



Good Practice Note No. 2

Project Management Processes

Part of a series of notes, developed with an internal control perspective, to help Centers and their internal auditors review their own internal management processes from the point of view of managing risks and promoting value for money, and to identify where improvement efforts could be focused

SUMMARY

This note focuses on the processes for managing research activities undertaken in support of projects in CGIAR Centers' medium-term plans. Terminology varies between CGIAR Centers, but for convenience, these research activities are referred to as (small "p") "projects" in these notes.

Management processes that govern project activities should support the following objectives:

- relevance and impact
- quality
- timeliness
- efficiency
- result dissemination
- further resource mobilization

This note attempts to capture, in the form of good practices, general principles of project activity management to support the achievement of these objectives. These are drawn from project management theory and good practices in the scientific research sector, including from within the CGIAR system.

Some of the good practices documented in this note are already being implemented in most, if not all, Centers, some are goals of Centers but are not yet implemented, and some may provide new ideas for Centers working on improving their project management processes.

It is also hoped that this note will stimulate discussion within the CGIAR System about the utility of and format for harmonizing project management practices and systems among Centers.

This note represents a "mile wide inch deep" analysis of project management issues. This is the first edition and it is hoped that, with feedback from Centers and some experience with its use as an



assessment tool and good practice reference, it can be improved. Also, some aspects of project management identified in this note are or could well become the subject of more focused individual good practice notes in future.

This note discusses the following good practices:

PROJECT MANAGEMENT POLICIES AND PROCEDURES

- Develop and communicate formal project management policies and procedures encompassing all key aspects of managing research project activities

PROJECT INITIATION AND PLANNING

- Start project planning with a brief concept note subject to internal review before significant investment is made in project design
- Develop a set of concept notes for discussion with donor funding agencies
- Hold open concept note and proposal reviews
- Use the Center intranet to provide proposal development tools to project leaders and teams
- Require that more detailed project proposals should address strategies to achieve impact, including communication strategies
- Adopt a risk-based approach to assessing, during project planning, the capacity of research partners to deliver technical and financial requirements
- Establish documented agreements as early as possible in the project cycle with partners
- Include in internal project plans an assessment of project delivery risks and plans for treatment of these risks

PROJECT FUNDING

- Coordinate within the Center the sending of formal proposals to donors and establish well-defined responsibilities for donor negotiation and finalization
- Issue project budgeting guidelines to assist with proposal preparation
- Provide automated budget preparation templates
- Involve finance and intellectual property professionals in the preparation or review of project proposals before submission
- Establish a formal process to approve projects and make funds available for implementation



PROJECT IMPLEMENTATION

- Formally assign project leadership and ensure that project leader responsibilities and accountabilities are well defined
- Align authority and accountability for project expenditures
- Develop detailed work plans for each project
- Synchronize project reporting with the Center level program planning and reporting cycle
- Coordinate within the Center the contracting for research partnership
- Develop tools to enable project leaders/teams to systematically monitor the status of research partners' technical and financial reports
- Develop consistent approaches reviewing and assessing research partners' reports
- Provide on-line access, in friendly formats, for project leaders/teams to monitor the status of expenditures and commitments against project budgets
- Establish guidance for reviewing and approving significant project changes
- Establish guidance for scientific data management that provides for safeguard from loss, protection of Center intellectual property, access to secondary analysis or other appropriate research, and quality assurance
- Establish scientific data quality assurance procedures appropriate for the type of research being conducted
- Establish research publication procedures
- Develop tools to enable project leaders/teams to manage donor-reporting requirements

PROJECT COMPLETION AND EVALUATION

- Identify in project planning documents the basis and means by which the project will be evaluated
- Develop mechanisms to assist researchers take into account project evaluation lessons

PROJECT MANAGEMENT INFORMATION

- Establish a single referencing system for projects to support an integrated project database
- Develop an integrated information system for collecting, tracking, processing, and disseminating project management information within the organization



- Digitize all key project documents and correspondence

PERFORMANCE ASSESSMENT

- Align research staff performance appraisal criteria with agreed research success factors

Acknowledgment

This note has been prepared solely for use by CGIAR Centers and their internal auditors. The note draws on lessons drawn from the results of audits and other reviews carried out in a number of the Centers. We particularly thank the staff of CIFOR, CIMMYT, IRRI, IPGRI, ISNAR, IWMI and WorldFish, who have assisted in information gathering for and review of this version of the note





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INTRODUCTION

Scientific research represents the core business of CGIAR Centers. It includes biophysical experimentation, surveys, analytical studies, and the design and implementation of databases and knowledge management systems. The research can have a wide range of objectives, such as improving crops and farming technologies, identifying constraints to adoption of new technologies, analyzing options faced by policymakers, and developing or evaluating capacity-building activities.

Research activities will usually be undertaken to support the research priorities as expressed in Center medium-term plans (MTPs). Centers will have a portfolio of MTP Projects (often referred to as “macro projects”) or Programs. Each MTP Project or Program will provide an umbrella for a wide variety of “small p” projects, which may be further broken down into subprojects, activities or tasks. The terminology for projects and smaller component units differs between Centers.

This note focuses on the management processes for controlling these “small p” projects. Their defining characteristics are:

- Definite time span
- Overall objective(s) to be achieved in this time span
- Methodology (research protocol)
- Defined inputs (resource requirements)
- Defined results/outputs which can be measured to verify achievement of objectives

Sometimes a project will be defined according to the work eligible to be funded under a restricted donor grant. On the other hand, one project might have two or more funding sources—so it is managed as a single unit of work but each source of funds may have different eligibility and reporting requirements to be managed.

Project management processes within Centers should support the following objectives commonly cited by the Centers:

- relevance and impact
- quality
- timeliness



- efficiency
- result dissemination
- further resource mobilization

Focusing as they do on the core business, project management processes constitute an important part of the overall internal control system of a Center.

Centers may have specific requirements or characteristics as far as project management is concerned. However, one can discern certain general principles, drawn from project management theory and good practices in the scientific research sector, including from within the CGIAR system. This note attempts to capture these principles in succinct form, as good practices, to provide a benchmarking tool.

