforts of international partners to enhance ME&L capacities and practices in ARD projects in South Asia include:

- A three-year M&E support initiative, organised from the World Bank's India Office. Through Learning and Design Workshops and 'customised clinics', this brought together and assisted project teams, including World Bank staff and national counterparts, in developing and/or refining their project M&E systems;
- The World Bank's DIME (Development Impact Evaluation) initiative in South Asia. This has since late 2009 been providing training and in-country technical support in impact

evaluation to a number of projects in rural livelihoods and water clusters in the region. IEG is currently engaged in identifying and sponsoring the establishment of an M&E Centre of Excellence in the South Asia region;

- Initiatives of other agencies, such as IFAD, IDRC and DFID. IFAD in collaboration with IDRC has, through ENRAP (Electronic Networking for Rural Asia-Pacific Projects) been promoting learning and sharing of experiences on M&E and MIS design and implementation. IDRC in late 2008 initiated support for a Community of Evaluators in South Asia, comprising experts from countries in the region. Its aim is to help systematise dynamic exchange and expand the knowledge and experience base on evaluation theory and practices.

already initiated by international partners in South Asia (see Box 13). A number of these provide possible entry points for enhancement of M&E quality in the region. The recent M&E learning and design initiative organised from the World Bank's India Office, for instance proved extremely useful in enhancing knowledge and practical skills among project teams in India, and is already spawning a 'community of M&E practitioners'[50]. This will require further refinement and stronger institutional and funding support if the gains made are to be sustained and replicated.

A logical extension of this is to integrate such type of initiatives more closely with Implementation Supervision and Support Mission processes which the World Bank and IFAD use, to make for greater information sharing and cross-learning in the region[51]. Future capacity development efforts could also dovetail with such other World Bank initiative as Independent Evaluation Group's (IEG) upcoming sponsorship

of a Regional M&E Centre of Excellence, and the World Bank's operations unit support for development of results-based guidance products and Investment Lending Reform.

Close coordination amongst the various international and country partners is necessary - to exploit synergies whilst avoiding piecemeal approaches. More systematic assessment of learning needs and tailoring of training programmes and guidance material to the project typologies and country contexts would also be needed. Both the World Bank and FAO, through the Cooperative Programme, and partnering with IFAD, could play a key role here, keeping in view their respective missions/ mandates and comparative advantages[52]. FAO has developed and is now initiating an e-learning based course on 'Impact Assessment of Large Scale Food Security Programmes'[53] based on a modular system which has potential for being adapted to wider use. Recent efforts between IFAD and USAID are also underway for further sharing ARD related indicators and practices.

---

50 Testimony to their usefulness is seen from subsequent requests by participants to repeat such courses for other projects in their home state. See World Bank (2008a, 2009) for reports of the workshops. To-date three M&E Learning and Design oriented workshops have been conducted in India (in Mussoorie, Teri University and Delhi), attended by over a hundred project personnel. FAO Investment Centre contributed technical inputs to these workshops during 2008 and 2009.

51 FAO Investment Centre has also, through the Cooperative Programme, been providing active technical support in M&E and MIS development and/or enhancement to a number of World Bank-assisted projects in India, Sri Lanka and Bangladesh. This had however been on an ad hoc rather than programmed basis.

52 A strategic objective of FAO for which the Investment Centre is taking a lead role is "Increased and More Effective Public and Private Investment in Agriculture and Rural Development". A key requirement here is enhanced M&E and learning systems at various levels of development planning/programming and implementation in member countries.

53 http://www.fao.org/spfs/learning-from-results/e-learning/en/.

6.3 Need for enhanced guidance framework

To put into practice lessons learned and share more widely the key messages from the stocktaking, including the feedback from the electronic survey of ARD projects in the region, calls for attention at two levels:

- Enhanced official guidance on M&E for ARD projects at preparation and appraisal stages;
- Improved availability of and access to M&E learning products and materials, as part of capacity development and technical support initiatives in the region.

Official guidance documents

There is need to revisit the type and extent of official guidance to be made available to project teams, particularly on the use of the results framework and impact assessment approaches. Existing guidelines of the World Bank, such as the PAD template provide only limited guidance on M&E aspects, and focus more on compliance with prescribed formats than how results framework are to be developed and used[54]. The literature on alternative impact evaluation approaches also falls somewhat behind that of quantitative methods.

It would be timely to consider making further enhancements to the existing PAD guidelines, to include clearer strategic direction on developing and using the results framework as a dynamic planning, monitoring, evaluation and learning tool. Updated guidance on supervision processes and preparation of Project Implementation Plans/ Manuals, especially on ME&L and MIS aspects and their relationships with institutional arrangements, human resource strategies, and risk management frameworks might also need to be considered[55]. These should fit with the Bank's current Investment Lending Reform initiatives, which *inter alia* recognise such shortcomings as the 'risk management gap, evaluation overload, and a 'supervision disconnect' not in keeping with the new realities of decentralisation and increased reliance on country partnerships[56]. IFAD has recently introduced more detailed supervision and implementation support policies[57] which incorporate guidance on M&E. Further work on how to put such guidance into practice under varying project circumstances will be an ongoing need.

Learning products

The greater availability of focused practical learning materials in readily accessible and user-friendly formats will be central to enhancing M&E capacity development among ARD projects in the region. Options to consider include the preparation of 'How to Notes' for use of project teams; policy briefs targeting government officials; and the compilation of more comprehensive Sourcebooks on specific topics and sub-sectors for specialised users like M&E staff and consultants. These should focus initially on the following key themes, to supplement official guidance materials for project preparation and appraisal, which could be expanded in accordance with felt needs over time:

- Developing and using a 'Good' Results and Risk-based Framework;
- Innovative impact assessments: Methods and Processes;
- Developing and utilising the Project MIS: Issues and Options;
- Mainstreaming ME&L: Addressing Institutional and Human Resource Issues.

The purpose of the learning materials is not to re-invent the wheel, but to present best practice and innovative approaches in succinct and digestible form. These should draw on the literature as well as on the lessons of experience from more successful projects in the region, including those documented in the present stocktaking. To optimise access and outreach, learning products developed should make full use of ICT and web-based media. Consideration should be given to the use of interactive electronic knowledge sharing tools, hosted on an appropriate web portal. To ensure sustainability, this is best done through piggy-backing on existing networks and websites oriented to development management and M&E, including those hosted by the World Bank, IFAD and FAO[58].

54 With reference to the July 2010 version.
55 The only readily guidelines for Project Implementation Plans (PIPs), prepared by the World Bank's Management Thematic Group in 1999 are outdated, especially on M&E aspects.
56 As articulated for instance in the Concept Note on Investment Lending Reform prepared by the World Bank's OPCS (Jan, 2009).
57 http://www.ifad.org/operations/projects/supervision/index.htm
58 For instance the Agriculture Learning and Impacts Network at the Institute of Development Studies, UK (http://www.aline.org.uk/home); and Monitoring and Evaluation News (http://mande.co.uk/).

References

Bamberger, M., Rao, V., and Woolcock, M. 2010. "Using Mixed Methods in Monitoring and Evaluation: Experiences from International Development". Policy Research Working Paper 5245.

Bamberger, M., Rugh, J., and Mabry, L. 2006. *Real World Evaluation. Working under Budget, Time, Data and Political Constraints.* Sage.

Casley, D. and Kumar, K, 1987. Project Monitoring and Evaluation in Agriculture. The World Bank. John Hopkins University Press. Baltimore and London.

Chaplowe, S.G. 2008. "Monitoring and Evaluation Planning." American Red Cross/CRS M&E Module Series. American Red Cross and Catholic Relief Services (CRS), Washington, DC and Baltimore, MD.

Duignan, P. 2009. "Terminology in Evaluation: Approaches, Types (Purposes), Methods, Analysis Techniques and Designs". A topic article in the Outcomes Theory Knowledge Base. http://knol.google.com/k/paul-duignan-phd/terminology-in-evaluation-approaches/2m7zd68aaz774/120

Duignan, P. 2010. "Impact/outcome Evaluation Design Types". An Outcomes Theory Knowledge Basic Topic. http://knol.google.com/k/impact-outcome-evaluation-design-types#

Earl, S., Carden, F., and Smutylo, T. 2001. *Outcome Mapping: Building Learning and Reflection into Development Programmes.* IDRC: Ottawa. http://www.idrc.ca

FAO, 2010 - Assessing Impact of Development Programmes on Food Security. E-learning course produced by FAO in collaboration with Wageningen University and Research Centre for Development Innovation. http://www.fao.org/spfs/learning-from-results/e-learning/en/

Global Donor Platform for Rural Development, FAO and the World Bank. 2008. Tracking results in Agriculture and Rural Development in Less-than-ideal Conditions: A Sourcebook of Indicators for Monitoring and Evaluation. http://www.fao.org/docrep/011/i0380e/i0380e00.htm

Hayward, N. and Brizzi, A. 2007. 'Supporting the People Sector: A Summary'. Livelihoods Learning Series 1, Note 1. Development Rural Livelihoods Cluster, South Asia Sustainable Development Department, the World Bank. Washington, D.C.

IFAD. 2002. *A Guide for Project M&E: managing for impact in Rural Development.* Rome.

James, A.J. 2010. "Quantified Participatory Assessment: Capturing Qualitative Information in Large-Scale Development Projects". http://portals.wi.wur.nl/files/docs/ppme/QPA.doc

Jones, N., Jones, H., Steer, L. and Datta, A. 2009. "Improving Impact Evaluation, Production and Use". ODI Working Paper Number 300. London.

Lai, K. C. 2001. "Lessons for Project Design and Implementation from selected Rural Development Projects in Asia (1990 – 1999)". FAO Investment Centre Occasional Paper Series. Rome.

Mayne, J. 2008. "Contribution Analysis: An Approach to Exploring Cause and Effect." ILAC Brief No. 16. Rome, Italy: Institutional Learning and Change (ILAC) Initiative. http://www.cgiar-ilac.org/files/publications/briefs/ILAC_Brief16_Contribution_Analysis.pdf

Muller-Praefcke, D. 2010. "The Use of Monitoring and Evaluation in Agriculture and Rural Development Projects: Findings from a Review of Implementation Completion Reports." FAO Investment Centre. Best Practices in Investment Design. Rome. http://www.fao.org/docrep/013/am292e/am292e00.pdf

Nonie. 2009. Impact Evaluations and Development: Nonie Guidance on Impact Evaluation. Network of Networks on Impact Evaluation. Care of IEG, Washington, DC: World Bank.

OECD. 2006. "Outline of Principles of Impact Evaluation". Document for the International Workshop on Impact Evaluation for Development hosted by the World Bank and the DAC Network on Development Evaluation. Paris.

OECD-DAC. 2007. *Sourcebook: Emerging Good Practice in Managing for Development Results. 2nd* ed. Washington D.C. http://www.mfdr.org/Sourcebook/2-2ndEdition.html

OECD-DAC. 2008. *Sourcebook: Emerging Good Practice in Managing for Development Results.* 3rd. ed. Washington D.C. http://www.mfdr.org/Sourcebook/3rdEdition/SourceBook3FINAL.pdf

The World Bank Development Research Group. Poverty and Inequality Team. http://www-wds. worldbank.org/external/default/WDSContentServer/IW3P/IB/2010/03/23/000158349_20100323100628/ Rendered/PDF/WPS5245.pdf

White, H. 2009. "Some Reflections on Current Debates in Impact Evaluation." 3ie Working Paper No. 1. New Delhi: International Initiative for Impact Evaluation.

Woodhill, J. 2007. "M&E as Learning: Rethinking the Dominant Paradigm" in *Monitoring and Evaluation of Soil Conservation and Watershed Development Projects*. J. d. Graaff, C. Pieri, Samran Sombatpanit and J. Cameron (eds.), World Association of Soil and Water Conservation.

World Bank. 2006. Conducting Quality Evaluations under Budget Time and Data Constraints. IEG and PREM Network. Washington D.C.

World Bank. 2008. *Annual Review of Development Effectiveness: Shared Global Challenges*. Independent Evaluation Group. Washington D.C.

World Bank. 2008a. "Results on the Ground: A Learning and Design Workshop on Monitoring and Evaluation and Social Accountability". Workshop Report. Mussoorie, Uttarakhand.

World Bank. 2009. *Annual Review of Development Effectiveness: Achieving Sustainable Development*. Independent Evaluation Group. Washington D.C.

World Bank. 2009a. "Investment Lending reform: Concept Note". Operations Policy and Country Services (OPCS). Washington DC.

World Bank. 2009b. "Monitoring and Evaluation Learning and Design Workshop". Workshop Report. New Delhi.

ANNEX 1
Electronic survey of ARD projects

Chart 1.
Summary matrix of project respondents

Country	Type and Number of Projects				
	Rural Livelihoods *	Natural Resource Management **	Water/ Irrigation	Other Rural Projects ***	TOTAL
India	3	3	1	1	8
Pakistan	-	-	1	1	2
Afghanistan	1	-	-	1	2
Bangladesh	-	-	-	1	1
Sri Lanka	1	-	-	-	1
Nepal	1	-	-	-	1
ALL	**6**	**3**	**2**	**4**	**15**

*	Includes poverty alleviation projects.
**	Includes watershed development
***	Includes marketing, rural enterprise development and rehabilitation/emergency response.

