

# SUSTAINABLE USE OF BIODIVERSITY

External Program Review

April 2000-March 2003

Review Team

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FINAL REPORT

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## EXTERNAL PROGRAM REVIEW OF SUSTAINABLE USE OF BIODIVERSITY (SUB)

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## EXTERNAL PROGRAM REVIEW OF SUSTAINABLE USE OF BIODIVERSITY (SUB)

### *EXECUTIVE SUMMARY*

The overall purpose of the review is to inform management decisions to improve program effectiveness and to help longer-term program learning. The review team selected key review areas within SUB's overall program for more intensive examination. These included two main areas: participatory plant breeding and medicinal plants as well as cross-cutting issues such as gender/equity analysis, networking and capacity building. The main methods used were interviews and review of documentation. Interviews were held face-to-face, by telephone and by e-mail with selected project leaders, representatives of external partners and with IDRC staff in Ottawa and in the Regional Offices.

#### *Achievement of strategic directions*

The review identified eight strategic directions in SUB's Prospectus that were used as a somewhat clearer yardstick for assessing progress in the second program cycle rather than SUB's three program objectives. The objectives are expressed more as goals and are therefore difficult to use in measuring progress. In terms of SUB's eight strategic directions (section 2 Box 8), SUB has made excellent progress. It has maintained a strong community-based approach and one that is more integrated between cultivated crops, uncultivated foods and medicinal plants. It has been a leader in developing research methodologies that involve men and women farmers and has continued to use global and regional networking as a key program strategy.

As anticipated in the Prospectus, SUB has created a Genetic Resources Policy Institute in collaboration with IPGRI. It has exchanged experiences with other PIs and has collaborated with several PIs in supporting joint research projects. SUB has managed to support interdisciplinary research as well as multidisciplinary but it is hard to judge whether it is more or less than might be expected - again, because there are no targets or indicators set.

In response to the last strategic direction, SUB has promoted the work of its research partners in publishing research results but it is not known if there is yet "brand recognition" within the policy community. In general we suggest that SUB might encourage more publications by its research partners in peer-reviewed journals as this is one way to mainstream the research results and methodologies with other researchers, and to link with other major scientific programs in biodiversity like the Millennium Ecosystem Assessment.

Overall, the review found that SUB has followed the strategic directions laid out in its Prospectus and has made major contributions to science, to policy, to institution building and to the work of the Centre between April 2000 and March 2003. It has also been an innovator within the Centre and is highly respected among its external partners and leading scientists in the fields in which SUB is active. It is a well managed program and well led with a dedicated cadre of committed IDRC staff and a team approach that has strengthened considerably over this program cycle.

#### *SUB's niche*

SUB's niche is clear and important in a crowded field. It builds well on IDRC's strengths and the Centre's history in research in natural resources management. SUB has the potential to provide research results and experience that can influence particularly national policies but also

international negotiations and guidelines for future practice. Its focus on local communities is increasingly recognized as important at the international level but few other organizations have the capacity and experience to work at community level in all developing regions **and** to link the local perspectives into national and international policy debates.

The strengths that IDRC has developed in medicinal plants research is:

- Focus on applied research rather than development-oriented activities
- An integrated program linking sustainable management and use; sustainable livelihoods and income generation; health and nutrition; and issues of gender and equity especially in relation to access and benefits from these resources.
- Multistakeholder approaches and mechanisms
- Democratization of research through multidisciplinary and interdisciplinary approaches
- Global issues are contextualized in particular regional realities
- Local/community based in situ conservation and community-management
- Specific attention to local and indigenous knowledge and practices
- Issues of gender and social equity, access and tenure are addressed
- Establishment of the scientific basis of traditional medicinal plants and traditional medicine
- Exploration of diverse ways and means to improve livelihood options for the most marginalized peoples who nurture and depend on medicinal and aromatic plants
- Establishment of formal and informal networks on MAPS at regional, national and local levels
- Regional and national contextualization of MAPs work

### *Looking forward*

The review has led to a number of suggestions for future program work. Among these are:

1. There may be some benefit in continuing some of the work of the present program cycle before moving completely to new thematic areas because the results are not yet consolidated enough to make some potentially major gains in impact and scaling up.
2. There are two main areas in PPB where we suggest that SUB may wish to support additional projects in order to create a critical mass of results across different situations:
  - Studies of the costs and benefits of participatory plant breeding, including (but not only) the economic impacts on incomes, especially of poor farmers;
  - Development of tools to help farmers manage information and be more systematic in their approach to PPB so that their capacities are also increased.
3. The main proposals coming from our review of medicinal and aromatic plants are:
  - Further development of cross-cultural analysis of medicinal plant use and alternative methods of verifying the safety and efficacy of herbal remedies
  - More research and discussion on the tension between conservation and use
  - Greater articulation and focus on how the rights of indigenous peoples and local communities to their genetic resources and knowledge can be recognized and protected and how access and benefit sharing schemes are working or not for them.
  - Future impact analysis studies on the changes on state of health and nutrition of communities where these projects were implemented.

- More studies done on how the most marginalized have been empowered and how and what are the new capacities they developed due to the support of SUB-PI.
4. Without substantially changing SUB's definition of its problematique, it may wish to consider recasting it within a scientific and policy framework that is more "legible" to its present and potential future partners. A scientific framework might emphasise the main drivers of globalization, including globalization of food production and distribution. An alternative policy framework might identify SUB's work more closely with the Millennium Development Goals (MDG) adopted at the UN Millennium Summit in 2000, especially that of poverty alleviation. Most, if not all, OECD donor agencies have accepted these goals and have structured their programs to meet them.
  5. For the next program cycle, SUB might better elaborate regional strategies for its program activities, in consultation with other PIs and the Regional Offices.
  6. A program wide review of SUB's capacity building activities in order to develop a more effective strategy is suggested. This should include capacity building integral to research projects as well as specific training and award programs. In particular, we suggest that SUB might consider how to work with others to strengthen university and high school curricula in order to meet its objectives. If possible, this review might be done as part of a Centre-wide exercise.
  7. SUB has been an innovator in using formative evaluations to learn lessons from the past and to guide its strategy. It has not always tracked changes to its strategy systematically. SUB's experience would be a useful case study of investment in these evaluations.
  8. SUB has used global, regional and sub-regional networking to great effect in its program strategy. However, there are many assumptions about the costs and benefits of networks that might be better understood if they were systematically tracked and evaluated. They are a major investment for the participants and for the Centre and their value-added could probably be better measured.
  9. SUB's gender/equity analysis has met some difficulties in implementing it in research projects, mainly because of the limited capacities of research partners to do it. SUB is probably a leader within the Centre in this area, and its experience can benefit the whole Centre. One suggestion is that SUB explores how to provide the necessary training and (more important) mentoring support through the project cycle by means of resource groups within its regional networks.

SUB's focus on key policy issues surrounding food production and pharmaceuticals, and their relationship to loss of biodiversity, together with its strong methodological emphasis on linking local and global perspectives are right on target. SUB is working in a highly charged arena, and one that will become more so if the Centre moves to work in the area of biotechnology and GMOs. A program with a biodiversity focus and decade-long successful track record is almost unique in a donor agency. This continuity of programming and program focus gives SUB and thus IDRC a special edge and credibility for policy uptake in its future work.

# EXTERNAL EVALUATION OF IDRC PROGRAM INITIATIVE: SUSTAINABLE USE OF BIODIVERSITY

## 1. INTRODUCTION

This external review of the *Sustainable Use of Biodiversity* Program Initiative (SUB) is one of several program reviews being undertaken preparatory to a new round of strategic planning when the current program cycle ends in March 2004. Victoria Tauli-Corpuz (Executive Director, Tebtebba Foundation, Philippines) and Anne Whyte (President, Mestor Associates, Canada) carried out the independent review between July-September 2003 (Annex 4). The timeframe for assessing the performance of the SUB PI is April 2000 – March 2003. During this three-year period, some 60 new activities were funded, in addition to projects that were closed and planning for new projects. That is to say, the review period includes not only all projects started between April 2000 and March 2003, but also the monitoring and downstream (closing the loop) activities of earlier projects as well as preparations for future activities. It is an impressive agenda of work.