A risk management perspective

Project management risks are essentially those things that would prevent achievement of project management objectives. Some key generic risks are:

- Efforts will be misdirected to work of low relevance and impact to the Center's strategic priorities
- Research will not meet quality standards
- Major overruns of time and cost budgets, with adverse effects on resources for other projects
- Significantly more resources spent on activities than actually needed
- Results not disseminated where they may have the most impact

The trend in thinking about management controls among control professionals is to

- apply a risk management approach to determining the extent of prescriptive procedural requirements, while
- ensuring that the control environment—in particular the staff incentives to appropriately manage risks using good judgment, tailored to the business activity—is appropriate.

Such an approach is as applicable to project management as other Center activities, and will place emphasis on

- establishing principles,
- empowering staff to make, within these principles, resource decisions commensurate with their management responsibilities and accountabilities, and
- Monitoring and recognizing performance.



Incentives

A theme running through this note is that, applied together, the good practices should promote an environment of incentives to project leaders and teams to deliver work that:

- attracts resources,
- meets the high quality standards expected of a CGIAR Center,
- is timely and efficient,
- has well-disseminated results, and
- has impact on relevant problems.

In such an environment, the procedural aspects of project management can be viewed not so much as a burden (or an imposed bundle of carrots and sticks) for project leaders and teams, but rather as a supportive framework that will help them achieve success.

The project life cycle

Project management is facilitated by looking at projects in terms of a life cycle-breaking the project into several phases to improve management control and quality. Project phases are marked by completion of one or more deliverables, and, based on these, decisions are made to continue the project into the next phase, and quality, cost, or other problems can be detected and addressed in a timely manner.

Admittedly, this can be a simplistic format, applying a linear model to scientific research, which may actually be more complex in terms of sequence and which can be participatory at all stages. However, the life cycle model is generally helpful for management purposes

This good practice note has adopted, for analytical purposes, the following set of phases drawn from practice within CGIAR Centers:

- Initiation and planning
- Funding
- Implementation
- Completion and evaluation

In addition to considering the good practices associated with these project phases, this note also considers good practices related to management information systems and performance assessment, and notes recent efforts related to developing quality management systems to ISO standards.



PROJECT MANAGEMENT POLICIES AND PROCEDURES

Good practice

Develop and communicate formal project management policies and procedures encompassing all key aspects of project management

Controlling project expenditure and quality begins with an effective project management policy. IPGRI, IWMI and WorldFish Center are currently active in developing or updating their documented project management policies and procedures.

To be effective, the policy must

- Have the total support and commitment of management.

Policy or procedure documents should indicate management support, including the support of program or “macro project” leaders. Issue of the project management policy by the Director General will also send a clear signal in this regard.

- Adequately clarify the required procedures and documentation for all phases of a project.

This is important to ensure that the policy clarifies accountabilities and establishes appropriate quality benchmarks. For Centers that wish to pursue ISO 9001:2000 conformance or certification, this is a necessary element of any quality management system. Box 1 provides a list of potential topics that can be covered in a suite of policies and procedures. In general, policies and procedures that have been prepared with considerable staff inputs will be more likely to be comprehensive as well as practical to implement.

- Contain clear statements of principle.

Clear statements of principle, which are supplemented by documentation of procedures, allow staff to fall back to the principle when a situation arises that is not contemplated by the detailed procedures.

- Remain current and reflect the terms and conditions and the expectations of donors who are providing restricted and unrestricted project funding.

Project management policies should be reviewed periodically to detect whether any changes in the types of projects being undertaken, or requirements and expectations of donors, have an impact on the current policy.

- Be adequately made available to staff



On-line access to project management policies and procedures by staff through an intranet is the most desirable approach. Electronic storage facilitates changes and timely advice of these changes. Publishing policy and procedures on an intranet also allows for the use of hypertext links to enable staff to quickly find particular detailed information. The use of graphical devices such as flow charts and having as much of the documentation as possible in native HTML format to avoid the need to call up other applications, helps keep intranet documents readable and quick to access electronically. IWMI's web-based Quality Manual, which has focused initially on the research project management cycle, is a good example of this approach put into action.

Box 1. Project Management Policy and Procedure Checklist

- Board of Trustee guidelines
- Project definition
- Overall project cycle
- Linkage to Program/Center/CGIAR priorities
- Projects vs. grants
- Logical framework
- Staff responsibilities and accountabilities
 - Research staff
 - Program assistants
 - Project leaders
 - Program leaders
 - -Project proposals and funding requests
 - Use of research partners/collaborators
 - Impact plans
 - Dissemination plans
 - Budgets
 - Requirements for ethical issues review
 - Restricted vs. unrestricted funding criteria
 - Donor submission coordination
 - Rejected proposals



- Project implementation
 - Quality control
 - Project changes
 - Contracting with and monitoring of research partners/collaborators
 - Facility requests
 - Budget monitoring / project financial management information systems
 - Project filing
- Project management information systems/
- Project reporting
 - Frequency
 - Completion reports
 - Formats
- Research data management
- Forward planning for follow-on projects
- Project evaluation
- Linkage of project results to performance management systems
- Linkage to CCERS
- Special requirements for outreach sites

Point to consider: Is there scope for the development of a common project management approach for all CGIAR Centers?

At this time, each Center has its own project management policies, procedures, and systems. The pros and cons of harmonizing these among Centers need further exploration. Reasons for a more harmonized approach may be beneficial to all Centers include

- Reducing the burden on any particular Center in reviewing and updating project management policies.
- Saving efforts in developing multiple project information systems and developing a critical mass of users to help fund an ongoing support function for system maintenance and help desk.
- Providing an ongoing mechanism for capturing the variety of good practices that can be found in Centers, and drawing on the experience of some Centers in training of NARS in project management methods.



Point to consider: What are the virtues of taking an incremental approach to strengthening or updating project management policies, procedures, and systems?

One point stressed by scientists consulted during the preparation of this note is the need—when considering initiatives to develop, strengthen, or update project management policies, procedures, and systems—to be realistic in how quickly this can be done.