The survey covered active ARD projects supported by the World Bank in South Asia. A total of 42 projects were contacted out of which 15 (35%) responded Electronic questionnaires were addressed individually to Project Directors/CEOs from the name list available at the World Bank office in New Delhi - it is expected that they would consult with and/or refer to their respective M&E Managers when responding. World Bank TTLs were also kept informed by copy of email. Respondents encompassed a good cross-section of project types and countries (See Chart above). Whilst these may not fully capture the range of situations across the region, the available information nonetheless provides a useful preliminary view of M&E arrangements in place and emerging resource and capacity issues that merit attention.

Chart 2.
ARD projects contacted and list of respondents, South Asia:
electronic questionnaire survey, 2010

	Projects Contacted	Projects Responded
	BANGLADESH	
1	Social Investment Programme Project II (SIPP)	
2	Emergency 2007 Cyclone Recovery and Reconstruction Project	x
3	National Agricultural Technology Project	
4	Water Management Improvement Project	
	AFGHANISTAN	
5	National Solidarity Project (NSP)	x
6	Rural Enterprise Development Programme	x
7	National Emergency Rural Access Project	
	SRI LANKA	
8	'Dam Safety' Project.	
9	Gemi Diriya II (Estates)	
10	Reawakening project - RaP	x
	INDIA	
11	Hydrology II	
12	Maharashtra Water Sector Improvement Project	
13	Rajasthan Water Sector Restructuring Project	
14	Tamil Nadu Empowerment and Poverty Reduction	x
15	Orissa Rural Livelihood Project	
16	Uttar Pradesh Sodic Lands Reclamation III Project	
17	AP Rural Poverty Reduction Project	x
18	Bihar Rural Livelihoods Project	x
19	National Agricultural Innovation Project	
20	HP Mid Himalayan Watershed Project	x
21	Uttaranchal Decentralized Watershed Project	x
22	UPWSRP	
23	MPWSRP	
24	TNIAMWARM	
25	Chhattisgarh District Rural Poverty Reduction Project	
26	MPDPIP	
	Assam Agricultural Competitiveness Project	x
27	Karnataka Community Based Tank M Project	x
28	Andhra Pradesh Community -based Tank Management Project	x
29	Orissa Community Tank Management Project	
30	Andhra Pradesh Community Forest Management Project	
31	Rajasthan Livelihood II	
	PAKISTAN	
32	Balochistan Small Scale Irrigation Project	
33	Additional Financing for Sindh On-Farm Water Management Project	
34	Sindh Water Sector Improvement Project Phase I	x
35	AJK Earthquake Additional Financing Project (Part Z)	x
36	Community Infrastructure and Services Project	
37	NWFP Community Infrastructure Project	
38	Land Records Mgmt & Information Systems	
39	PK: Third Pakistan Poverty Alleviation Fund Project	
	NEPAL	
40	Irrigation Water Resource Management Project	
41	Poverty Alleviation Fund	x
42	DRDP	

ANNEX 2
Useful features and good practices observed. Detailed tables by project

Case study projects

Table A.
Useful features and good practices observed, case study projects main challenge:
Determining core design requirements of ME&L system

Project	Features and Practices
Uttar Pradesh Sodic Lands Reclamation Project (UPSLRP)	1. Clearly articulated project ME&L framework, consisting of judicious mix of internal, external, and participatory elements, with M&E responsibility distributed across entire project organisation. 2. Combination of externally executed special studies and evaluations with rapid assessments by project staff, which proved useful in triangulating of field level information, providing direct feedback to management, and greatly facilitated borrower's own ICR/PCR process. 3. As part of the Social and Environmental Management Framework (SEMF), provision was made for independent surveys and/or stakeholder consultations to assess environmental impacts (including on downstream groundwater quality and biodiversity on wetlands and natural habitats), as well as poverty and gender outcomes related to social safeguards compliance. 4. Use of GIS and RS tools and data in planning e.g. identification of degraded areas, site selection, tracking of results and reporting, and sustained technical resource support of competent agency provided for at the outset.
Karnataka Watershed Development Project (KWDP)	1. Innovative system design and implementation by single outsourced agency, covering full range of MEL functions, utilising customised MIS, field based data collection, participatory assessments, and remote sensing/satellite imagery and GIS tools. (KWDP). 2. Clearly defined subsystems for (a) concurrent monitoring covering internal input-output and external process monitoring, and self assessment by CBOs; and (b) impact assessment studies utilising sample surveys and satellite imagery with ground-truthing. 3. Focused thematic studies and feedback on key processes led to important policy decisions and actions (e.g. revising project investment pattern, improving social inclusion, modifying approach in group formation, and filling gaps in the project logic.
Andhra Pradesh Community Based Tanks Management Project (APCTMP)	1. Well structured system design consisting of field based monitoring, CBO self-assessment, thematic studies, process documentation, impact evaluation processes, and web-enabled MIS with GIS capabilities. 2. The design recognised the centrality of CBOs and catered for both downward as well as upward accountability in its performance assessment approach - by providing for community assessment of performance of project staff/service providers i.e. duty bearers, and using this information to identify issues and decide on needed actions. 3. Learning is emphasised as project core value, and given practical expression in self-assessment and reflective mechanisms at all levels. This includes action/experiential cross-learning at the local level, in which WUA's learn through participating in assessment of one another's performance. 4. Social and Environmental Management Framework (SEMF) included putting in place strategies and management plans, and developing indicators for plan implementation and social and environmental parameters to be monitored. Internal and external monitoring of safeguards and mitigation measures, including the Resettlement Action Plans (RAP), were an integral part of the ME&L system - with responsibilities clearly identified at various levels (community/WUA, district, state, and external agencies).

Project	Features and Practices
Bihar Rural Livelihoods Project (BRLP)	1. Good combination of internally and externally executed M&E, covering progress monitoring, CBO self-tracking, process monitoring, concurrent/on-going evaluation, action research & documentation, and impact assessment processes. 2. ME&L framework emphasises learning, process documentation, feedback and adjustment processes, to help fine-tune implementation at various levels of the project. 3. ME&L well integrated into the 'Rural Livelihoods Management Information System' with ample provision made for MIS design & development and subsequent refinements over time.
Andhra Pradesh Rural Poverty Reduction Project (APRPRP/IKP) [59]	1. Besides input-output monitoring through MIS, the M&L system provided for both internal group self-monitoring and external process monitoring, focusing on inclusiveness, functioning of SHGs/VOs/other CBOs, and learning and feedback. 2. Process monitoring objectives include analysis of the assumptions linking processes to results i.e. going beyond observation of actions and responses of project staff and partner organisations' (e.g. PRIs/line departments) to evaluating effectiveness of processes and prospects for adaption – essential in a process-intensive project of this kind.
Andhra Pradesh Community Forest Management Project (APCFMP)	1. Project is guided by an M&E Framework document, prepared by Centre for Public Perception and Policy (CENPAP), encompassing input-process-output monitoring, community based self monitoring, special studies, and third party concurrent monitoring and evaluation, underpinned by a multi-layered conceptual framework to identify various M&E tasks, rather than a single-layered logical framework. Whilst not fully implemented in practice, the framework is basically sound and has wide applicability. 2. The multi-layered system concept provided for systematic and explicit monitoring of social and environmental dimensions of change associated with project interventions, including bio-physical aspects like survival rate and growth of planted or assisted-regeneration vegetation, outputs and outcomes of Resettlement Action Plan, Environmental Management Plan, Pest Management Plan, and Gender Empowerment.
Meghalaya Livelihoods Improvement Project in the Himalayas: MLIPH (IFAD)	1. Clearly documented M&E Plan based on logical sequencing of tasks for system implementation, including re-visiting the logframe, stakeholder workshops to identify information needs, deciding on data collection requirements and responsibilities, capacity building on M&E for all staff, and designing reporting plan, learning system, and mechanism to document and communicate lessons learnt. 2. M&E Plan covers input, output, and outcome indicators along with frequencies, methods and responsibilities as well as reporting scheme and presentation forums for review. Includes overall and annual M&E work plans and budgets. 3. Learning is facilitated through in-built documentation processes within the system, and provision for staff position in core management team combining communication function with M&E.
Uttarakhand Livelihoods Improvement Project in the Himalayas: ULIPH (IFAD)	1. Project M&E Framework document: (a) conceptualises monitoring and evaluation as interrelated subsystems, each with own set of objectives; (b) sets out the sequence of M&E tasks over project lifetime, underpinned by the logframe and IFAD's RIMS[60]; and (c) sets out a participatory framework for SHGs' self-assessment of performance. 2. System provides for use of process monitoring and diagnostic studies for problem solving, with scope for assessing appropriateness of programme design and redefining project objectives where required. 3. A distinction is made between information requirements during various phases of project implementation (pre-project, start-up to midterm, midterm to EOP, and also post-implementation for sustainability of information flows and usage by CBOs/village institutions and financial intermediaries).

59 Earlier project phase (APDPIP) and current APRPRP have been merged into a combined programme known as Indira Kranthi Patham (IKP), aimed at elimination of poverty through social mobilisation and empowerment.

60 Results and Impact Management System, adopted by IFAD-assisted projects, which provides for information at three levels of the project logic, ranging from activities and outputs to outcomes (changes in behaviour and performance) and longer term impacts.

Table B.
Useful features and good practices observed, case study projects
Main challenge: *adopting appropriate ME&L methodologies and processes*

Project	Features and Practices
Uttar Pradesh Sodic Lands Reclamation Project (UPSLRP)	**Impact Assessments** 1. Coherent series of thematic studies undertaken to assess a range of social, economic, and environmental impacts as well as technical quality, operational, and sustainability issues relating to the project interventions. These permitted on-going assessment of the adequacy, efficacy and relevance of interventions (e.g. rehabilitation/upgrading and maintenance of drainage structures, farm to market roads; technology dissemination through system of farmer field schools), which assisted in refinement of implementation approaches and processes. 2. Evaluation methods included: (a) combination of statistical surveys with informal surveys/ PRA tools (FGDs, participatory resource mapping, etc.) to assess changes in agricultural land use and socio-economic status (e.g. cropping intensity/yields over successive crop seasons, poverty status/incomes); communities' perceptions of impacts (e.g. from improved road and drainage infrastructure); (b) direct observations (e.g. traffic volume/composition; changes in flora/fauna and soil microbial biomass on reclaimed areas); and (c) use of remotely sensed/ satellite imagery data (high resolution LISS-III and PAN sensors. IRS-1C/1D images) to assess changes in cropping intensity and ecology/quality of affected areas e.g. wetlands. 3. The studies drew on expertise across various disciplines (agronomic, engineering, economic, social, ecology, and management science) of different specialised institutions, much of it from within UP State. These provided important inputs for preparation of ICRRs (borrower and World Bank) and preparation of follow-on project phase.
Karnataka Watershed Development Project (KWDP)	**Impact Assessments** 1. Impact Evaluation processes utilising multiple sources of information gathering. This is exemplified in the methodology for the Mid-term Evaluation (MTE) of phase II, which utilised household surveys on a sample of project watersheds, focused group discussions, transect walks, remotely-sensed (satellite imagery) and GIS data, drawing on MIS reports, and information from successive rounds of process monitoring (focused on awareness creation, capacity building, and Watershed Action Plan processes). 2. The use of sampling methods, rather than attempting full coverage of all areas in impact assessment/baselines. For the MTE household survey, nine out of twenty sub-watersheds (SWS) in the project were sampled, based on agro-ecological differentiation, with micro-watersheds in SWSs further selected according to topographic situations (ridge, middle, valley), from which village and household samples were drawn for different socio-economic strata (landholding type, caste categories). Control villages were also included. 3. Thematic studies as part of concurrent M&E provided important and timely feedback on results and key processes, which led to important policy decisions and actions. Studies on concurrent basis provided useful feedback on key processes, which led to important policy decisions and actions. These included making adjustments to the project investment pattern, improving social inclusion and gender focus, modifying approach in group formation, revising modalities of FNGO participation in the project, and filling gaps in the project intervention logic (e.g. introducing a low-cost system of village- based veterinary service providers to cater to livelihood development needs of women and landless, not provided for at project design stage).
Andhra Pradesh Community Based Tanks Management Project (APCTMP)	**Results Framework** 1. Well defined Results Framework (RF), with clear statements on intermediate outcomes, each accompanied by specific and measurable indicators reflecting improved systems performance (institutional and financial aspects, such as % annual water charge collected) and farmers responses (e.g. adoption of improved techniques or diversifying away from paddy) and satisfaction with market intelligence services. Use of the RF matrix is supported by a three-page description on arrangements for results monitoring in the PIP. 2. Use of the RF for monitoring and evaluation further facilitated through: establishment of benchmarks and year-wise incremental targets; clear identification of frequency, sources, and specific responsibilities for data collection and generating a common understanding on these among DPU staff, SO staff and WUAs. **Participatory Monitoring and Rating** 3. Combination of quantitative with qualitative approaches for periodic self-monitoring by primary stakeholders, through user-friendly Quantified Participatory Assessment (QPA) tool, using colour coded rating criteria and scoring system, covering participation/dialogue, technical performance, self-management and innovations/adoption, which provide basis for participatory identification of issues and needed actions at WUA level. Involving WUAs in assessing one another's' performance moreover provided a novel way for encouraging cross-learning.