### 1.1. Terms of reference

The overall purpose of the review is to inform management decisions to improve program effectiveness and to help longer-term program learning. The review is therefore focused at the Program Initiative level rather than at project level. Evaluations of groups of projects and other program activities are inputs into the overall PI assessment. The objectives of the review are:

- i) Assess the extent to which SUB is meeting its objectives and aims as set out in its Prospectus, and identify any evolution in objectives;
- ii) Document results (outputs, reach and outcomes) of SUB;
- iii) Offer reflections on the strengths and weaknesses of SUB's thematic approach and strategies in relation to the current state of the fields in which SUB is active.

### 1.2. Evaluation approach

To obtain an overview of SUB's program activities for the past three years, we have selected two major areas of SUB's work and two cross cutting program strategies as the key review areas for closer examination (Box 1). These areas were chosen in consultation with the SUB Team as key areas of their past work, representing a major part of SUB's work in Phase 2, whose evaluation would be relevant to future program decisions. Many of the examples for our conclusions therefore are drawn from the key review areas.

Within each of the four *key review areas* a number of projects have been selected for closer attention. These are considered not as individual research activities but in terms of the broader program context and SUB strategy, which enables us to provide some insight into the "value added" of the SUB PI.

### BOX 1: KEY REVIEW AREAS

Thematic areas	Participatory plant breeding Medicinal plants
Program strategies	Policy influence on key boundary partners Capacity building

Our rationale for this approach rather than selecting 2-6 projects for detailed analysis is that

- ❑ It better reflects SUB's overall performance, which includes a large number of new projects during the review timeframe;
- ❑ SUB has already conducted a number of evaluations at project and sub-program levels on which this review can build;
- ❑ The SUB team is particularly interested to learn from the review some insights into future program directions.

The selection of boundary partners to examine in more detail was also done following discussion with the SUB team and the identification of the CGIAR and local decision-makers are key targets for SUB's outputs and influence in closing the loop.

### 1.3. Methods and evidence

The Review Team (Annex 4) agreed on an initial workplan and assigned lead responsibilities for the key review areas<sup>1</sup>. Each member shared their ideas for the conclusions and recommendations when they met for the SUB team meeting on September 29 2003 and these are reflected in the final report.

The main methods used were interviews, group discussion and review of documentation. Interviews were held face-to-face, by telephone and by e-mail with selected project leaders, representatives of external partners (both at international and local levels) and with all IDRC staff in Ottawa and the Regional Offices<sup>2</sup>. Meetings and group discussions were held in the Philippines with members of the CBDC-Bohol project and with members of SEARICE in Quezon City. The design of the interviews allowed some triangulation of perceptions and observations between PI staff, project leaders and external partners. In all, 25 interviews were conducted by Anne Whyte and Vicky Tauli-Corpus met and held group discussions with 16 project staff in Bohol and Quezon City (Annex 1).

The Review Team had access to all the project appraisal documents (PADs) for the period under review as well as project outputs including technical reports, PCRs, publications and websites. Other documentary evidence examined included evaluation reports, selected trip reports by

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<sup>1</sup> Victoria Tauli-Corpus reviewed SUB's work in medicinal plants; its influence on local boundary partners; and capacity building at local level. Anne Whyte reviewed SUB's work in participatory plant breeding (PPB); its partnership with the CGIAR; capacity building in gender/equity analysis; closing the loop and the implementation of its evaluation plan.

<sup>2</sup> The two exceptions were Brenda Lalonde (Ottawa) due to illness and Innocent Butaré (WARO) who did not respond.

program staff, the minutes of PI team meetings and staff workplans. The IDRIS database and the SUB website were consulted to obtain an overview of all projects funded in Phase 2 and for the regional distribution of SUB projects shown in figures 1-2<sup>3</sup>. The list of the principal documentation reviewed is given in Annex 2.

#### 1.4. Acknowledgements

The Review Team would like to thank all members of the SUB PI team who gave so generously of their time and expertise for this review and for their careful review of the draft report. We also thank the Evaluation Unit, especially Denise Deby for providing technical and logistical support. Finally we want to acknowledge the contributions of all the project leaders and staff and international partners who answered our questions and shared their experiences with us. Without the efforts of all these people, this external review would not be possible.