Incremental steps, focusing on particular important aspects of project management, or starting with modest requirements that may lead to more sophisticated or rigorous requirements later, should be considered. Scientists have cited past over-ambitious or “big bang” initiatives that have failed to take root, and suggest that an evolutionary approach—starting with a few basics then building on them when they are well established—is more likely to lead to successful implementation of any project management improvement initiative.

This note is an invitation to think about the scope for improvement in project management in the Centers, but it should not be interpreted, by its broad coverage of areas, as advocating that all areas for improvement must be dealt with together and immediately.

PROJECT INITIATION AND PLANNING

This phase of a project concerns

- initiating the planning processes;
- identification of the need for the project;
- identification of scope and deliverables;
- linkage with the agreed research priorities of the Center;
- definition of sub-projects or activities and their duration and sequencing;
- site identification and resource estimation (including staff, equipment, facilities, travel, consultant services);
- identification of research partners/collaborators; and
- risk analysis and proposed mitigation measures.

Good practice

Start project with a brief concept note subject to internal review before significant investment is made in project design



A standard requirement for the preparation of a concept note, as part of the planning process for new projects, helps build in quality at an early stage of a new project. Preparing a concept note helps sharpen ideas and clarify the need for the proposed project. Subjecting a concept note to a review before proceeding to detailed development can be an important quality assurance element, helping to ensure that significant resources are committed only to projects considered to have high relevance and potential impact.

Concept notes can be the outline of a more substantial project plan or proposal, which fleshes out the proposed research methodologies, sites, program of experiments, research partners/ collaborators, staffing and other resource requirements, roles and responsibilities of project staff, schedules, quality arrangements, and deliverables.

This planning approach is recommended for unrestricted as well as restricted funded projects.

Good practice

Develop a set of brief concept notes for discussion with donor funding agencies

Box 2. Elements of a comprehensive concept note

- Outline of the research problem: why it is important, and expected impact of the research
- Stakeholder interest in the research problem
- Past work to address the problem (summary literature survey)
- Research hypothesis/ proposition/ questions
- Links to other research projects
- Proposed methodologies (including data sources, tools, analytical approaches)
- Skeleton logframe (purpose, activities, outputs, inputs, indicators and assumptions)

Adapted from a guideline prepared by IWMI staff

Concept notes may play a very useful role in resource mobilization by alerting donors in a “friendly” format to areas where Center research could support their programs. They can also be a tool for packaging unrestricted funded research activities into projects that may attract restricted funding as part of a financing strategy to help the Center cope with a dwindling proportion of unrestricted funding.

To be effective, the concept notes should be short, have an attention-capturing headline that allows a donor to readily ascertain the problem area being addressed, and summarize the problem area, proposed objectives, activities, outputs, and expected impacts. In recognition of the development focus of many



donor agencies, concept notes should, as much as possible, show linkages of the proposed research to development problems.

In this regard, capacity building and extension-related work that is currently funded from unrestricted sources should be considered a priority area for developing such concept notes.

Good practice

Hold open concept note and proposal reviews

A culture of friendly and constructive critiquing of work encourages staff (and stakeholders, including potential partners and beneficiaries of the research) to share ideas and is an important ingredient for successful systems of peer review and quality control. Centers should consider taking advantage of such a culture to promote open concept note and proposal reviews, so that broad inputs can be obtained.

Aside from the greater potential for identifying improvements in the design stage, an open review has the advantage of ensuring that research staffs are aware of everyone's project development ideas to avoid the risk of efforts being unwittingly duplicated because of lack of information.

One open review format which Centers might consider is:

- circulation of draft documents or presentation on the intranet, inviting comment;
- a chaired presentation involving the author, their supervisor, staff responsible for donor communications and relations, interested researchers from different disciplines and possibly external stakeholders, including potential partners and beneficiaries of the research.
- discussion of the concept note at the presentation (see Box 3), including of any input provided prior to the presentation via email, especially from researchers and stakeholders based in other locations who cannot attend the presentation, and
- communication of outcomes of the review.



Box 3 - Features of a concept or proposal review

- The discussion of the concept note or proposal has four parts:
- Substance—scientific value, methodology, etc.
- Scope—size of the project, staffing, partners, etc.
- Budget—is the budget adequate? Greedy? Realistic?
- Presentation—How well is the concept note or proposal written? Will it attract a donor?

Extracted from ISNAR training materials for a course: “How to Write a Convincing Proposal”. This course provides detailed information and suggestions for concept note/proposal preparation and review, and has been delivered in some Centers.

Good practice

Use the Center Intranet to provide proposal development tools to protect leaders and teams

Center intranets can be effective vehicles for providing easily updateable access by research staff to such tools as

- Donor guidelines and templates for proposals
- Center guidelines and templates for proposals
- Logical framework reference material
- Information on such items as donor policies, areas of interest, new developments in funding agency focus, umbrella agreements with the Center. In addition to providing summaries or links to donor websites, trip reports to donor agencies are made available in the intranet by some Centers to provide current information in this area.
- Databases of completed or draft proposals

IRRI has done a lot of work in developing web-based access for staff to this type of information.

Some donors require specific proposal formats to be followed. However, the advantage of developing Center templates for use whenever possible—even covering details like the layout of cover sheets and use of logos—is that they help ensure the documents meet consistent presentational specifications, as well as content coverage, so as to establish a “brand” that donors can recognize and come to identify as signifying a quality product. A number of Centers reviewed have produced comprehensive templates and guidelines for staff in this area.