Project	Features and Practices
Bihar Rural Livelihoods Project (BRLP)	**Results Framework** 1. Results framework include clear outcome indicators, such as on self reliance and inclusivity of the CBOs; actual usage of the Community Investment Fund (% for productive asset generation); partnerships and business linkages resulting from use of the Technical Assistance Fund; and importantly an indicator highlighting the establishment of the project ME&L system, including the MIS and learning forums at different levels of the project – all of which are amenable to monitoring by project management, the government and Bank missions. **Process Monitoring** 1. Methodology used providing for monitoring on periodic basis of: (a) core processes relating to targeting/social inclusivity, community institution building, functioning and effectiveness i.e. CBO performance; (b) business processes of the project; and (c) other critical emergent issues identified by the MIS and/or arising from monthly (district) and quarterly (state) reviews. This provides input to and helps operationalise concurrent/formative evaluation of programme on routine basis. 2. The requirement for substantive participation of and structured interaction between internal and external personnel; and coverage of shortcomings as well as good/exemplary processes are useful features of the approach adopted. Findings from process monitoring had led to key strategic decisions by project management such as in universalisation of the food security and health risk fund; revision of the SHG rating tool; and further inclusion of the left-out poor through devolving responsibility of SHG formation for the unreached vulnerable groups to the VOs.
Andhra Pradesh Rural Poverty Reduction Project (APRPRP/IKP)	**Baseline and Impact Assessment (IA) studies**: 1. Systematic link between baseline study and impact assessment studies (mid-term and end-term) for successive project phases: a) Earlier phase of Project (APDPIP) undertook baseline study in 2002 (May), Mid-term IA Study in 2006 (May) and End-Term IA Study in 2007 (August); Current (expanded) project phase APRPRP carried out baseline study in 2006 (Feb), Mid-term Study in 2008 (August), and End-term study (2010). All were guided by logical framework/ results framework indicators with reference to the project intervention model/hypotheses of cause and effect concerning poverty and livelihoods. 2. Baseline, Mid-term and End-Term Studies were undertaken on sample of project districts, inclusive of controls (3 out of 6 districts in APDPIP; and 5 out of 16 districts in APRPRP) selected to represent different ecological and socio-cultural zones. Contextual difficulty of finding appropriate controls in APRPRP baseline addressed through use of proxy criteria (% irrigation) to sample non-programme mandals (sub-districts) of roughly equivalent poverty status as programme mandals. **Use of Quantitative Methods** 1. Quasi-experimental, difference-in-difference approach for IA integrating baseline and impact assessment surveys planned for at the outset i.e. from 2002 APDPIP baseline stage. Same sample (households, CBOs) in baseline survey revisited in subsequent IA surveys. Propensity score matching (PSM) was used to establish comparability between participants and non-participants in APDPIP. IA methodology facilitated by engaging the same agency (CESS) for baseline and subsequent IA studies over entire period 2002–2010, ensuring continuity and consistency in technical quality. **Process Monitoring** 1. Two-tier system of process monitoring (PM) to track progress and processes of project, involving an Apex agency for overall coordination and field organisations for different zones of project (around 5 districts each): this helps harmonise approaches besides ensuring process monitoring is fully integrated with other ME&L components, including project MIS, in holistic fashion. Sampling and rotational system of visits and re-visits ensures good coverage of mandals and villages/CBOs, down to SHG level, and also CIF sub-projects. 2. Processes being monitored cover various levels of project intervention logic i.e. from inputs to outputs, and from outputs to outcomes, which are identified according to their relevance at the stage of the project in a particular area (district/mandal). A range of participatory tools are used, besides systematic examining of MIS reports, project records at various levels, and records/registers of CBOs. Analysis and interpretation (quarterly reports, annual synthesis) focus on key process issues, and trigger mandatory Action Taken Reports by field managers. This has led to actions to improve both project operations as well as functioning of CBOs e.g. better coverage of target group under CIF, increased internal lending by SHGs, and enhanced role of Village Organisations in CIF sub-project implementation).

Project	Features and Practices
Andhra Pradesh Community Forest Management Project (APCFMP)	**Baseline and Impact Assessment** 1. Mid-term Impact Assessment study used both quantitative and qualitative methods to collect primary and secondary data relevant for the analysis. Besides structured questionnaires, qualitative tools, like FGD, were used to interact with specific groups of respondents such as members and non-members of VSS (village level forest protection committees), women, PAFs (project affected families) and people belonging to vulnerable groups. Personal interviews were also conducted with project functionaries like personnel of the Forest Department, NGO functionaries and PRI functionaries. 2. Baseline work was undertaken internally at project start-up by Forest Department staff, covering all households and focusing on forestry related bio-physical data. Despite its limitations in benchmarking higher level outcome and social/economic development impacts, the process was nonetheless served in familiarisation of Forestry staff with the situation on the ground, while data collected and stored in the project's 'Forest Management Information System (FPMIS) would be useful for detailed project work planning as well as future tracking of forest management indicators. **Multi-Stakeholder CBO Assessment/Social Audit** 1. Participatory, multi-stakeholder approach was used in assessing functioning and performance of CBOs (i.e. the VSSs) towards sustainability of CFM (community forest management) through a 'Social Audit' approach, using innovative OMR (optical mark reader) sheets to facilitate recording of responses of 'social auditors' comprising panel of VSS members, VSS management committee members, community extension workers, NGOs, and Forestry Staff. 2. VSS assessment was based on weighted scores on five sets of criteria for: (a) organisational effectiveness (including self-reliance, re-investment, and conflict resolution aspects); (b) social equity (focusing on inclusiveness for vulnerable groups and assistance to women); (c) economic benefits to members (such as employment generation and income sharing among members); (d) resource sustainability for CFM (e.g. forest areas treated and survival rates of plantations); and (e) environmental benefits to CFM (e.g. improved water recharge in wells, fire protection measures implemented). Findings are being used to identify issues to be addressed and to suggest needed actions on each set of criteria in poorly performing areas/VSSs.
Meghalaya Livelihoods Improvement Project in the Himalayas: MLIPH (IFAD)	**Project Logic and Indicator Levels** 1. Project logframe provides for articulation not only of outcomes of each component, but also the anticipated outputs/deliverables of the project, facilitating monitoring (this is absent in the RF of the PAD in WB-assisted projects). Each output or outcome has a narrative statement (e.g. enhanced capacity of communities to access external resources/services) as well as performance indicators (no. of community proposals accepted and implemented by external agencies). IFAD Results and Impact Management System (RIMS) document provides guidance on ensuring higher level outcomes (levels 2 and 3) as well as lower level outputs (level 1) are explicitly articulated. Linkage to Annual Work Plan and Budget facilitates utility of logframe as monitoring as well as annual planning, especially on project deliverables. 2. The project logframe is utilised as a live document, evolving with the project and refined over time. Logframe developed during initial project design was revisited and revised at project start-up and further updated during project implementation to incorporate modifications to the project intervention logic (e.g. new focus on convergence of line management roles and responsibilities; and introduction of additional interventions/outputs to internalise initial design assumptions). This makes for continuing relevance and improved clarity and specificity of performance indicators. 3. Direct involvement of project staff at various levels (other than M&E staff) during logframe revision and the participation of communities in indicator development helps improve realism and impart ownership of the logframe and performance indicators. **Baseline Survey and Village Database** 1. Besides the sample survey for purpose of benchmarking key outcome and impact related variables, a PRA of all 652 project villages was undertaken, providing important community level qualitative information as well as individual household level data (e.g. poverty status, basic socio-economic characteristics). Such data is extremely useful for detailed implementation planning and in fine-tuning project interventions and strategies. When stored on appropriate relational database (project already has MS-ACCESS database structure), this also provides a powerful tool for incorporation within the project MIS to support future planning and M&E.

Project	Features and Practices

Uttarakhand Livelihoods Improvement Project in the Himalayas: ULIPH (IFAD)

Project Logic and Indicators

1. As in the case of Meghalaya Livelihoods project, use of the logframe included provision for re-visiting and refinement over time. Here again, clear distinction is made between outcomes and outputs, which are articulated in separate narrative statements for each project component, along with corresponding sets of performance indicators.

2. Outcome statements and indicators focus exclusively on system improvements and beneficiary responses (e.g. for the livelihood support component, main outcome was 'target households ... . operate sustainable microenterprises in equitable, gender-sensitive and environmentally friendly manner" – corresponding performance indicators included no. of HHs adopted new technology (including on forestry practices) promoted through project; ha. of land brought under crop consolidation for at least two cropping cycles; and % of HH enterprises owned by women. Indicators like no. of self-help groups established or farmers trained in improved agricultural techniques, soil and water management practices, came under project outputs for CBO strengthening and training.

Baseline Survey

1. As several years of implementation had taken place before baseline survey was undertaken, the project adapted to this situation by sampling from villages with different start-up years, besides terrain/connectivity categories (e.g. top-hills, middle-hills, valleys), thus facilitating subsequent impact assessment (IA) design and analysis.

2. Baseline and IA studies utilised a quantitative participatory assessment (QPA) approach, which provided a quantitative means of assessing qualitative parameters – essentially combining PRA with an ordinal scoring system to permit translation of findings into scores that may be compared over space and time. Information was gathered at household, SHG, and village Panchayat levels on a range of economic, social (including gender), and organisational variables, including attitudinal and perceptional responses.

Table C.
Useful features and good practices observed, case study projects
Main challenge: *effective use of ICT in the MIS to meet development management and ME&L requisites*

Project	Features and Practices
Uttar Pradesh Sodic Lands Reclamation Project (UPSLRP)	1. Clear provision at the outset for using ICT to support monitoring, with computer software developed and hardware installed at HQ and field management units early in the project. A comprehensive database management system for the MIS was established (using the powerful RDBMS Sybase as back-end and Power Builder (6.0) as front-end in the client server architecture). Web-enabled technologies were used to retrieve the data on Internet. MIS reports generated were used for planning (physical and financial), detailing beneficiary entitlements and contributions for land improvement, and for monitoring and progress review.
	2. Computer software was developed in-house for the MIS, GIS, Participatory Management System (PMS), Financial Accounting System (FAS), and personnel information/payroll systems. GIS and FAS were well integrated with the MIS. PMS captures information kept in village registers on activities of WUGs (including monthly savings); functioning of women SHGs, and village plans. It shares database used by the MIS, which include detailed baseline data at village, beneficiary household, field plot (by degradation level), and WUG levels.
	3. A standard accounting package (SAP) was developed for maintaining the database of SHGs organised in project villages. Data on savings and expenditures were captured on regular basis. Analytical reports with their balance sheets generated show the effectiveness or otherwise of the SHGs, identifying needed corrective measures to rectify weakness and fill gaps, which resulted in reviving of the weaker SHGs.
	4. GIS integration facilitated web-based decision support and monitoring, permitting user defined query for activity, demographic and spatial analysis (as maps and tables). FAS integration helped project in reconciliation of physical performance with financial progress. It also ensured that physical and financial information was available in clear, simple, user-friendly and consistent form. This helped in timely preparation and audit of financial statements, enhancing their credibility, analysis and active usage in decision-making.
	5. Although not part of the main MIS, a Computerised Management System software based on critical path analysis (CPA) was deployed in concurrent monitoring of project implementation by the independent consulting agency. This established milestones and timelines of key activities (engineering, land development, input distribution, agronomic and other technical services) to be accomplished by a range of line departments. In combination with field visits and quality verification, this provided a consistent and methodical approach for implementation monitoring, facilitating prompt identification of delays and bottlenecks.
Karnataka Watershed Development Project (KWDP)	1. A customized MIS package (*Sujala Mahithi*) was designed and developed by the ME&L Unit of Antrix (the outsourced ME&L agency) for physical and financial monitoring at the different levels. This package helped provide a systematic database which allowed users to query and analyze periodic field data, and prepare reports on specific project components at State, District, Taluka, Sub-Watershed and Micro-watershed levels. Refinements to software were made over project period (Version 3.0 at time the project closed). Initially, financial reports provided by the MIS did not tally with the project's Financial Management System, due to double counting and other issues. This was later rectified through a "transaction-based" system by merging the PFMS with the MIS.
	2. Both the GIS and remote sensing (using satellite imagery) were used to provide information for wasteland and soil maps, identifying ground water potential, run-off estimation, project site selection, and land use or land cover mapping. This helped in tracking progress under the project by comparing satellite data at different points in time, covering before, during and after the project interventions.
	3. The MIS was linked to a GIS enabled software (*Sukriya Nakshe*) that allowed different levels of analysis on a cadastral map - from State, through District, Taluka and the Sub-watershed layers to micro-watershed. This was bi-lingual, with use of symbolic depiction in the menu of some 150 different types of project activities, making it very user-friendly. A complementary GIS map viewer tool *Nakshe Vivara*, helped display the different resource maps e.g. land use and soil type and allowed overlay of user-defined layers for spatial depiction on cadastral maps, with specific query facility. This enabled documentation of changes over the life cycle of the project e.g. in field bunding and farm pond implementation, untreated and treated watersheds, with 'before' and 'after' images.
	4. Other software applications linked to the MIS, such as for sub-watershed action planning - SWAP (*Sukriya Yojane*) - helped provide real-time beneficiary-level data e.g. on IGAs, and land treatments, with facility for generating a variety of reports for analysis and assessment of impact. This significantly reduced the time taken for participatory development of sub-watershed action plans and facilitated subsequent monitoring and reporting.
	5. The use of GIS and RS as ME&L tools was combined with traditional "ground-truthing" mechanisms, including participatory observations, focus group discussions, transect walks, informal discussions, and interviews with key informants. Innovative activities such as regular satellite teleconferencing between HQ and field units and communities, and wall paintings made significant contributions to transparency and accountability.