## 2. PROGRAM OBJECTIVES AND STRATEGY

In its Prospectus for Phase 2, SUB defines its goal not only in terms of its ends but also through its means – which includes engendered and participatory research (Box 2).

### BOX 2: SUB PROGRAM GOAL

*“To promote the conservation and sustainable use of biodiversity and the development of appropriate technologies, local institutions and policy frameworks through the application of interdisciplinary and participatory research that incorporates gender considerations and local and indigenous knowledge.”*

Its program focus is on the generally neglected link between biodiversity and poor communities in marginal environments, and how to ensure that research on local and indigenous management of biodiversity **is entered into national and international policy debates**. SUB has defined its own unique and strategic entry point into important policy debates and the scientific basis for decision-making (section 8).

#### 2.1. Program objectives

The three objectives of the PI for 2000-2004 are all aimed at community level resource management and its engagement into higher levels of decision making about biological resources (Box 3). They are not only closely linked to one another; they are also expressed more as goals than as measurable objectives against which performance can be assessed, and thus present a

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<sup>3</sup> Originally this analysis of all projects was going to include a breakdown by thematic area but this proved to be of less use than anticipated as the boundaries of the themes have shifted over the course of Phase 2.

challenge to the reviewers<sup>4</sup>. There were originally four objectives in the first program cycle: the fourth one (*To support the development of options for sustainable livelihoods and incentives for the sustainable use of the products of biodiversity, especially medicinal plants*) has been merged with Objective 3 with a focus on medicinal plants rather than natural products.

**BOX 3: SUB PROGRAM OBJECTIVES 2000-2004**

To promote use, maintenance and enhancement of the knowledge, innovations and practices of indigenous and local communities that conserve and sustainably use biodiversity;

To support the creation of models for policy and legislation that recognize the rights of indigenous and local communities to genetic resources and to the equitable sharing of the benefits of the use of these resources in the context of intellectual property regimes;

To develop gender sensitive incentives, methods, livelihood options and policies that facilitates community-based participation in *in situ* biodiversity conservation and management strategies.

## 2.2. Thematic areas

SUB's work is broadly structured around five main themes (Box 4) but SUB has been proactive in working with their partners to refine the definition of the problem within these themes resulting in some innovative conceptual developments in restructuring the field.

**BOX 4: SUB THEMATIC AREAS**

Agricultural biodiversity - research on new and traditional approaches to increasing food production without the loss of on-farm biodiversity;

Gender dimensions of biodiversity use and conservation, and by extension social analysis of knowledge, roles, rights and access<sup>1</sup>

Indigenous knowledge - including both local and indigenous knowledge of genetic resources and their uses and conservation

Medicinal plants - these are the genetic resources most competed over today and can serve as models for future social, economic and political debates over biodiversity;

Informing policies with local perspectives and approaches – including research methods that link informal scientists such as farmers to formal scientific systems

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<sup>4</sup> While the Terms of Reference for the review does not ask us to comment on the objectives themselves, we should point out that objectives couched in the language of goals do not lend themselves to assessment of program performance, either by external reviewers or senior management.

For the practical purposes of conducting the review, we have kept the division between agricultural biodiversity and medicinal plants but we recognize that SUB is leading the way in rethinking these old and perhaps largely academic distinctions (section 8).

### 2.3. Strategic directions

The SUB Prospectus lays out a number of strategic directions for the PI during the second program cycle (Box 5). Since these are as close as the Prospectus comes to measurable objectives, they are used in the review as one yardstick to assess SUB's performance for achieving the strategy that it set out for itself (section 10).

#### BOX 5: STRATEGIC DIRECTIONS FOR SUB

1. A strong community-based approach founded on the scientific rationale that communities are the principal stewards of the world's biodiversity;
2. A more integrated approach to the biodiversity of cultivated crops, uncultivated foods and medicinal plants within single ecosystems;
3. Research methodologies that involve men and women farmers as key experimenters in sustainable crop improvement, most notably *Participatory Plant Breeding (PPB)*;
4. Support to more interdisciplinary research as well as multi-disciplinary research;
5. Increased emphasis on exchange of experience with other Program Initiatives;
6. Continued support to SUB's global and regional research networks to maximize their impact and to link the networks more with one another;
7. Creation of a Genetic Resources Policy Initiative that builds on the Crucible Project to support the development of research and negotiating skills on policy and access to proprietary technology by southern researchers;
8. Promotion of the work of research partners including the publication of research results and the development of 'brand recognition' within the policy community.