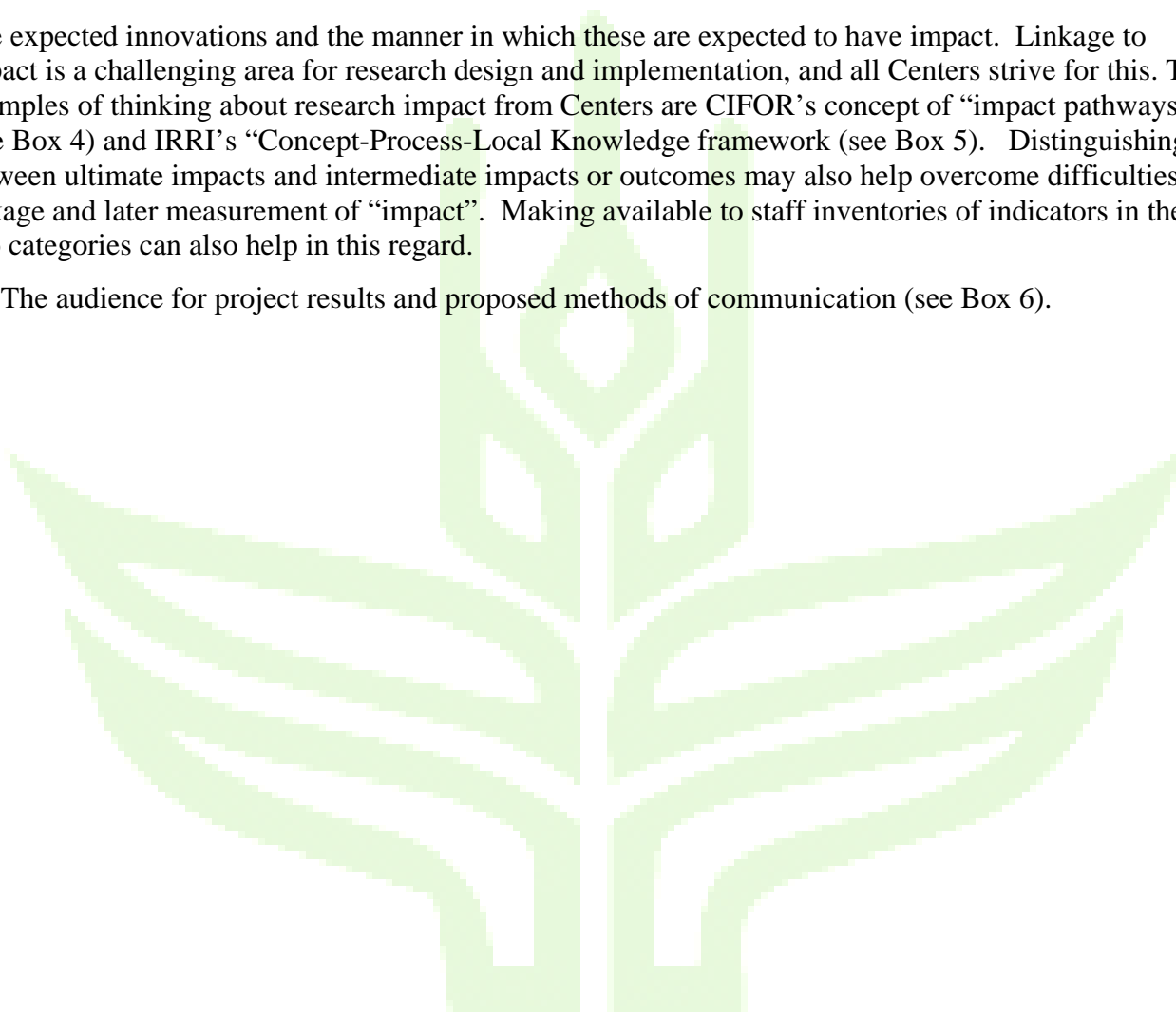
Good practice

Require that more detailed project proposals should address strategies to achieve impact, including communication strategies

A key incentive for research staff to develop projects that have impact, aided by appropriate dissemination of project results, is to require detailed project proposals to address

The expected innovations and the manner in which these are expected to have impact. Linkage to impact is a challenging area for research design and implementation, and all Centers strive for this. Two examples of thinking about research impact from Centers are CIFOR's concept of "impact pathways" (see Box 4) and IRRI's "Concept-Process-Local Knowledge framework (see Box 5). Distinguishing between ultimate impacts and intermediate impacts or outcomes may also help overcome difficulties of linkage and later measurement of "impact". Making available to staff inventories of indicators in the two categories can also help in this regard.

- The audience for project results and proposed methods of communication (see Box 6).

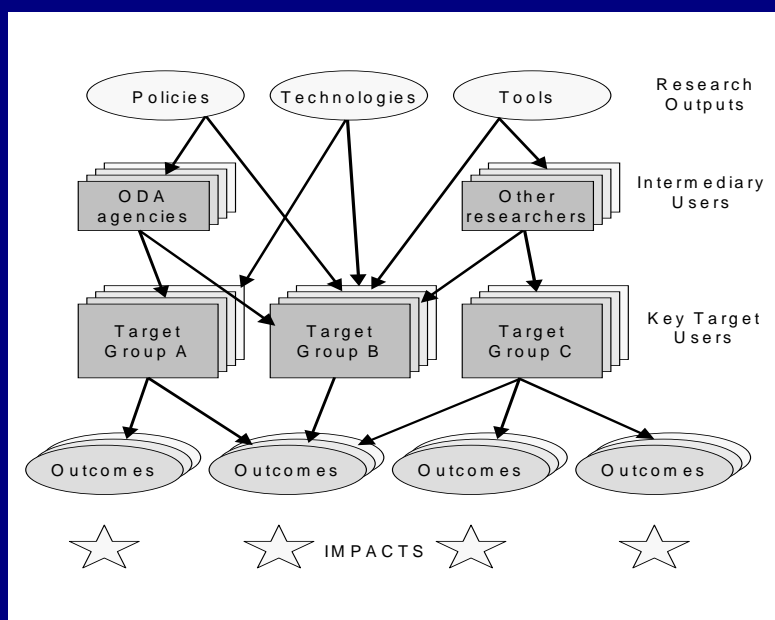




Box 4. CIFOR's concept of impact pathways

An impact can be defined as a significant or major effect that provides direct benefits as a result of innovations stemming from research. Such effects consist of two mutually dependent components. The first component is solving problems of a high potential impact. This is a necessary, though not sufficient, condition for the second component, which is getting research solutions into practice.

The influence and impact of research can be understood through the concept of 'impact pathways' [see figure below].