Project	Features and Practices
Andhra Pradesh Community Based Tanks Management Project (APCTMP)	1. The project MIS is integrated with GIS (known as GMIS) and web-enabled to facilitate easy access by stakeholders (through the project website www.apmitanks.in). Information is routinely collected and reported, based on the Results Framework and Annual Action Plans (AAPs). It is voucher-based and finance-linked, and generates predetermined reports against the AAPs. 2. The system contributes to transparency through posting on the project website various MIS reports, including progress of project implementation, funds release, stakeholder details, results of Quantitative Participatory Assessment/WUA grading, and report updates on 'online petition status' from its grievance redressal system. 3. Performance targets for each indicator are finalized as part of the AAPs, and progress and variances against these are tracked by the system and reviewed during meetings of the District Level Committees on a quarterly basis. The focus is on understanding the reasons for variances and identifying support requirements. Some outcome level information is also reported e.g. on farmers' responses and systems improvements, such as no. adopting improved cultural practices, hectares converted from paddy to non-paddy crops (as per Results Framework indicators). This provides important dynamics for interactions with and feedback from SOs, CBOs and communities, linking the MIS with monitoring processes. 4. Clear assignment of functions and responsibilities, as integral part of the ME&L system, for data capture, processing, reporting and use, is an important feature of the MIS. Together with specific accountability for results delegated to individual senior staff members at the State level, these provided important dynamics for management interactions with and feedback from field staff, SOs, CBOs and communities, linking the MIS with monitoring processes, as seen from the following: • Responsibility for data capture in the field rests with some 250 Support Organisations (SOs)/NGOs, covering around 500 mandals and WUAs in more than 2150 tank locations. These are supervised by 21 District Project Units (DPUs) of the project, each of which is staffed with a Manager-MIS, responsible for training of data entry staff within the district and for graphical presentation of MIS information based on analysis of targets and achievements. • Working closely with the Manager-MIS in each district is an Assistant Project Director-ML&E, whose responsibilities include coordinating with DPU staff on capacity building on ME&L for project staff, SOs, and the WUAs, generating a common understanding of the Results Framework, undertaking field based/process monitoring tasks, and facilitation of learning from field experiences in project implementation. • DPUs in turn are supported by multi-disciplinary teams (MDTs) of experts/senior staff at State level (PMU), on a zonal basis (4 zones of around 5 districts each, covering between 88–115 mandals and 460-650 tanks). Each MDT has a team leader and is held accountable for the results of the zone as a whole, while individual MDT member also serve as District Coordinator for one district within the zone.

Project	Features and Practices
Bihar Rural Livelihoods Project (BRLP)	1. The Project has, with the help of an external MIS agency, developed a functioning MIS for input-output monitoring. This included contractual arrangements for sustained external ICT support, initially for three years (phase I), which was subsequently extended (phase II, for further enhancement to the system scope, including addition of new components and modules, and web capabilities). The external ICT support included not only routine systems maintenance and trouble-shooting, but also provision for software modification/refinements, and on-going implementation support/training at both state and field levels. Adequate project budgets were allocated for these.
	2. The system design was transaction-based at the outset to permit routine capture of SHG and member information, both static and dynamic which, given the relational database capabilities, greatly facilitated analysis and reporting. Data on activities under various project components were also routinely captured. These permitted monitoring of both the performance of CBOs (SHGs, VOs/federations) and that of project operations, in terms of results of specific components and staff and office performance i.e. business processes of BRLP. The MIS data are being used to generate Monthly Planning and Progress Reports (MPPRs) for blocks and clusters. Annual Action Plans are also based on analysis of the MIS data. Such functional linkages with planning and monitoring processes provided strong dynamics for operating and using the system.
	3. The MIS consists of the following modules: (i) Microfinance; (ii) Livelihoods; (iii) Institution and Capacity Building; and (iv) Social Development Initiatives. In addition, there are modules at the state level for: (i) 'BRLP' covering project office operations, staffing; (ii) 'Programmes' which provides information about specific programmes initiated by the head office; and (iii) "Reports' listing the different kinds of reports that may be generated. MIS enhancement in phase II would add a human resource management module, and a dashboard of indicators covering analysis of trends and deviations from the norm for real time (on-demand) decision support.
	4. The MIS gave special attention to activities and functioning of the SHGs, including providing and repayment of loans, and linkages to banks. It has an utilisation-cum-validation mechanism for SHG data pertaining to savings and credit. This involves generation and use of a 'DIDI' sheet (Digitized Demand Information Sheet), indicating both 'demand' that each SHG makes of individual members over different weeks of the month, covering compulsory and voluntary savings, meetings attendance, loan disbursements, and repayments. A useful feature of the system is capability to alter the repayment terms for specific SHGs as and when deemed necessary. Such flexibility was added following discovery in the field by project staff that poor repayments in some SHGs which showed up in the MIS stemmed from factors which lay outside the control of SHG members, such as devastation of crops from severe flooding. The latter called for a sensitive approach in microfinance operations, and modifications to the MIS software were made to accommodate such a need.
	5. The MIS design and development process was a collaborative exercise with active participation of the client (project staff, including the CEO, Manager for M&E, other managers/functional specialists, and the CEO), communities, and the service provider. It went through a series of participatory design workshops and software development and testing stages – alpha testing (with dummy data) and applications refinement, and beta testing (capture of real data from the field), prior to finalisation and roll-out across the project. Consideration was also given to sustaining the MIS after the termination of the project and to enabling computerised operations at the cluster and/or village level e.g. through the Common Service centres (an existing village-based Computer Kiosk that provides important Government-schemes related information to the village community). The use of mobile telephony for DIDI Sheets data entry and transmission to the blocks was also being piloted, using tailor-made software developed by the external MIS agency.

Project	Features and Practices
Andhra Pradesh Rural Poverty Reduction Project (APRPRP/ IKP)[1/]	1. A web-enabled MIS was being developed with the help of an ICT agency that had a sound track record in system development in major rural programmes (including the fully automated system of the NREGA employment guarantee scheme covering some 12.5 million households in AP state). Building on the existing information system, the MIS would meet not only the management information requirements of APRPRP/IKP but also the wider ICT needs of SERP (State Society for Elimination of Rural Poverty), the parent agency for the project. (Other activities of SERP range from health, education and insurance and disability assistance programmes, to dairying, marketing and non-pesticide management, covering some 35,000 Village Organisations, 1,100 mandals, 22 districts, with over 10 million SHG members).

2. A major consideration in ICT development was the role of the MIS as a tool for project management. This required availability of information of both static and dynamic nature. The former included basic village, SHG and individual member socio-economic data. Dynamic information pertained largely to data on Project and CBO performance. Much of this could be captured more efficiently from better use of ICT. Benefits included:

• Facilitating performance monitoring and grading of SHGs, and reviewing loans against plans
• Ensuring transparency and visibility
• Reliable and timely information flows, including elimination of delays in monthly balances and accounts.
• Minimising need for and time spent on rectification of errors in data transmitted from the field.
• Integration of physical and financial MIS
• Generating automatic reports across all levels of SHGs, and federations at village, mandal, district, state.

3. Main stages in ICT design and development consisted of: (a) An initial period of study and analysis; (b) Fielding of Interim System; (c) Pilots and trials; and (d) Fielding of the full system. Notable here was the emphasis given to the initial study stage. This covered analysis of SERP's functional and information requirements, software functionality and interface requirements, identifying areas for automation, and the feasibility of on-line transactions. Important processes were:

• An organisational analysis of SERP and its departments;

• Brainstorming and interactive sessions with key stakeholders, including SHGs, women members, NGOs.

• Gaining a thorough understanding of major functions of SERP and documenting processes/ sub-processes

• Analysis of all processes/sub-processes from the ICT perspective.

• Identifying areas for ICT intervention.

4. Innovative use of information technology within the village development context was explored by the project, for instance by piloting the use of Netbook computers (Atom-based mini-laptops) for data capture by Community Bookkeepers. Advantages noted so far were reduced recording time for group transactions, better access to recorded information for group members, possibilities of net connection for data upload, and quick turnaround for report generation. This had potential for women empowerment through acquiring computer literacy. Prospects for scaling up to all project Village Organisations, including provision of subsidised entrepreneurial loans to bookkeepers for service provision, depending on findings from the pilot would be looked into.

5. Partnerships in advancing the use of ICT in microfinance and promotion of rural banking were also being forged with a number of private sector entities, such as the CGAP-Gates Foundation (linked to the Consultative Group to Assist the Poor); TCS; AP Online; Atyati (an offshoot of I-flex/Citicorp) for bank linkages through VOs and District federations; CISCO (to support training and networking); and Tata Tele-services.

6. A longer term vision is to make available Smartcards for all SHG members; permit full transparency in transactions (based on very successful NREGA software) to record transactions and help deliver IKP products and services; and making members profiles readily accessible by range of relevant service providers, to enable members to go beyond the SHG structure and access other third-party services. |

Project	Features and Practices
Andhra Pradesh Community Forest Management Project (APCFMP)	1. A computerized monitoring package FMIS - (Forest Management Information System) was developed and installed across all management units (at ranges, divisions, circles, Regional Geomatics Centres and in the PMU. The package is modular in nature, covering the various project components and activities. It was developed in MS-Access using Visual Basic as the front end. It consisted of four Modules: (i) Community Forest Management; (ii) Financial Management; (iii) Forest Inventory; and (iv) Forest Protection. Modules (i) and (ii) were routinely used by the Project for planning and monitoring purposes.
	2. Preparation of Annual Work Plans at division, circle and state levels were done using the FMIS package. VSS Annual Plans prepared through participatory approach were also documented in the FMIS. Monthly cash accounts at all accounting levels were also generated using this package. Lack of integration between physical and financial reporting restricted the usefulness of the system for project monitoring. Nonetheless, the software had the potential to generate monthly monitoring reports and also reports from participatory monitoring, and is being used across the project entity.
	3. The FMIS was a low-cost approach in using IT to assist planning and monitoring. This catered for information flows from VSS level (hard copy reports) via range level offices to division level where computerised data entry took place. This was supplemented by a monthly system of pre-printed and post-paid postcards in which Community Extension Workers reported on VSS level activities such as management committee meetings held, submission of VSS cash accounts on time, and on training and workshops conducted.
	4. The project had utilised optical mark reader/recognition (OMR) sheets during its 'Social Audit' of all VSSs. This simplified recording of responses and facilitated computer data entry and analysis. Whilst this was carried out as a one-off and belated exercise, such an approach is amenable for use on a routine basis for periodic monitoring and reporting. Along with the postcard system, this demonstrated the importance of pragmatism in MIS design and development, in which there is a place for both state of the art ITC as well as low technology options, depending on needs and circumstances of the project.
Meghalaya Livelihoods Improvement Project in the Himalayas: MLIPH (IFAD)	1. Project has in place a low-cost and user-friendly MIS, using computer software developed in-house by the Monitoring and Evaluation Officer, under the guidance of the Communication, Monitoring and Evaluation Manager. This provides data on each SHG, which is available at village, cluster, block and district levels.
	2. Data are entered at block level using EXCEL worksheets and analysed at Project headquarters using SPSS. This is done so quarterly, and was considered adequate for monitoring purposes. Data quality is managed by regular training of the VLGP (group Promoters) and the SHGs, who are also rated regularly for their book keeping and other group management skills - which it is hoped would provide an incentive for the SHGs for ensuring accuracy of their books. It is also envisaged that VLGPs will continue to function as service providers after the project ends, with village organisations continuing to pay for their services.
	3. Despite the savings in cost and time for the project in getting an MIS up and running, there are severe limitations with the in-house software developed by (a single) project staff. EXCEL-based systems invariably subject to data entry/omission errors which are difficult to detect or correct, and can easily corrupt the project database. (Moreover, the SPSS package is more suited as a statistical/survey analysis software than as a MIS tool). Absence of a relational database structure and simply capturing data at SHG level also greatly limits analysis of member level responses and outcomes (e.g. by caste, gender, or wellbeing status). Moreover, there is a major risk in MIS system collapse should the staff member concerned leave the project.
	4. The above software issues notwithstanding, a highly positive feature of the MIS is its strong linkage to monitoring and learning mechanisms and action planning by project staff. A system of Rapid Action Strategy surveys involves two-person teams of district staff visiting and living in the cluster villages for a period of around ten days (2 -3 days per village) on the basis of the quarterly MIS data. An Action Report for villages within the cluster is then prepared and submitted to the District Management Unit for remedial action. Key areas monitored and being acted upon include targeting and inclusion, gender participation, functioning of SHG/village organisation, and convergence with line departments. When further developed, such a mechanism has potential for integrating the MIS with broader process monitoring initiatives, and identifying any needed higher level policy actions.