### 2.4. Regional strategies

The SUB prospectus does not elaborate on its regional strategies other than to say it will have regional distinctiveness in its programming. Rather, it proposes to retain a resource allocation between regions that is similar to that for the First Program Cycle, if staffing levels in the Regional Offices remain adequate to the task (Box 6)<sup>5</sup>. While regional differences and priorities are evident post-facto in SUB's programs, it would be helpful if some clearer strategy and

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<sup>5</sup> The categories in box 6 are those given by SUB in its Phase 2 Prospectus and are not those of the reviewers, including the distinction between multi-regional networks and global projects.

performance measures for regional strategies were spelled out in the next Prospectus. At the same time, we recognize that IDRC's regional priorities need to be framed between headquarters and the Regional Offices at the level of the Centre, as they are also dependent on staff resources.

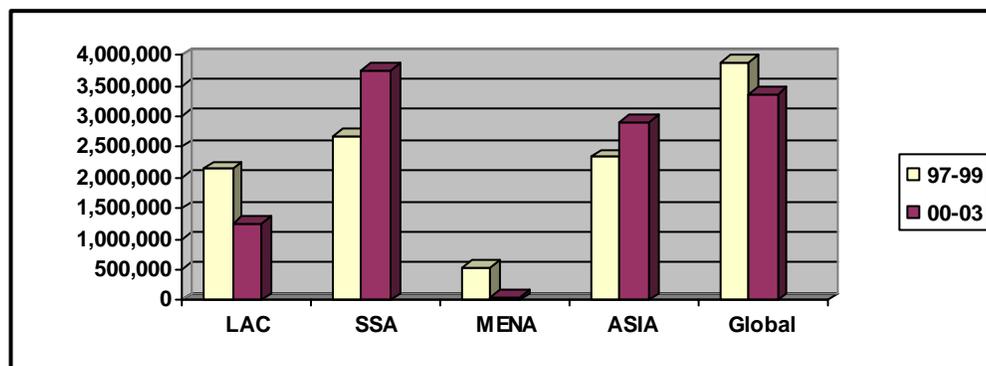
**BOX 6: PLANNED REGIONAL ALLOCATIONS PHASE 2**

Global	12%
Multi-regional	23% (networks that occur in more than one region)
Africa/Middle East	25%
Asia	22%
LAC	18%

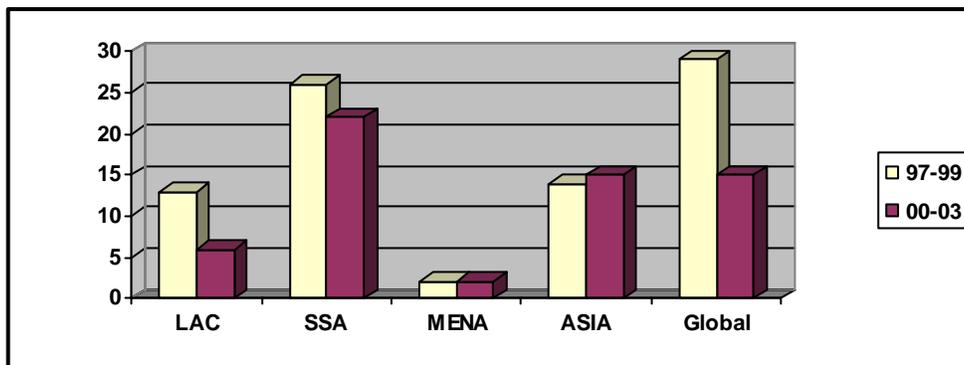
The expenditures and numbers of projects funded by SUB in the different regions for two three-year periods (FY 1997/8 – 1999/00 and 2000/01-2002/03) are given in Figures 1 and 2. They show that project activities in Latin America and the Caribbean have fallen from 18% in Phase 1 to 11% so far in Phase 2 while project funding in Sub-Saharan Africa has increased from 23% to 33% of total expenditure. The MENA region had only 5% of project funding in Phase 1 and less than 1% in Phase 2. There appear to be two main reasons for this low investment by SUB in MENA. The first is staff resources in the region. For the past 18 months, the RPO has allocated about one day per week to SUB. Before that, SUB's project development in the region was handled by the Regional Director. The second reason is reportedly the difficulty of finding project leaders who are both technically competent in the areas supported by SUB and are able to lead participatory research projects that include gender and social analysis. Such interdisciplinary research is not common in MENA in the fields in which SUB works. A consultant prepared a MENA regional strategy paper for SUB, but this has not yet been adopted or followed up.