Just as there must be a coherent plan for the production of research outputs, so must there be a plan for delivery of these outputs to the specified target groups in a manner that maximizes the potential for impact.

In response to this need, CIFOR has adopted and is actively promoting the concept of impact pathways, and highlighting the need to optimize research efforts across the range of possible pathways.

- Passive dissemination of information is generally an ineffective strategy.
- The best practice for disseminating innovations and promoting effective diffusion is well known but seldom implemented by research institutions.
- Applied and strategic research institutions must reward success in uptake and adoption, and not just count publications.

Further research on the relative effectiveness and efficiency of different dissemination and uptake strategies is required. Such research must be built into the research process.

Extracts from a paper by Dr. Michael Spilsbury, CIFOR, "From Research to Impact – and the Tricky Part in Between" in "Proceedings of the Expert Consultation on Communication Between Forestry Researchers and Policy Makers and Stakeholders, May 8-9, 2001, Chiang Mai, Thailand", FORSPA, December 2001.



Box 5. IRRI’s “concept-process-local knowledge” framework

Research requires relevance—it must meet the needs of the target group being not only beneficial but also perceived to be beneficial. Thus, farmers’ perceptions and incentives need to be integral parts of a research agenda. Too often, basic disciplinary theory dominates practical application. The “Content-Process-Local Knowledge” framework provides a robust model for ensuring both relevance and efficiency in research and delivery.

The figure [below] highlights the need for interaction but also indicates that there should be opportunities for independent action.



When applied, based on the following table, this simple model clearly demonstrates to collaborators within a system what their roles are and how they can function together to increase the efficiency of their research and delivery system. It helps clearly identify which areas need to be done together, which areas are lacking, and which areas can be pursued independently. It recognizes that all have a role to play in successful delivery. People are the key to success. By focusing on the process, discussion concentrates on meeting needs. This simple format ensures what can be considered three key points:

1. True opportunities are recognized.
2. Real needs versus interests are pursued.
3. All steps in the delivery process are considered.

Problem	Causes	Options	Content specialist/role	Process players/role	Local knowledge players/role	Modifier/consideration
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Extract from “Project 12: Facilitating Research for Impact” IPMO web page, IRRI Intranet.



Box 6. Communicating results

Carrying out appropriate research is only part of the answer to making an impact. In so far as research requires organization, the same applies to the transmission of research findings to the target audience. If this is not given sufficient attention, the effect may be tantamount to not having done the research at all.

Communication of research findings requires careful attention, preferably when the research is still at the design stage. Both the audience and the method of communication have to be identified at the start of the research project. Sufficient time and money must be allocated for creating and transmitting the message. Research institutions should not hesitate to engage professional communicators to carry out these tasks if the results would justify the expense.

Extracts from a paper by Dr. Nigel Sizer, The Nature Conservancy, "Building a Strategy for Impact, or How You Can Change the World in Ten Simple Steps" in "Proceedings of the Expert Consultation on Communication Between Forestry Researchers and Policy Makers and Stakeholders May 8-9, 2001 Chiang Mai, Thailand", FORSPA, December 2001.

A related issue is the linkage, in planning documents, of research to poverty alleviation, stakeholder participation, and sustainability. The Sustainable Livelihoods Framework, developed by the United Kingdom Department for International Development, may be a useful resource for thinking about these links.

Good practice

Adopt a risk-based approach to assessing, during project planning, research partner capacity to deliver technical and financial requirements

Many CGIAR Center research projects are carried out in collaboration with various research partners. Their activities become essential components of the project. The partnership process can be an important means of ensuring relevance of research and achieving impact through the adoption and use of the findings at policy level. Partners in national agricultural research systems (NARS) and advanced research institutions (ARIs) may bring expertise and technology not available in the Centers. Partnerships with institutions in developing country NARS are also the major means through which Centers address research capacity building.

However, in the case of less well-endowed NARS partners, delays in submission of technical or financial reports from research partners can delay overall project deliverables or cost recovery from donors.

Project teams should devote some attention during project planning, especially in the case where proposed research partners are less well-endowed NARS institutions, to the capacity of proposed



research partners to meet reporting requirements in a timely fashion, commensurate with the size and complexity of the project components to be carried out. For very significant partnerships, involving the transfer to partners of large amounts of resources, the scheduling of a review by financial as well as technical professionals, should be considered, particularly where there the institution involved does not have an established track record with the Center.

The sequence by which potential partners are identified should also be considered: are institutions identified first, and suitable scientific staff sought out later, or should partner institutions be selected after being identified as having suitable scientific staff to collaborate? In some cases, the latter may be an appropriate strategy.

Centers should also consider developing guidelines for partners, particularly those from less well-endowed NARS, on expectations in terms of managing resources, maintaining accounts, and technical/financial reporting.

Good practice

Establish documented agreements as early as possible in the project cycle with partners

Establishing a memorandum of understanding or letter of agreement (Center terminology differs) with partners up front in the project design or implementation phase helps to clarify relationships and roles and functions early on and helps avoid potential misunderstandings or disagreements if problems emerge later in the project cycle.

One area where early clarity is desirable is the requirement on partners in terms of the documentation of project expenses, and this should be aligned with what is required of the Center by the donor(s) who will fund the project.

These agreements should be formally documented.

Good practice

Include project plans an assessment of project risks and plans for treatment of these risks

While an assessment of project risks and plans for treatment of these risks may not be suitable for inclusion in project proposals submitted to potential donors, it is important that an internal assessment be made, as part of project planning. Applying a logical framework approach can facilitate such assessment.

Project risk analysis should encompass not only technical risks but also public awareness issues and civil society concerns



PROJECT FUNDING

This phase of a project concerns

- preparation of funding proposals to donors,
- negotiations with donors on funding, and
- approval and allocation of (restricted and unrestricted) funds to project budgets.

Good practice

Coordinate within the Center the sending of formal proposals to donors and establish well-defined responsibilities for negotiation and finalization

While informal interaction between scientific staff and donor officials on potential projects can be helpful in developing funding opportunities, formal submission of proposals should be centralized and responsibilities for negotiations on behalf of Centers should be clearly defined. This should be well communicated to Center staff. This helps manage the risks of

- proposals being submitted to donors without adequate quality control;
- proposals of lesser priority being submitted to and agreed by donors, at the expense of other projects considered by Center management of being higher priority;
- internal confusion or lack of knowledge within a Center as to donor submissions.