Project	Features and Practices
Uttarakhand Livelihoods Improvement Project in the Himalayas: ULIPH (IFAD)	1. Recognising the limitations of its existing information system, which was largely manual or had its computerised components implemented on standalone/piecemeal basis, the Project (known also as *Aajeevika*) embarked on a comprehensive development of a web-based MIS that would make better use of enabling IT (information technologies) to help improve efficiency and manage diversities, and enable all stakeholders track and monitor project implementation and performance. This was initiated through a detailed study on MIS requirements, including assessing computerisation/automation options.
	2. A key element of the study was gaining a thorough understanding of the objectives and operations of the project, including the institutional arrangements and business processes of the operating institutions at various levels. (Two organisations were jointly responsible for project implementation - one a state registered society dedicated to enhancing livelihood opportunities of poor households (UGVS), and the other a Social Venture Capital Company (UPASaC) to promote livelihood activities through commercial enterprises/services. Harmonisation of information flows across organisations was essential in view of the overlapping nature of activities and implementation responsibilities). Weaknesses and inadequacies in the existing system, including limitations of using computer software developed in-house on ad hoc basis by (transient) project staff were also identified.
	3. The study outlined the broad requirements of the system design that would be required for ULIPH (i.e. the High Level Design), based on an in-depth analysis of: (a) users of the system; (b) key events (including triggers/periodicity) when information is used or generated (and specific users); (c) different data capture mechanisms (from manual records to mobiles, handsets, project computers, common service centres/digital post-boxes) and (d) data storage (centralised or decentralised database) options.
	4. A comprehensive information requirements list, including priority level and functionality, was prepared through a participatory process involving all key stakeholders. These were grouped under four modules, taking into account the component structure of ULIPH, its M&E framework, and business processes of both UGVS and UPASaC, consisting of: (i) SHG/Federation module, (ii) Livelihood Value-chain module; (iii) Project Management and Communication module; and (iv) Human Resource Management module. A roadmap for software development and deployment/rolling-out was then outlined. Subsequent software design further streamlined the MIS under two main packages for: (a) SHG related data (i.e. focused on CBO operations) known as SHG-MIS; and (b) project head office MIS, called HOMIS, which essentially focused on project operations covering component activities for capacity building, livelihood enhancement/development and support systems (including bank linkages and business development service), and facilitating effective project management.
	5. Main aspects of the MIS design adopted by the project were: (a) establishing a centralised database (CDB) that is accessible from field offices, with off-line functionality for data entry and viewing; (b) outsourcing of web space through reputed third party service provider while planning and building capacity for project's own dedicated server; and (c) multiple options for data uploading and transmission to SDB by Group and Business Promoters of UGVS and UPASaC, respectively, including through computers at block and district offices, Common Services Centres being set up through Public-Private Partnership in the State, hand-sets (where GPRS is available), and by via mobile phones (initially piloted in one district prior to full adoption).
	6. Development of a web-enabled GIS was pursued through partnership with the locally based Peoples Science Institute (PSI), which had already a prototype web-based Village Information System (VIS) for the state. This had capability for sharing village level information and map visualisation of natural resources, infrastructure and demography, including thematic layers from the 1991 and 2001 National Census datasets. The last of these are a valuable resource whose potential for both planning and monitoring, is often not well exploited, and initiatives in making greater use of Census data, such as that being pursued with PSI are highly desirable.

Table D.
Useful features and good practices observed, case study projects
Main challenge: *mainstreaming ME&L in project management*

Project	Features and Practices
Uttar Pradesh Sodic Lands Reclamation Project (UPSLRP)	1. Project was implemented by the Uttar Pradesh Bhumi Sudhar Nigam (UPBSN, a registered corporation within the UP Government). All project personnel, from top management down to field and community levels, were considered to be the "eyes and ears" of the project. 'Monitoring is nobody's monopoly' was the principle followed by the project. Along with role clarity and well defined job functions and responsibilities, this had a highly positive impact on promoting M&E system implementation and usage across all levels of the project organisation.
	2. In addition to regular line supervisors at project headquarters, there was a small team of (8) Zonal Officers (ZOs) assisting top management in supervising (i.e. more effective span of control) and providing support to field staff. The ZOs were located at project headquarters but had delegated responsibilities for ensuring effective project management in all project districts within their Zones. This gave further impetus to M&E processes and helped underline the importance of the MIS/GIS for tracking reclamation activities and indicators.
	3. Participatory and self evaluation mechanisms, built into the project's institutional arrangements, facilitated M&E at CBO level. Core Teams comprising representatives of CBOs (Farmers' Groups, WUGs, SHGs), Gram Panchayat/other village functionaries, participating NGOs, and male and female Village Animators, led by Assistant Managers at each project site functioned essentially as an executive arm of Site Implementation Committees (SICs). They met to review project progress and implementation issues on a regular basis, serving as a form of social audit whilst imparting local ownership of the M&E system.
	4. Although there was reliance on third party agencies for concurrent implementation monitoring and conducting thematic/special studies, these were well linked to internal M&E processes at field level. External monitoring reports along with action points are discussed with district level project staff, and shared with CBO/village level stakeholders. Monthly reports are also sent to UPBSN management for review and return to the respective districts for compliance and corrective action, copied to the external agencies, thereby completing the information loop.
	5. The work of the external M&E agencies was routinely reviewed by two committees: one (Monitoring Committee - MC) on progress of the Action Plan to be followed by the consultants, and the other (Evaluation Committee – EC) to review outputs and reports of the consultants. The latter included one to two members of the MC plus external experts (sociologist, economist, statistician). Both committees were chaired by the Managing Director of UPBSN, underlining the high priority given to M&E across the whole project.

Project	Features and Practices
Karnataka Watershed Development Project (KWDP)	1. Design and implementation of the ME&L system, including the MIS/GIS, were fully outsourced to a single external M&E agency (Antrix Corp, commercial arm of ISRO), which deployed full time staff at project headquarters and field (with three M&E staff in each district). Despite being delegated to a third party service provider, ME&L were treated as integral elements of project management and played a key role in triggering policy changes during implementation. This included decisions to redirect resources towards pro-poor interventions e.g. greater use of revolving funds for IGAs, modifying the investment pattern of the project (towards horticulture and forestry activities), and introducing new features such as village-based private veterinary service providers (*Gopala mitras*) to cater for livelihood development needs of women and landless people, identified through M&E studies.
	2. The M&E agency (Antrix Corp.) was accorded a high degree of independence in implementation; it reported and had direct access to the Project Director. This facilitated rapid feedback to top management and prompt responses to information from input-output and process monitoring and findings of thematic/special studies. At the same time, involvement of SWS (Sub-watershed) Executive Committee members (with their own monitoring cell), Area Groups, and local NGOs in process monitoring activities (which included field verification and transect walks) and the Quality Management System of OK Cards (kept by farmers for structures built on their land) helped link monitoring substantively to planning and implementation processes at the community/beneficiary level.
	3. The institutional arrangements in place, characterised by an inclusive in-house review system, gave ME&L a prominent role at all levels of the project management structure. These included:
	• Weekly audio conferences between the Project Director and all the district officials (DWDO and team) to review project progress and check compliance. These utilised as starting point findings of the M&E agency submitted monthly to DWDOs and NGO partners for their compliance and follow-up.
	• Monthly meetings at project headquarters, chaired by the PD and attended by key stakeholders (including APDs, subject matter specialists, heads of all NGOs, representatives of research institutions, and staff of Antrix Corp.). These generally last a whole day, and were regarded as an important part of the project's planning and review calendar.
	• Submission of compliance reports by DWDOs to the PD every month. These are critically reviewed by District Nodal Officers during visits to project sites in their respective districts.
	• A District Level Review Committee (DLRC) in each district headed by the Zilla Parishad CEO, with the District Watershed Development Officer (DWDO) as Secretary, reviews and approves Actions Plans. There is also a District Resource Group (DRG) consisting of district officials of the different line departments, which provides technical assistance, monitors NGO training, and scrutinises their action plans. These bodies complement each other, with the former functioning as a review and monitoring mechanism, and the latter focusing on technical issues.
	• Process monitoring and thematic reports prepared by the M&E agency are shared with DWDOs and LNGOs directly through E-mail and shared in workshops, to discuss salient findings, review status, agree on corrective measures, and facilitate replication of best practices.

Project	Features and Practices
Andhra Pradesh Community Based Tanks Management Project (APCTMP)	1. The project is implemented by CADA (Command Area Development Authority), as a Special Purpose Vehicle, through formation of a PMU headed by a State Project Director, with DPUs in the districts, each headed by a District Project Director. A Project Steering Committee, with the State Chief Secretary as chair, the Commissioner, CADA as convenor, and members from departments of rural department, agriculture, animal husbandry, fisheries, irrigation, and groundwater provide an important mechanism for project review and guidance, and injection of stakeholder perspectives across technical sectors.
	2. MEL functions and responsibilities are well institutionalised within this management structure. Internalization of MEL tasks has been facilitated through clear definition of roles and responsibilities and establishment of review & feedback loops at state, district and village levels. There is also strong emphasis on facilitating use of information for decision-making at the level where it is generated. The systems at the village and tank level are participatory, well-designed and supported by external facilitating agencies/NGOs, called Support Organisations (SOs).
	3. There is an internal monitoring structure for the project at all levels, with direct responsibility vested in PMU and DPUs staff. The PMU have four staff with specific M&E/ MIS functions - one expert each for M&E, Research and Documentation, MIS and GMIS. There is also zonal allocation of monitoring responsibilities along with accountability for results within the zone for PMU staff. Multi-disciplinary teams (MDTs) of experts/senior staff are charged with mentoring and monitoring DPU staff within the zone. Each MDT has a team leader, while individual MDT members also serve as District Coordinator for one district within the zone. Performance assessment of WUAs is consolidated zone-wise, with the MDT accountable for results of the zone as a whole.
	4. At the DPU level, there is an Assistant Project Director-ML&E and a Manager-MIS, whose work is well integrated with that of other staff. TORs for both positions are clearly defined and include, among other duties, the following significant tasks:
	• Coordinating with DPU staff on capacity building for MLE to SO, DPU and WUAs and generate a common understanding on the results framework.
	• Coordinating with M&E agency for baseline, concurrent monitoring, mid-term assessment and final project evaluation at District level.
	• Compilation of project annual plans from component wise plans, in coordination with DPU team members.
	5. Within the system of participatory self-monitoring, performance of key project stakeholders (WUA, SO, DPU and PMU levels) is gauged by results of project interventions at the WUA level. Achievements at this level are monitored using a Quantitative Participatory Assessment tool involving the various stakeholders across the project organisation as follows: (a) WUAs undertake self-assessment of their own performance, based on agreed set of criteria and system of scoring; (b) SOs undertake assessment of WUAs and provide inputs for the latter's improvement; (c) SOs performance is assessed by the DPU/PMU on the basis of the WUA ratings; and (d) performance of DPU/PMU is also gauged from the consolidated WUA assessment results. This provided an important instrument for building capacities of WUAs and their functionaries in overall management roles and functions, a primary focus of the project that was in keeping with the state APFMIS Act, 1997.
	6. The capacity building strategy of the project is underpinned by results-based management (RBM) principles, emphasising: access to information; stakeholder participation; subsidiarity (doing the work at the lowest possible level of implementation and management; and flexibility. It covers management functions at three implementation levels, namely state, district and WUA levels. This includes training programmes on overall approach on monitoring learning and evaluation, results-based management, participatory monitoring and learning, and process monitoring. The main focus is on creating and facilitating mechanisms and instruments promoting analysis of data gathered and generating learning from MLE processes, and two-way information flow. Orientation training is provided to project staff at state and district levels, staff of CADA, support organisations, WUA management committees and members. Specific skill training such as on MIS and participatory tools is given to MLE and MIS staff and WUA committee members.