Asia received an increase in SUB expenditure from 20% in Phase 1 to 26% in Phase 2. Global (including inter-regional) activities remained stable at 33-30% across the two Phases. Part of the reason for these differences between planned and actual expenditures by region are that the second program cycle has another 18 months to run (with the transition year 2004-05) and SUB seeks to be responsive to good proposals coming in.

**Figure 1 SUB expenditures by region for Phase 1 and 2 (CAD)**



**Figure 2** Number of SUB funded activities by Region for Phase 1 and 2



When we reviewed the projects that are funded in each region, it was hard to discern any pattern or strategy so we asked SUB team members in the regions and in Ottawa what the regional strategy of SUB is. The responses show that, except for medicinal plants, team members do not feel that SUB has well articulated regional strategies, other than a general strategy to develop regional networks<sup>6</sup>.

While we appreciate that SUB is a global Program Initiative rather than being based in only one or two regions, we would recommend that for the next program cycle, some more consideration be given to the different priorities and capacities in the regions to further elaborate regional strategies for SUB. We would also suggest more exploration with other PIs and perhaps within the Regional Offices about how SUB might best collaborate with other IDRC programs at either regional and/or country level. At the same time we recognize that SUB is not the only player in any such collaboration and that regional strategies also need to be considered at the level of the Centre.

<sup>6</sup> Responses from the REGIONAL OFFICES: \*We don't have a regional strategy. \* It comes out of the projects in each region. \*We don't have many discussions about regional strategies. We should discuss more about having more opportunities for cross-regional exchanges. \*Do we have regional strategies? \*It would be OK if we stuck to it. People doing programming here are primarily interested in other regions. \*I think currently medicinal plants are dominant in Africa and South Asia and agrobio in Southeast Asia and Latin America. But it seems to me that this has been happening more because of the POs expertise and interest rather than based on the critical assessment of local priority and needs.

Responses from OTTAWA: \*We don't have them. \*We haven't really articulated a regional strategy except for medplants. \*We try to spread resources across the regions. \*The ROs are in a better position to develop regional strategies but all funding is under Ottawa control. We are not taking advantage of our ability to have regional strategies. \*I don't know if we have any. \*We don't really have any other than MAPPA and Medplants in Africa. If we have integrated strategies they should be at national or sub-regional levels anyway.

## 2.5 Evaluation

Although in Phase 2, SUB has evolved in some of the directions suggested by the external review of 1999, in its Prospectus for Phase 2, the PI does not spell out how it will respond to the recommendations from the 1999 review. Nor in the main body of the Prospectus does SUB discuss project or program monitoring and evaluation. The proposed evaluation framework is laid out in an Annex. The difficulty facing the review team was that the evaluation plan and associated indicators was designed for Phase 1, which had four objectives and the plan has not been revised for Phase 2 (which has only three objectives). The Phase 2 Prospectus does lay out a number of operational and other *mechanisms* for both project and program evaluation, which are important given the geographic distribution of team members in Ottawa and in all the Regional Offices (Box 7). Given the absence of a clear statement in its Prospectus of how SUB proposed to respond to the 1999 external review, we have tried to assess within the context of this review's findings, how SUB has responded to the earlier review's recommendations.