Central coordination of donor submissions also facilitates the maintenance of management information (database) on projects submitted and their status.

Good practice

Issue project budgeting guidelines to assist with proposal preparation

Budget guidelines help ensure that everyone involved in the preparation of a proposal uses the same financial assumptions and that the costs disclosed to donors are consistently identified and calculated.

Budget information in project proposals should adequately capture the full direct costs of proposals (see Box 7). This is vital if full cost recovery is sought, but even where restricted funding donors are not expected to fund the full direct costs, let alone indirect cost (or “overhead”) allocations, the contribution of unrestricted funding to the full costs of a project should be made clear in project proposals. This is important for Centers to make judgments on the acceptable amount of “co-financing” from unrestricted funds, and also for donors who insist on seeing Center “co-financing” included in the budgets.



Other budget-related issues that can be problematic for a Center should also be dealt with in such guidelines:

- Making adequate provision for publication of research results, and/or dissemination through workshops and conferences—which usually would happen after the research activities have ended. The life of a project as budgeted should take into account such time lags
- The need to identify whether project budgets should make provision for evaluation activities after the end of the research activities

Realism in budget preparation for such things as delays in recruitment of staff, consultants or partners, and possible delays in partner execution and reporting

Box 7. Full project costing

The full direct costs of projects should be properly identified in project budget proposals. Costs that research staff may not have traditionally included in budgets, but should in future include

- the costs of Center staff directly involved in the execution of the project,
- costs of Center staff responsible for project management oversight and quality control,
- related costs such as Center staff travel in connection with the project, and
- the cost of use of Center facilities.

References to these costs as “overhead” are misleading, they are costs directly incurred in relation to projects. They are “indirect costs” only in the sense that they are usually portions of shared costs that have to be allocated by an agreed computational method, rather than charged directly in full.

Full direct costing should be applied to restricted projects, even if donors are not prepared to finance all direct costs, so that management can monitor the extent of any subsidy from unrestricted funds, to make judgment as to whether to accept such subsidy when negotiating with the donors, and to report to donors the extent of the subsidy.

A separate Good Practice Note on Project Costing has been prepared.

Good practice

Provide automated budget preparation templates

Automated budget preparation templates, in formats easily understood by non-financial staff, can help project teams efficiently build up budgets based on proposed staff time allocations, collaborator costs, facility usage, travel plans, and other anticipated expenditures. Such tools can be linked with program



and Center-level “scratch pad” or “scenario testing” systems for managing staff allocations and such dimensions as regional or subregional allocations of project costs.

Good practice

Involve finance and intellectual property professionals in the preparation or review of project proposals before submission

Finance professionals in the Centers can play an important contribution in developing project proposal budgets. Intellectual property (IP) professionals can help ensure that IP issues are identified and addressed appropriately at an early stage. Where possible, finance and IP professionals should be included as part of the project preparation team. Otherwise they should have a review and advisory role before the project proposal is finalized.

Good practice

Establish a formal process to approve projects and make funds available for implementation

The process by which project proposals are approved and the related documentation requirements should be clear. In general, staff and other resources should not be utilized on project implementation before approval. In addition to including appropriate information in project management policies and authorization matrices, good practice includes controlling the assignment of, and charging of expenditure and staff time to, new project budget codes in Center accounting and time recording systems.

Two timing issues, which Centers may face occasionally, are

- **Needing to start work before donor formalities are completed:** Where proposals are to be funded by restricted donors and early start of a project is felt essential, Center management may agree to project start before completion of formalities. Center management should weigh the benefits of proceeding against the risks of having to subsequently fund the project from unrestricted funds or other sources. It is important that there is a defined process for making such exceptions.
- **Needing to mobilize consultants quickly, while the contracting paper work follows:** Staff may feel under pressure to have consultants commence work on a project before contracting is complete. Center contracting processes should be made efficient enough to ensure they can be completed quickly, to minimize this pressure. There are risks of contract dispute when requesting consultants to work ahead of contracts, and these should be avoided as much as possible by good project planning. Center policies should prohibit any official travel by consultants without contracts being in place.



PROJECT IMPLEMENTATION

This phase of a project concerns

- Project-executing processes—coordinating people and other resources to carry out project plans
- Project-controlling processes—monitoring and measuring project progress and taking appropriate action on significant variances

Box 8. Project management tools

Depending on the size and complexity of the projects, the following project management tools may be useful to assist a project team:

- Project network diagrams—a schematic display of the logical relationships among, or sequencing of, project activities. There are different methods but the most common is the precedence diagramming method, which underlies much project management software. Project network diagrams support critical path analysis.
- Gantt charts—provide a standard format for displaying project schedule information by listing project activities and corresponding start and finish dates in calendar format. Project management software facilitates preparation of Gantt charts which track actual against planned schedules.

Good practice

Synchronize project reporting with the Center-level program planning and reporting cycle

Project management policies should establish the frequency and format of project progress reporting. This may need to be modified for specific restricted donor requirements. Synchronizing project and Center level program reporting, as well as with preparation of annual Center operating plans, helps minimize the reporting burden on both preparers and reviewers of reports.

Good practice

Coordinate within the Center the contracting for research partnership

Coordination of research partner contracting, accompanied by the development of standard terms and conditions for use in partner contracts, minimizes the risks associated with inconsistent arrangements and lack of important provisions in partner contracts, and facilitates the development of Center management information (database) on the extent and status of research partnerships.



Good practice

Develop tools to enable project leaders/teams to systematically monitor the status of research partners' technical and financial reports

Project leaders/teams should monitor the status of research partnerships responsible for project activities. There should be readily accessible and up-to-date data on

- time elapsed on partnership contracts;
- progress against contract milestones; and
- due dates for technical and financial reports, and status of reports with past due dates.