Project	Features and Practices
Bihar Rural Livelihoods Project (BRLP)	1. M&E functions are well integrated into the project management structure. Institutional arrangements include a State Project Manager for M&E (SPM/M&E) with seniority on par with Sector Heads, and reporting directly to the CEO. The incumbent has clear mandate to lead, guide and provide technical support on ME&L to other sections of the project. Supporting the SPM/M&E are two Programme Managers, one for M&E and MIS (PM/M&E,MIS), and the other for Research and Documentation (PM/R&D), with responsibility for learning aspects. All positions required strong technical background and experience and were filled after careful selection.
	2. M&E are part and parcel of the functional responsibilities of staff across all technical units at various levels. This is well articulated in job descriptions of Sector Heads and District Project Management Unit staff. Although M&E Officers had not been recruited at district level, responsibility for this function rests with the District Project Manager (DPM), and is reflected in the job description. DPMs are accountable to respective sector heads for programme delivery and also reports project progress and achievements to the District Level Programme Management Coordination Committee (DLCC), chaired by the District Collector.
	3. A participatory bottom-up planning and budgeting process has been put in place, which is largely driven and facilitated by the SPMU, and is designed to elicit participation of staff across all levels – from the Community Coordinators to the CEO, including the State Project Managers and the Chief Financial Officer. This process sets the core responsibilities of the staff on an annual basis. The participatory planning and review system has resulted in enhanced ownership of targets and accountability for their achievement. The objectives and tasks that follow are clearly understood at all levels and are supported by the MIS which enables consolidation of data around a common code. Knowledge of, and familiarity with, the plan targets and activities also contributes to greater use of the MIS, particularly for reporting and planning purposes.
	4. There is close working relationship between M&E and capacity building activities of the project. All newly recruited staff undergo a formal induction programme (15 days) during which special attention is given to: (a) the logframe and results framework; (b) the different components of the project and associated M&E requirements; (c) complementary roles of the MIS and M&E; (d) linkages between process monitoring and routine MIS; and (e) data collection methods. They also undergo a one month 'village immersion' programme, working as Cluster Coordinators at village level, whose duties include data collection and reporting. They are then provided further top-up and refresher training on the MIS. All these involve close collaboration between the state M&E/MIS staff and the Institution Building and Capacity Building staff at state and district levels, including the District Training cell headed by a Training Manager.
	5. Clear accountability of project staff for results at state, district, and block/village levels and the management-orientation of the job designations help bring out the need for effective feedback and learning at each level, and provide strong motivation for M&E/MIS implementation and utilisation. This might not have been the case should staff be deployed purely as technical specialists in the project and/or where lines of control within the project organisation are less well defined.

Project	Features and Practices
Andhra Pradesh Rural Poverty Reduction Project (APRPRP)	1. The project is implemented by SERP (Society for Elimination of Rural Poverty) an independent autonomous society of the Andhra Pradesh Department of Rural Development, headed by a CEO. Project monitoring, evaluation and learning functions are well integrated into its management structure, with clear roles and responsibilities for staff at various levels of the organisation.
	2. At the state (PMU) level the M&E unit is headed by a senior staff with designation of State Manager, M&L, who is supported by an M&L Project Manager and two Project Executives – one responsible for M&L and the other for MIS. At district (DPU) level there is an M&E Officer who assisted by a computer operator, responsible for ICT and routine data entry work. In addition, the Mandal Samakhya (Federation) Accountants assist the district M&E Officer in data collection from the mandals (blocks).
	3. Of note are the specific annual budgets allocated under the institution and human capacity building component for training of project staff at state, district and community levels (e.g. Community Coordinators) and for CBO officials and staff (e.g. Executive Committee members, Mandal Samakhya Accountants). This reflects the attention given to building capacity in M&E for key stakeholders across the project organisation. Also noteworthy is the budgetary provision and clear timelines for thematic and case studies, documentation of best practices, end-of-project impact assessments, and importantly for ICR consultations and surveys. Total M&L costs for the three years to 2012 are put at some USD3.4 million (some 7% of the cost for the Project Management component).
	4. The system of external process monitoring helps catalyse internal M&L processes through periodic interactive workshops to review and respond to the findings and recommendations of the contracted FAs (field agencies, each covering a zone of around five districts). Following field visits to districts and villages, FAs submit a list of process issues requiring mid-course correction, which are presented to a full meeting of the respective DPMUs for discussion and debate, to arrive at a list of 'agree to do' actions. DMUs prepare an action plan, which is reviewed at subsequent rounds of workshops undertaken on rotation basis. They are also required to prepare an 'Actions Taken Report' indicating specific actions proposed and taken, including reasons for divergence from recommendations of the FAs. These are discussed in regular meetings at SPMU and through video conferences chaired by the CEO. In this way M&L form part and parcel of the routine activities of project staff at all levels.
Andhra Pradesh Community Forest Management Project (APCFMP)	1. M&E roles and functions are established at various levels of the project. The head of the unit at state PMU is at Conservator of Forests (CF) level, who is supported by three Deputy/Assistant CFs, designated specifically for M&E functions. Three other staff at Forest Range Officer (FRO) level are also assigned M&E responsibilities in the project. Besides M&E they are also responsible for preparation of work plans and budgets, which helps link planning and programming with M&E functions.
	2. Project implementation, monitoring and reporting follow largely the territorial-based organisational structure and hierarchy levels of the Forest Department (Beat, Section, Range, Division,/Circle, Regions), with staff and community level personnel all playing a part:
	• The VSS (Vana Samarakshana Samitis - literally, Forest Protection Committees with management committees elected from community members, including at least half who are women) undertake micro-plan preparation and monitoring of their own performance:
	• Information on project activities and expenditures at VSS level is routinely recorded on paper, aggregated at Beat and Section levels, and sent to Range Offices where computer data entry takes place before being further transmitted to Forest Division and headquarters levels. Responsibilities for this work rest with FBOs (Forest Beat Officers), FROs (Forest Range Officers), DFOs (Divisional Forest or Assistant Officers), and CFs at the respective levels.
	• VSS level Information is also collected by Community Extension Workers and NGO Coordinators and reported directly to the Range Offices.
	3. The transitioning from the earlier Joint Forestry Management approach to the Community Forest Management in the present project required further capacity building, re-orientation and training of Forest Department staff. Training programmes and workshops helped capacitate field personnel, especially DFO/Sub-DSOs, FROs and FBOs/ABOs, not only in M&E *per se* but also a range of related topics such as gender sensitisation, social mobilisation and preparation of annual plans, as well as Information Technology and the MIS. This helped provide staff at various levels with an all round understanding of their roles besides skills needed to undertake planning and monitoring/reporting duties.

Project	Features and Practices
Meghalaya Livelihoods Improvement Project in the Himalayas: MLIPH (IFAD)	1. The project has well-defined institutional arrangements at various levels for M&E, supported by a M&E plan developed at the outset, accompanied by a road map of key steps and processes which included: • Review and revision (where necessary) of existing logframe. • Stakeholder workshops to identify M&E information requirements and data collection tools. • Assigning responsibilities for data collection and reporting. • Elaborating procedures, steps and time for data collection, processing and flow of analysed information. • Design of reporting plan and learning system, and the strategy and mechanism to document and communicate lessons learnt. • Building capacity in M&E among project staff. 2. There is strong commitment of top management of the project to M&E, with placement of a senior person as Manager for Communications, Monitoring and Evaluation at the state PMU level. There are M&E Officers in every District Management Unit (DMU), while Block Coordinators and Cluster Supervisors (CSs) are involved in data collection and reporting to monthly review meetings at block and district levels. 3. The MEOs are responsible for the MIS and preparing Quarterly Status Reports (QSR) s for the project-wide Quarterly Review Meetings (QRMs). The QSRs focus on project components and help drive the agenda of the QRMs, as each quarter's planning is based on review of the previous quarter. QRMs are not held at PMU but at a district office by rotation, to give every district a chance to be involved in organising the review process and play centre-stage in the monitoring system. 4. Each fortnight, the CEO/Project Director chairs a Core Group meeting at the PMU, attended by all the sector heads. Significantly the agenda is set by the head of the M&E cell i.e. Manager, Communications, Monitoring and Evaluation. The focus is essentially on strategic and macro aspects, based on the MIS and other qualitative and quantitative information. Decisions taken this meeting include such issues as promoting group insurance, improving bank linkages of SHGs, etc. The minutes are shared with the district and block personnel. 5. The above processes helped impart a sense of ownership of the M&E system among project at the various levels. Acceptance of the system however did not occur automatically. Special effort was needed to change initial perceptions of M&E from being a burden to that of an asset that could also reduce workload of other project staff. This involved orientation and training workshops to improve awareness and skills, as well as continuing hands-on support. For instance, MEOs provided technical support to the CSs within their district in developing theme-based case studies initiated by the latter, and writing up for information sharing and learning. This was preceded by formal on-the-job training in process documentation, which included inputs from the project Communications Officer and the Manager, Communications and M&E.

Project	Features and Practices
Uttarakhand Livelihoods Improvement Project in the Himalayas: ULIPH (IFAD)	1. The project had initially not allocated adequate financial and human resources to M&E. Compounded by rapid turnover of M&E staff; this had hampered system development and implementation. Recent initiatives to address these issues however helped assert a central role for M&E in the project, including establishing a professionally re-designed MIS, allowing the emergence of a practical system that is finding acceptance and ownership among project staff.
	2. Clear arrangements for M&E and MIS have been instituted as follows:
	• At the PMU level, responsibilities for monitoring, evaluation and learning rest with: (i) a Manager, Communication, Monitoring and Evaluation, in close collaboration with (ii) a Manager, Knowledge Management and Information Technology. These cover both the social mobilisation and enterprise development strands of the project organisation.
	• There are no M&E officers appointed at district level, but M&E responsibilities are shared between the District Project Manager (DPM) and the Coordination Officer (CO). The DPMs focus on the periodic (monthly, quarterly) reviews of programme activities, outputs and outcomes with district teams and FNGOs and RNGOs (field and resource NGOs), while ensuring similar reviews are undertaken at block and village level. The COs assist in monitoring and review of Group Promoters activities (primarily on SHG/social mobilisation aspects), including monitoring the gender orientation of participating agencies. Project implementation and reporting on progress of activities at the field level are undertaken by FNGOs, Group Promoters and Business Promoters.
	• Responsibilities for MIS data capture at village level rest with the Group Promoters/Business Promoters, who are provided training and maintenance and technical support by IT field teams deployed in each district by the external MIS agency. Training and continuing IT support for the MIS at project headquarters is also provided for through contractual arrangements with the MIS agency.
	3. The integration of M&E within the routine functions of project staff have been facilitated by:
	• Carefully drafted job description/TORs of field level personnel that included specific mention of their ME&L roles and responsibilities. For instance the DPMU's TORs included the conduct of and/or support to monthly and quarterly review meetings with project stakeholders, as well as "At least 12 working days/month dedicated to field visits and feedback loops to be followed to relay the field observations and issues to colleagues for timely and comprehensive action".
	• The consultative processes adopted, leading to substantive participation of key stakeholders, during design of the MIS and baseline and impact assessment surveys - the latter through use of a quantified participatory approach.
	• The system of documenting processes and results - each district of the project brings out bimonthly newsletters in the regional language. These have contributions from project stakeholders at the village and district levels and are widely circulated among project stakeholders. The process of publishing the newsletter lends the district teams an opportunity for review and reflection on important project developments. Documentation is seen here not as an end in itself, but as a process that contributes to review and reflection.
	• The project Steering Committee chaired by the Chief Secretary of Uttarakhand reviews project performance on a six-monthly basis. This provides important dynamics for the project M&E system and helps link it to policy decisions at state level.

ANNEX 3
ME&L system design: features of good practices and their significance

Case study observations

Project Feature	Main Observations	Significance and Usefulness
Overarching M&E Framework	**KWDP**: An overall system design conceived as two sub-systems for: (a) concurrent monitoring of project inputs, outputs and processes by project staff and community stakeholders; and (b) periodic and ad hoc assessment of project impacts, both socio-economic and environmental, with support of external partners. These are supported by a web-based and GIS-enabled MIS for capture, storage, analysis and visualisation of data, ground-based as well as remotely sensed using satellite technology.	• Holistic approach in system design permitted information needs not only of project teams to be identified but also that of CBOs and community members over the project life, contributing to upward as well as downward accountability.
	APCTMP: System encompassed field based monitoring, including well developed procedures for CBO self-assessments, thematic studies, process documentation, and impact evaluation processes, supported by web-enabled MIS with GIS capabilities. The design recognised the centrality of CBOs specific provisions for community assessment of own performance, that of their peers, and also performance of project staff/service providers.	• Timely availability of information of routine and ad-hoc nature facilitated tracking of processes and results essential for decision support, making the system relevant and useful to management. • Combination of information gathering approaches assisted in triangulation of information, increasing its reliability.
	APCFMP: System design was underpinned by a 'multi-layered' conceptual framework which looked beyond the logical framework indicators. This provided for systematic and explicit monitoring of social and environmental dimensions of change associated with project interventions, including gender empowerment, survival rates of regenerated vegetation, and outputs and outcomes of Resettlement Action Plan and Environmental Management Plan.	• Close functional linkages between the MIS and ME&L was made possible by addressing information management and ICT requirements as an integral part of M&E system design at the outset.
Mutually Reinforcing Blend of Internal, External and Participatory Components	**UPSLRP**: Besides a well functioning MIS, system design provided for regular field verification and rapid assessments by project staff, externally executed studies and assessments, and an inclusive system of village level site implementation committees (SICs) for participatory monitoring and review of project activities and results.	• Primary stakeholders, including male and female community members are empowered in joint monitoring and review of the adequacy and quality of project activities and outputs. • System facilitated triangulation of information, providing direct and timely feedback to both community members and project management, and encouraging downward accountability.
	APRPRP: Internal monitoring is complemented by robust external process monitoring system involving an Apex agency for overall coordination and quality assurance, and three field agencies covering different zones.	• Permits independent assessments of quality and adequacy of operations in the field. • Led to actions to improve project operations as well as CBO functioning, including better coverage of target group under Community Investment Fund (CIF); increased internal lending by SHGs, and enhancing the role of Village Organisations in supporting CIF sub-project implementation.

Project Feature	Main Observations	Significance and Usefulness
Evaluation's Substantive Role in improving Project Performance	**KWDP**: Formative evaluation is integral to the ME&L system. Input-output monitoring and CBO self assessments, are complemented by a programme of well-focused thematic and diagnostic studies aimed at improving project performance	• Thematic studies provided timely and relevant information to assist management in identifying where course correction was needed and making necessary revisions to project strategies and implementation modalities. • Led to policies and actions for enhancing participation of landless labourers in soil and water conservation activities; re-balancing investments between physical and biological interventions; improving group formation processes; and filling gaps in the project logic e.g. introducing new initiatives to enhance incomes of landless/weaker groups.
Learning as a Core Project Value	**APCTMP**: Learning is given practical expressions through self assessments and reflective mechanisms at all levels (staff and community stakeholders), including involvement of WUAs (Water User Associations) in reviewing performance of other WUAs[61].	• Self-learning and cross-learning promoted at the local level provide useful dynamics for both ME&L system implementation and utilisation across the entire project organisation.
	BRLP: Learning function is incorporated into internal monitoring and evaluation action research processes, such as learning forums and exposure visits. A peer review approach is also promoted through routine participation of senior staff in Internal Review Meetings of other project districts, blocks and village clusters.	• Facilitates experiential learning & sharing of action research findings at various levels, providing environment for positive competition and mutual learning. • Besides feedback on problems and issues to be addressed, led to decisions to feed forward successful interventions piloted, which provided basis for up-scaling e.g. new crop varieties, systems of rice/wheat intensification, health risk fund.
Monitoring the Results of Environmental and Social Safeguards/ Plans	**APCFMP**: M&E framework includes explicit monitoring of social and environmental dimensions of change associated with project interventions, including outputs and outcomes of Environmental Management Plan, Resettlement Action Plan, Pest Management Plan, and Gender Empowerment.	• Ensures monitoring of unplanned outcomes of project interventions and other social and environmental impacts of the project are proactively catered for (see also Box 3). • Helps make explicit the need for attention on gender issues even when these are not specifically reflected among the results framework indicators.
	UPSLRP: Provision is made within SEMF (Social and Environmental Management Framework) for independent surveys and stakeholder consultations to assess environmental impact (e.g. wetlands biodiversity), and poverty and gender outcomes related to social safeguards put in place.	
Clearly Articulated and Time-bound M&E Plans	**MLIPH**: Well documented M&E Plan developed based on logical sequencing of tasks for system implementation, re-visiting the logframe, and stakeholder workshops to identify information needs, data collection requirements and responsibilities and capacity building requirements[62].	• Facilitates system implementation across entire project organisation, and monitoring in terms of timeliness and adequacy of M&E systems activities and outputs. • Availability of overall and annual M&E budgets helps ensure commitment of requisite financial and human resources for system implementation.

61 Further details on participatory assessment tool used at community level are given in a following section.

62 Based on IFAD's RIMS guidelines.

ANNEX 4
Baseline and impact assessment surveys: methodological issues encountered

Case study examples

Issue	Main Observations
1. Linkages between Baseline and Impact Assessment Surveys	
Lack of continuity and consistency between baseline and impact assessment surveys	With few exceptions, quantitative surveys were undertaken largely as separate exercises with little continuity in terms of datasets or analytical processes. This makes it difficult in making full use of quasi-experimental design approaches. Closer linkage between baseline and impact assessment survey design and execution would be called for.
Issues of coordination and duplication of effort when engaging multiple agencies for similar studies	Most projects had relied on external agencies for technical support in design and execution of baseline and impact assessment studies. Some had contracted several agencies to undertake such studies over different project stages (e.g. *UPSLRP-II).* Harmonisation of methodologies, instruments, data and reports proved challenging. The problem may be resolved by engaging a single external agency to support baseline and subsequent surveys seems. This could also help ensure continuity and consistency between design, data collection, analysis and interpretation of the survey findings.
2. Comparison/Control Groups and Samples	
Suitable comparison groups not readily available	*APCTMP*: community tanks included for intervention were all in poor condition, needing rehabilitation, whereas those available for inclusion as matched controls were mostly well-functioning tanks. Quasi-experimental design may not be most effective way of determining the counterfactual or attributing impact[63]. Other methods such as those based on subjective recall by project beneficiaries may be far more informative
Comparison samples too small or poorly identified	*KWDP*: MTR survey sampled 105 project households with only 5 control households per micro-watershed (valley, middle and ridge) to also cover large, medium and small farmers in each of nine sub-watersheds. The small sample size of the controls poses problems for statistical analysis. Absence of clear control selection criteria compromises comparability, raising the possibility of spill-over and 'contamination' effects from project treatments. Similar problems apply to other case study, projects, with the exception of *APRPRP*, which utilised propensity score matching to address this issue.
No comparison group in baseline or subsequent studies	*APCFMP*: Baseline survey of village protection committee (VSS) areas was undertaken internally by community extension workers, with full enumeration of VSS households, but with no controls. MTR and income impact studies also had no control samples. Similar observations apply to *MLIPH* and *ULIPH*. Data constraints with this approach preclude difference-in-difference analysis, requiring other tools to help eliminate possibility of contribution from non-project influences.
3. Sampling Methodology	
Sampling design lacking rigour or clarity	Inadequate clarity on statistical basis for sampling design was a common weakness across the project cases. Indication of sample sizes needed to permit statistical inference of impact/detecting change and establishing the counterfactual was generally missing. The use of disproportionately small control samples is inappropriate when variability among non-participating households is often greater than the more homogenous project participants. Lack of statistical treatment of survey data (only mean values presented) also weakens inferences made.

---

63 Counterfactual refers to what would have occurred if the population had not participated in the project or received services or benefits. Control or comparison groups may serve as a counterfactual. However, differences in circumstances or behavioural patterns could render them not suitable for this purpose.

Issue	Main Observations
Possible selection bias	In one project *(KWDP)* the baseline mean crop yields, cropping intensities, and incomes of treatment households were much higher compared to control households (by some 25–40%). The proportion of large farmers in treatment group is also higher. These suggest possible selection bias, and not comparing like for like. Greater attention on sampling design, especially on randomisation procedures is needed.
Missed Opportunities	Some projects were implemented in stages i.e. with earlier and later areas/groups receiving treatment, while in others baselines were delayed by some years (e.g. *ULIPH*). Combining and staggering baseline and impact surveys over a number of years would permit adopting pipeline approach and difference-in-difference analysis in impact assessment. But such opportunity was not exploited by any project.

4. Scope and Utility of Baseline Surveys

Clarity of purpose in baseline surveys	Besides benchmarking for assessment of project outcomes and impacts, baseline surveys were also used for situational analysis, documenting of existing ecological, resource and socio-economic conditions (*APCFMP, UPSLRP-II*) and in supporting detailed implementation planning (*MLIPH*). Attempting to meet multiple data collection requirements within the same survey could compromise design and execution[64]. Benchmarking could for instance be done through sample surveys. Clarity at the outset as to the purposes to be served and careful consideration of data collection instruments, timeframes and resources needed is essential.
Optimising utility of baseline data	One project undertook a baseline study with full enumeration of households in all project villages to support detailed implementation planning (*MLIPH)*. Such household data if properly structured and stored in computerised databases can have enormous utility for monitoring CBO/SHG activities (e.g. % of females receiving loans) and in providing a sampling frame for future impact assessments. Greater value would be achieved by integrating such village baseline surveys with MIS design and development processes.

---

64 One World Bank-assisted project in North-Eastern Sri Lanka attempted to do this through complete enumeration of all project households, using in-house staff. But it failed to complete the survey more than a year into the process.

ANNEX 5
Effective use of ICT in the MIS: good practices observed and their significance

Case study examples

Key Feature	Main Observations	Significance and Usefulness
Strong commitment by project management in MIS establishment and follow through.	• Providing adequate financial and technical resources, realistic timeframe, covering MIS design and development, deployment and roll-out across the project entity. • Key stages supported include: (a) assessment of management information requirements, feasibility and options for ICT and automation; (b) software development and customisation; (c) field testing and validation; (d) training/capacity building; and (e) system maintenance and technical support for further adaptation, roll-out and subsequent refinement. (BRLP, ULIPH, KWDP, UPSLRP, APRPRP).	• A long term view of resource and organisational requirements helps minimise risks of discontinuities, over design, deployment and roll-out stages. • External ICT support over an extended period is critical, as there is invariably need for software adaptation, debugging/error rectification, trouble-shooting and report refinement following deployment and system roll-out.
User-centric and participatory approach in identification and validation of information and reporting requirements.	• Design and development of MIS and testing of system components are undertaken as a participatory and collaborative exercise, with active involvement of user communities, including Project Director, M&E manager, line managers/functional specialists, field personnel, support organisations, and CBOs, facilitated by the MIS agency/service provider. (BRLP, ULIPH, APRPRP).	• Besides validating relevancy and adequacy of information outputs (user perspective) and manageability of arrangements for data inputs (supplier perspective), helps provide ownership of the system to key stakeholders. This however needs to be tempered by selectivity and practicality. System designers need to negotiate with user communities on what information is essential and what could be excluded.
Using a modular structure in the MIS design.	• Identifying key business processes of the project/programme and CBO operations; prioritisation of MIS design and development requirements and effort; and structuring information outputs and reporting protocols in modular form, with clear timelines for delivery and roll-out of each module. New modules are added as circumstances permit and/or needs arise (BRLP, ULIPH, APRPRP)[65].	• The incremental approach helps build confidence and makes MIS development more manageable. • Permits flexibility and scope for refinement, which is particularly important in projects which are process-intensive. However, this approach needs to be backed by a clear overall strategy at the outset to avoid a loose design or piecemeal development approach.
Relational database management system (RDBMS) in system architecture	• Computer databases created covered both static and dynamic data such as: (a) baseline information on project villages, CBOs, target beneficiaries, resource user groups/members; and (b) periodic data on action plans, activities, operations/transactions of CBOs/user groups from village records/registers. (UPSLRP, BRLP, ULIPH).	• Integration of static and dynamic data within the RDMS permits a transaction-based approach in system design, facilitating data capture, storage, retrieval, and synchronisation, permitting flexibility in analysis and reporting. It also facilitates data verification and maintaining data integrity.

Key Feature	Main Observations	Significance and Usefulness
Linking information for work planning, budgeting, and monitoring of progress and performance	• The MIS is integrated with GIS and web-enabled to facilitate easy access by stakeholders. Information is collected and routinely reported by the MIS, based on the results framework and Annual Action Plans. Predetermined reports are generated against these Plans, including outcome level information e.g. farmers' responses, as per results framework indicators. • MIS reports on funds release, stakeholder details, implementation progress, results of participatory performance assessment and 'online petition status' from its grievance-redressal system are posted on project website (APCTMP).	• Provides important dynamics for MIS implementation and utilisation and for interactions with and feedback from field personnel, Support Organisations, CBOs, and communities. • Transparency is facilitated, contributing to downward accountability of project.
Clear logistical and institutional arrangements for roll-out and future sustainability	• Besides equipping and assigning responsibilities for MIS operations, a training programme for project staff at all levels, is undertaken prior to full deployment. This is supported by detailed user manuals for data collection, computerised data entry and report generation. Technical and initial handholding support in the field offices by the external MIS service provider are also provided for. • Developing user-friendly options and MIS modules for data capture and upload, and quick turnaround for report preparation by community level actors (e.g. Community Bookkeepers) at village Common Service Centres[66], through mobile telephony, hand-held devices, or inexpensive mini-laptops/ netbook computers. (BRLP, ULIPH, APRPRP).	• Close technical support at roll-out is essential to iron out teething problems in data entry and connectivity, fix bugs/run-time errors, ensure database integrity, and in synchronisation of on-line and off-line data. • Empowers and supports communities, including Village Organisations/CBOs in sustainable use of the MIS for record-keeping, planning and monitoring their own operations.

---

65 In APRPRP, modules for SHG bank linkages, micro-insurance and jobs, developed earlier, were later integrated into the web-based MIS design. In BRLP, a Human Resource Management module and a Dashboard for real-time decision support were added after other modules (such as SHG micro-finance, livelihoods, social development initiatives, Project Office Operations, and Reports Generation) were already up and running.

66 These may be existing village-based Computer Kiosks that provide important Government-schemes related information to the village community (BRLP) or centres set up through public private partnerships (ULIPH).

Attribution. The extent to which the observed change in outcome is the result of the intervention, having allowed for all other factors which may also affect the outcome(s) of interest.

Action Learning. An educational process whereby the participants study their own actions and experience in order to improve performance. Closely related to learning-by-doing and teaching through examples and repetitions.

Accountability. Obligation to demonstrate that work has been conducted in compliance with agreed rules and standards or to report fairly and accurately on performance results *vis-a-vis* mandated roles and/or plans. May require a careful, even legally defensible, demonstration that the work is consistent with the contract terms.