A central point within the Center should be designated responsibility for maintaining a project partner contract database, ideally integrated with an overall project management system. This database could support useful features such as flagging to project teams imminent reporting due dates and providing reports on overdue reports to aid timely follow-up with partners. The databases can be used to provide summary reports to senior management for monitoring purposes.

A suitably designed partnership database can also provide the Center with management information useful for such analysis as the proportion and budget transfers involved of partnerships in developed and developing countries; the geographic spread by region, country, theme or crop; by type of research activity; and trends in this regard.

The Center's finance function, if suitably staffed, could also assist project leaders/teams with the review of financial reports from partners, particularly those that are complex or indicate financial problems.

Good practice

Develop consistent approaches to reviewing and assessing research partners' reports

Some researchers have found it useful to develop standard formats by which they record assessments of partner reports (Box 9 summarizes some common points found in formats and checklists provided to the Internal Auditing Unit). Centers should consider promoting such formats to assist new project leaders and ensure consistency of approach to partnership evaluations



Box 9. Points to consider in the review of research partner progress reports

- Matching with partnership agreement requirements (timeliness, content)
- Progress achieved against milestones, reasons for nonachievement
- Results obtained and outputs produced
- Suggested adjustments to project approach
- Impact on project schedule and budget, and implications for donor agreements
- Impact on project budget

Good practice

Provide on-line access in friendly formats for project leaders/teams to monitor the status of expenditures and commitments against project budgets

Consistent with the idea of aligning authority and accountability, project leaders/teams should be able to readily monitor the budget status of their projects. Budget reports should include both actual expenses and commitments (those with contracts or purchase orders issued). This will be most efficient if there is a project management information system that is linked to financial systems.

Project teams may also want such data to include anticipated (but not yet contracted) commitments, to aid project teams in determining a full picture of funds availability. Providing this via financial systems provides a dilemma for the Center's accounting professionals, as anticipated expenditure does not usually meet accounting tests for recognition within the official accounts. It can be difficult to objectively determine the amounts or the certainty of such anticipated expenditures. Nonetheless there is clearly value in having such information available. Alternatives to including this data in the financial systems, where these systems do not allow for separate tracking of such data, are to

- Develop “scratch pad” features in the project management information system, where project teams themselves can record anticipated expenditures and refer to this when estimating fund availability; or
- Schedule regular meetings or ongoing interaction between project staff and Center finance professionals to discuss fund availability on the projects, as indicated in financial systems plus anticipated expenditures identified by project teams.

Good practice

Establish guidance for reviewing and approving significant project changes



Project changes should be anticipated in project management procedures. Significant changes in scope, outputs, timing or resources should be subject to review and approval, and appropriately documented in project files.

In the case of restricted funded projects, procedures should ensure that provisions of donor agreements are applied—in some cases changes might require pre-approval from donors.

Good practice

Establish guidance for scientific data management that provides for safeguard from loss, protection of Center intellectual property, access to secondary analysis or other appropriate research, and quality assurance

Scientific data can be held in many different forms e.g., laboratory and field site notebooks, measurement equipment records, survey notes and completed questionnaires, literature surveys, and project reports. Scientific data management is critical to ensuring that research data are adequately captured and archived so that it is readily retrievable even after the responsible research staff has left the organization.

Data management procedures should form part of research project management procedures and should cover

- Responsibilities of individual researchers—ensuring that research data requirements are clearly communicated to new research staff, and handover of original data is dealt with in exit procedures for departing research staff
- The role of research unit/program leaders in actively helping to implement standard Center data archiving requirements
- Ownership issues—particularly where research data within the project are generated by partners or with proprietary (third party) technologies or processes
- The acceptable formats for recording data—physical and electronic
- The registration and filing of physical records
- Archiving and access of data held in electronic form and links to research meta-databases
- Application of international or other extra-Center data definition standards
- Any differences in requirements for raw vs. analyzed data



The issue of data management becomes more important as researcher mobility increases. CIMMYT has instituted a formal exit interview procedure that aims to specifically address the issue of unpublished data and information when researchers retire or leave.

Good practice

Establish scientific data quality assurance procedures appropriate for the type of research being conducted

Data quality is linked closely with data management. Data quality systems can be expensive to maintain and are often not explicitly budgeted. Centers should consider, where relevant

- Ensuring, before implementing an ambitious set of data quality requirements, whether there is first an adequate information system to catalog experiments or other research activities generating data. This should be ideally linked to a higher level project management database
- As a minimum, including pointers in experiment databases, to where filed/archived research data can be found
- Harmonizing laboratory notebook requirements
- Establishing methodological standards for statistical analysis
- Incorporating in data quality standards the requirements, if any, of research publications which require, with the submission of journal articles, the provision of links to research data for peer reviewers
- Identifying requirements with regard to scientific instrument calibration

Good practice

Establish risk-based research publication procedures

Timely publication of research results promotes project impact. Centers should clarify procedures for internal and/or external peer review or other quality control procedures relating to publication.

Given the potentially time-intensive nature of an internal publications review process, a heavy approach to publication review may lead to unacceptable backlogs in publication or lessening of quality of the reviews. In determining the review process, Centers should consider applying a risk-based approach, with review requirements varied, depending on the type of publication and extent of its audience.

Where possible, review requirements should be streamlined e.g., internal and external peer reviews should not be duplicative.



Publication in nonscientific formats, particularly those aimed at policymakers and non-scientific staff in donor agencies, can benefit from internal or external assistance from specialized editors.

Good practice

Develop tools to enable project leaders/ teams to manage donor reporting requirements

Project leaders/teams should manage the deadlines defined in donor agreements for technical and financial reporting. Usually the Center's finance professionals will assist with meeting the financial reporting requirements.

There should be readily accessible and up-to-date data on

- when donor reports are due
- reports already provided
- status of reports with past due dates

A central point within the Center should be designated responsibility for maintaining a donor contract database (probably should be the same point also responsible for partnership contract database and, like the latter, ideally integrated with an overall project management system).

This database could support useful features such as flagging to project teams imminent reporting due dates. For example, IRRI has developed a system, linked to its project database, to send emails to responsible staff advising of reports due in the next two months, as well as closer to deadlines.