Baseline Survey and Data. A survey to collect data prior to the start of the intervention. Baseline data are necessary to conduct double difference (or difference-in-difference) analysis, and should be collected from both treatment and control groups.

Benchmark. Reference point or standard against which progress or achievements can be assessed. A benchmark also refers to the performance that has been achieved in the recent past by other comparable organisations, or what can be reasonably inferred to have been achieved in similar circumstances.

Bias. The extent to which the estimate of impact differs from the true value as result of problems in the evaluation or sample design (i.e. not due to sampling error).

Comparison Group. A group of individuals whose characteristics are similar to those of the treatment groups (or participants) but who do not receive the intervention. Under trial conditions in which the evaluator can ensure that no confounding factors affect the comparison group it is called a control group.

Concurrent M&E. An approach which emphasises close alignment (concurrence) between the processes and outputs of monitoring and evaluation. To all intents and purposes this is coterminous with formative evaluation i.e. primary focus on optimising project results during implementation.

Confidence Level. The level of certainty that the true value of impact (or any other statistical estimate) will be included within a specified range.

Confounding Factors. Variables other than the programme which affect the outcome of interest.

Contamination. When members of the control group are affected by either the intervention (see spill-over effects) or another intervention which also affects the outcome of interest. Contamination is a common problem as there are multiple development interventions in most communities.

Contribution Analysis. An approach to assessing the performance of programmes and projects towards an outcome or outcomes - applicable especially to situations where designing an 'experiment' to test cause and effect is impractical[68]. It focuses on assessing the contribution a programme is making to observed results. Causality is inferred through: establishing that the programme is based on a reasoned theory of change (ToC);

---

67 Based primarily on the following sources: (a) OECD/DAC Glossary of Key Terms in Evaluation and Results-Based Management. Paris 2002; (b) Bamberger, M., Rugh, J., and Mabry, L. 2006. *Real World Evaluation. Working under Budget, Time, Data and Political Constraints*. Sage; and (c) 3ie .2011. 3ie Impact Evaluation Glossary. International Initiative for Impact Evaluation: New Delhi, India. http://www.3ieimpact.org/userfiles/doc/Impact%20 Evaluation%20Glossary%20-%20May%202011.pdf

68 Mayne, J., 2008. "Contribution Analysis: An Approach to exploring Cause and Effect". ILAC Brief No. 16. Rome, Italy: Institutional Learning and Change (ILAC) Initiative.

validating the plausibility of assumptions behind why the programme is expected to work; verifying the ToC from the evidence; and analysing and taking into account other factors that may also influence the outcomes.

Control Group. A special case of the comparison group, in which the evaluator can control the environment and so limit confounding factors.

Counterfactual. The value of the outcome for the treatment group in the absence of the intervention.

Difference-in-difference. (also known as double difference) The difference in the change in the outcome observed in the treatment group compared to the change observed in the control group; or, equivalently, the change in the difference in the outcome between treatment and control. Double differencing removes selection bias resulting from time-invariant unobservables.

Evaluation. The systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability.

Experimental Evaluation Design. A research design (also known as randomised controlled trials) in which subjects are randomly assigned to the experimental (treatment) group and the control (non-treatment) group. Both groups are measured (tested) through a survey or other instrument before the experiment begins. The treatment is then applied to the experimental group but not the control group. The conditions of the two groups are carefully regulated during the period of the experiment to eliminate any external factors that might influence outcomes. The test or survey is then administered again to the two groups. Any significant difference to the change in the mean value of the outcome variable between the experimental and control groups is then interpreted as initial indication of treatment effect.

Focus Group Discussions (FGDs). It is a method used to obtain in-depth qualitative information on perceptions and ideas from a group of people, usually numbering no more than around ten people, who have something in common or who are from similar background. Homogeneous groups are preferred because mixing age and gender groups may inhibit some people, especially women or the youth, from expressing their views in front of others.

Formative Evaluation. (See also concurrent M&E) An evaluation intended to help improve implementation and optimise outcomes of an on-going project. It is sometimes referred to as developmental evaluation – to make sure the project or programme is well formed and well-developed. It does this by drawing on different information collection methods such as surveys, focus group discussions and information from monitoring and the MIS.

Impact. Positive and negative long-term effects on identifiable population groups produced by a development intervention, directly or indirectly, intended or unintended. These effects can be economic, socio-cultural, institutional, environmental, technological or of other types.

Impact Evaluation. In a narrow sense, this is the study of the attribution of changes in the outcome to the intervention. More broadly, it includes analysing why and how impacts occur. This involves examining the logical links between observed project interventions and observed impact. The focus shifts to contribution rather than attribution, with reference to the Theory of Change (ToC).

Informatics. It is the science of information, the practice of information processing, and the engineering of information systems. Informatics studies the structure, algorithms, behaviour, and interactions of natural and artificial systems that store, process, access and communicate information. It also develops its own conceptual and theoretical foundations and utilizes foundations developed in other fields.

Intervention Logic. A systematic and reasoned description of the casual links between a project's activities, outputs, immediate and end outcomes. It starts with a clear definition of an outcome and uses logic and evidence to link outcome goals to outputs. This helps select interventions that are most likely to be effective and identify the key results that can be monitored to show interventions work.

Logical Framework (Logframe). Management tool used to improve the design of interventions, most often at the project level. It involves identifying strategic elements (inputs, outputs, outcomes and impact) and their causal relationships, indicators, and the assumptions and risks that may influence success and failure. It thus facilitates planning, execution and evaluation of a development intervention.

Matching. A method utilized to create control groups, in which groups or individuals are matched to those in the treatment group based on characteristics felt to be relevant to the outcome(s) of the intervention.

Management Information System. Different people may have different perceptions of what a MIS is. What it is not is just a computerised system for processing data. The following are two of the more useful definitions in the literature:

"It is a system using formalised procedures to provide management at all levels in all its functions with appropriate information, based on data from both internal and external sources, to enable them to make timely and effective decisions for planning, directing and controlling the activities for which they are responsible"[69].

"A computer-based system that provides managers with the tools for organizing, evaluating and efficiently running their departments. In order to provide past, present and prediction information, an MIS can include software that helps in decision making, data resources such as databases, the hardware resources of a system, decision support systems, people management and project management applications, and any computerised processes that enable the department to run efficiently". http://www.webopedia.com/TERM/M/MIS.html

Monitoring. A continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an on-going development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds.

Optical Mark Recognition. A process to capture human-marked data from document forms such as surveys and tests for computerised storage and analysis. Requires using a dedicated scanner and specially printed forms for data capture.

Outcome. The intended or achieved short-term and medium-term effects of an intervention's outputs, usually requiring the collective effort of partners. They represent changes in behaviour of a target group or institution, system performance, or development conditions which occur between the completion of outputs and the achievement of impact.

Outputs. The products, goods, and services which result from the completion of activities within a development intervention. They include deliverables relating to operational change, such as improved facilities, skills and abilities. They are results over which project managements normally have a high degree of control.

Pipeline Approach. An impact evaluation design in which the control group are those who have not yet received the intervention, but who are scheduled to do so. The assumption is that there will be no selection bias, since both treatment and control groups are to receive the interventions. However, the quality of the matching should be checked, since later participants could differ from those treated earlier.

---

69 T. Lucey. 2005. *Management Information Systems*. 9th ed. Thompson Learning.

Processes. A set of end-to-end activities that together create value. Also refers to a series of related activities aimed at achieving a set of objectives in a measurable, usually repeatable manner. In the context of a project, processes encapsulate the way in which activities transform inputs into outputs, and how various internal or external factors facilitate or inhibit realisation of desired outcomes.

Process Monitoring. This has its roots in 'process documentation' a field based research methodology first used in the Philippines in the 1970s. It involves understanding and tracking processes linking inputs to outputs and outcomes that are important for project success. Application varies amongst practitioners, but main ingredients include: (a) a flexible and adaptive approach concerning what is to be monitored; (b) quantitative and qualitative indicators are examined, with the main focus on qualitative indicators; (c) looks at how broader socio-economic context of the project could affect outcomes; and (d) identifies reasons for problems. It differs from progress monitoring, which is primarily concerned with inputs and outputs.

Propensity Score Matching (PSM). A matching procedure, based on predicted probabilities, to select comparable samples with similar characteristics as the project group. The propensity score is the probability of participating in the intervention based on observed characteristics. These characteristics must not be affected by the intervention. PSM allows matching on multiple characteristics, by summarizing these characteristics in a single score.

Quasi-Experimental Design (QED). A set of quantitative evaluation designs used to determine impact where randomised assignment of subjects to experimental conditions is not possible i.e. when an evaluator does not have control over who receives an intervention. The most robust designs are where it is possible to undertake longitudinal surveys spanning pre-, during, post- and ex-post stages of project implementation, covering project

and comparison groups. The least robust are those without comparison groups and/or where pre-project i.e. baseline observations are not carried out. QEDs include propensity score matching (see above) and regression-based methods to control for selection bias and other confounding factors through the use of specialised statistical procedures.

Relational Database. A relational database matches data by using common characteristics found within the data set. It stores data in separate tables instead of placing all data in one large table. The tables contain data fitted into predefined categories. Each table (also called a relation) contains one or more data categories in columns e.g. member's name, sex, location. Another table would describe a transaction or operation e.g. type of loan provided, member's name, purpose of the loan, size of loan, date etc. The user of the databases could for instance report on loan disbursement according to location, gender, purpose and period during the year. The software used is called a relational database management system (RDBMS).

Results Based Management (RBM). A management strategy by which an organization ensures that its processes, products and services contribute to the achievement of desired results (outputs, outcomes and impacts). RBM rests on clearly defined accountability for results, and requires monitoring and self-assessment of progress towards results, and reporting on performance.

Results Framework. The logic that explains how results are to be achieved, including causal relationships and underlying assumptions. The results framework is the application of the logframe approach at a more strategic level, across an entire organisation, for a country programme, a programme component within a country programme, or a project.

Sampling Frame. The complete list of the population of interest in the study. This is not necessarily the complete population of the country or area being studied, but is restricted

to the eligible population, e.g. families with children under five, or female -headed households. If a recent sampling frame is not available then one needs to be constructed through a field-based listing.

Semi-structured Interviews (SSI). This forms part of the PRA (participatory rural/relaxed appraisal) toolkit. It is conducted with a fairly open framework which allows for focused, conversational, two-way communication. It can be used both to give and receive information. Unlike the questionnaire framework, where detailed questions are formulating ahead of time, the SSI starts with more general questions based on an initial checklist of topics to guide the discussion. This allows flexibility in the conversation, probing of particular issues, and inclusion of new issues to be explored as they arise.

Spillover Effects. When the intervention has an impact (either positive or negative) on units not in the treatment group. Ignoring spillover effects results in a biased impact estimate. If there are spillover effects then the group of beneficiaries is larger than the group of participants. When the spillover affects members of the control group, this is a special case of contagion (contamination).

Summative Evaluation. An evaluation conducted to determine the quality, merit, worth, or shortcomings of a programme. It contrasts with formative evaluation, which is intended to provide information to help improve a programme during its implementation.

Theory of Change (ToC). This is basically about how and why an initiative works[70]. It hinges on defining all of the necessary and sufficient preconditions required to bring about a given long-term outcome. This involves laying out the sequence of outcomes that are expected to occur as a result of an intervention, and planning an evaluation

strategy around tracking whether and why expected outcomes are actually produced. It makes explicit both the outcomes of an initiative (early, intermediate, and longer term) and the action strategies that will lead to their achievement. The ToC should be plausible (if we do these things we will get the results we expect), doable, testable, and meaningful i.e. stakeholders see the outcomes as important and the magnitude of change in these outcomes being pursued as worth the effort.

Transaction-based Approach. An information system based on capturing and processing information as and when the transaction or operation occurs e.g. attendance of CBO members in a training activity. If names of members and basic details like location, gender and caste/wealth ranking are already in the MIS database, data captured from the training attendance record sheet can readily be used to produce a training report with breakdown by area, gender and social category. The same applies to participation in microfinance and income generation activities. In general, the transaction processing system should be able to collect, store and process data to support various management information needs.

Transect Walk. During a PRA, a transect walk is taken jointly by the facilitator and participants through the area of interest (e.g. hamlets, forests, cropland) to observe and learn about the location and distribution of resources, features, landscape, main land uses, and production or natural resource management issues along a given transect. The information gathered is documented as a diagram or map which is then used to promote further discussion of topics identified during the walk. Triangulating the observations with information from other sources e.g. semi-structured interviews and discussion with key informants helps improve understanding of such issues as resource degradation and agricultural production constraints.

---

70 Weiss, C. H. 1995. "Nothing as Practical as Good Theory: Exploring Theory-based Evaluation for Comprehensive Community Initiatives for Children and Families." in J. P. Connell, A. C. Kubisch, L.B. Schorr, & C. H. Weiss (eds.), *New Approaches to Evaluating Community Initiatives: Concepts, Methods, and Contexts* (pp. 65–92). Washington, DC: The Aspen Institute.

I2883E/1/11.12