The database can be used to provide summary reports to senior management for monitoring and follow up purposes.

PROJECT COMPLETION AND EVALUATION

This phase of a project concerns

- Administrative closure—generating, gathering and disseminating information to formalize project completion, including evaluating the project and compiling lessons learned for use in planning future projects.
- Closeout of donor agreements related to the project.



Good practice

Identify in project planning documents the basis and means by which the project will be evaluated

Project evaluation may be made at different levels. For most, if not all projects, one can seek to evaluate—at the end of the project—the achievement of stated outputs and make some judgment about the efficiency (relationship with inputs) and timeliness of the project.

However, attempts to measure the impacts of projects based on the expected project outcomes, even at an intermediate level, can be difficult to accomplish. In many cases, measuring impact may be only relevant and cost effective to attempt at a broader program or MTP project level, usually through periodic external evaluations. However for large projects with long lifespans, Centers should consider providing in the project design for

- defining impact measures
- benchmarking studies of these measurements, to be undertaken as part of the initial phases of a project
- periodic re-measurement as part of the project to track changes over time during or after completion of the research activities.

Lessons from efforts to apply performance measurement to public-sector programs, such as the use of contribution analysis (see Box 9) may be useful to consider.



Box 9. Contribution analysis: addressing attribution with performance measures

- Acknowledge the attribution problem
- Present the logic of the program
- Identify and document behavioral changes
- Use discriminating indicators
- Track performance over time
- Discuss, and test alternative explanations
- Gather additional relevant evidence
- Gather multiple lines of evidence
- When required, defer to the need for an
- evaluation

From "Addressing Attribution Through Contribution Analysis: Using Performance Measures Sensibly" Discussion Paper by John Mayne, Office of the Auditor General of Canada, June 1999. We thank Dr. Doug Horton of ISNAR for this reference.

Regardless of the sophistication of efforts, project planning should identify the level of evaluation that will be attempted and how this will be conducted.

Good practice

Develop mechanisms to assist researchers take into account project evaluation lessons

Evaluation activities should be linked to an overall learning process to ensure that the design of new research takes account of the lessons of earlier work. This may be implemented in Centers at a number of levels:

- on-line dissemination and retrieval of evaluation results
- seminars and workshops
- participation of impact assessment specialists in the review of new concept notes and proposals
- requirement for specific attention in concept note formats to identifying relevant evaluation results that are taken into account in the project design



PROJECT MANAGEMENT INFORMATION

Good practice

Establish a single referencing system for projects to support an integrated project database

Establishing a single referencing system for projects may require Centers to

- develop a common definition of what constitutes a project—particularly for activities funded from unrestricted funds
- ensure a common approach is applied by all program units, which may have previously adopted their own particular classifications

Good practice

Develop an integrated information system for collecting, tracking, processing, and disseminating project management information within the organization

For most Centers, it will be worthwhile investing in some form of automated project management system. With developments in technology, it is increasingly becoming within the reach of Centers to develop systems that

- bring project-related programmatic, human resources and financial data together;
- facilitate analysis at a macro level of types of projects, donors, partners;
- enable drill down to various levels of detail on the status of project portfolios, down to the status of individual projects and sub-components, and possibly linkage to research databases
- update human resources and financial data directly from corporate HR and financial systems, as is the case with the CIAT project management system; and
- support, through data warehousing concepts, flexible analytical tools for management.

Good practice

Digitize all key project documents and correspondence

Most project documents and correspondence produced within Centers and by research partners and donors will already be in digitized form. Maintaining central electronic files of key project documents will facilitate coordination intra-Center (and Center-partner) coordination, including coordination between outreach offices and headquarters. This latter aspect is an area raised as needing improvement



by researchers consulted in a number of Centers where project management responsibilities are shared across locations. Central electronic files also facilitate archiving of project material.

PERFORMANCE ASSESSMENT

Good practice

Research staff performance appraisal criteria should be aligned with agreed research success factors

The success factors for research most commonly cited in CGIAR Center documents are:

- relevance and impact
- quality
- timeliness
- efficiency
- results dissemination
- further resource mobilization

Performance appraisal systems applying to research staff should be designed so that performance in regard to these success factors is addressed to the extent these are applicable to particular staff – this is a key aspect of aligning incentives. This should be reflected in the criteria established in performance agreements.

Implementing a well-aligned performance assessment system requires a great deal of management effort. This note will not attempt to also cover performance assessment systems in any depth, but among the “alignment” issues that Centers need to consider are

- The limitations of an annual assessment when research may be much longer term. Suitable milestone achievements need to be identified that have overall consistency over a longer period.
- One measure used in performance assessment of researchers, which is relatively easy to objectively quantify, is publications. However, this may not be a fully representative measure of impact or results dissemination—the question of where research is published and who is using it is relevant. Some research may not be amenable to assessment according to publication output.
- Measurement of success in mobilization of resources is, for many researchers, a controversial and uncomfortable new indicator. Where used, performance agreements need to be very specific about how researchers are expected to address this criterion. Centers should consider whether such a criteria should be applied selectively to research staff. For some researchers, it may be the product of specific efforts, within their field of research, to identify and realize new sources of funds. For



others, further resource mobilization may be the outcome of high-quality science that is well regarded by donors, rather than specific mobilization efforts.

QUALITY MANAGEMENT SYSTEMS

IWMI and the WorldFish Center have started implementing quality management systems using the goal of ISO quality certification as an incentive, and IWMI has focused its initial efforts on its research activities.

ISO9001: 2000 is the latest version of a general standard, issued by the International Organization for Standardization for establishing a quality management system. It is applicable to any product delivery process. It was developed to provide a basis for independent certification of quality processes to promote confidence of third parties in an organization's ability to deliver quality products.

In the context of a Center's project management, it may be used to provide assurance to existing or potential donors that the project management process employed meets rigorous, objectively measurable standards with respect to quality.

An ISO9001: 2000-compliant organization adequately documents its processes, builds into those processes the basis for validating if the processes are being implemented, and has a system for methodically verifying or auditing implementation and identifying opportunities to improve the process.



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