### BOX 7: EVALUATION PLAN IN PHASE 2 PROSPECTUS

#### *Project level*

- ❑ Critical review of project ideas and proposals by several team members at an early stage and shared comments through SUB's Intranet
- ❑ Well documented monitoring visits and trip reports, as well as review of technical reports and PCRs
- ❑ Formal evaluations of projects through budget line items included in the project budgets

#### *Program level*

- ❑ Performance framework for evaluation outlining PI objectives, outputs, reach and impact
- ❑ Development of Evaluation Matrix
- ❑ Development of performance indicators for measuring impact such as income enhancement, reduction of drudgery and improvement in child nutrition
- ❑ Priority areas for evaluation are:
  - Integration of gender analysis and its impact on equity in access to genetic resources
  - Capacity building (specifically the capacity of local communities to participate in all stages of research from priority setting to policy making)
  - Extent to which field-level research is informing policy and programs in in-situ conservation of agro and aquatic biodiversity
  - The effectiveness of interdisciplinary approaches

At project level, our review of project files shows lively and supportive e-mail interaction across the SUB team in making comments that help to improve project proposals and efforts to do joint monitoring visits between Regional Office and headquarters staff members. Although we examined fewer of them, the trip reports that we reviewed report on monitoring visits in detail and these are circulated among team members. Therefore we conclude that at the level of project

monitoring and evaluation, SUB is doing due diligence and is carrying out its Evaluation Plan as anticipated.

Together with CBNRM and MINGA, SUB is also leading the way in exploring effective ways of building participatory monitoring and evaluation into its projects. One good example is the MAPPA project (box 8).

**BOX 8: PARTICIPATORY MONITORING AND EVALUATION:  
The example of the MAPPA project**

MAPPA will help develop and implement participatory monitoring & evaluation system by involving the major stakeholders. MAPPA will represent MAPPA program, in the Technical Advisory Committee (TAC) of the country partners that can advise the project on technical matters.

At district, block, village and project levels, Advisory Committees comprising of key stakeholders will be formed to develop a practice of participatory research and effective coordination. Government agencies will be responsible for technical backstopping and evaluation. The CBOs and NGOs will help with implementation, capacity building and mentoring. Resource NGOs will support sensitisation and training

The role of MAPPA is to convene the monitoring and evaluation mission, to carry out regular technical and administrative monitoring of the progress, to coordinate with other international, national and local partners and most critically to facilitate partnership development and networking. MAPPA will help source the services of local and expatriate consultants based on the needs of monitoring and evaluation. The NTFP project partners, of course will be the core group of participatory monitoring team.

At the level of the Program, SUB has adjusted its evaluation plans since April 2000 as program implementation progressed, and in the light of Centre-wide evaluation activities. There are therefore some differences between the plans laid out in the Prospectus and what has been done to date. Of the four priority areas for evaluation two have already been undertaken:

- (1) evaluation of the SRISTI project as one of the case studies of the Centre-wide Policy Impact Evaluation Study being coordinated by the Evaluation Unit; and
- (2) evaluation of mainstreaming social and gender analysis in SUB's activities.<sup>7</sup>

A third planned evaluation of capacity building, is expected to be part of a Centre-wide review starting next fiscal year. We would recommend that any evaluation of capacity building include not only a SUB case study of a larger Centre review but that a program-wide review of SUB's support to capacity building is also undertaken before the next Prospectus is prepared, including that built into research projects and projects whose main objectives are capacity building. We feel that this would help SUB to better define the Program's objectives and future strategy for capacity building. Also on the evaluation agenda of SUB is a study of the effectiveness of interdisciplinary approaches. This again might be a valuable evaluation exercise at the level of the Centre.

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<sup>7</sup> Adamo, A. K., 2002, Mainstreaming Social/Gender Analysis in the Sustainable Use of Biodiversity Program Initiative: Mid term Evaluation, 15 July 2002, ms

The Performance Framework included in the SUB Prospectus for Phase 2 lays out the performance targets, activities, outputs, reach and impacts anticipated under each of the four objectives of the Program. As noted above, originally there were four objectives for SUB. These were reduced to three in 2002 but the Performance Framework was not changed to reflect this and remains at four objectives.<sup>8</sup> We suspect that the Performance Framework, far from being a living document, is probably not very useful to SUB.

SUB has not yet developed the ambitious performance impact indicators described in the Prospectus, but is instead using other indicators to structure and assess its projects. It would certainly be interesting and valuable at the level of the Centre to explore impact indicators such as proposed by SUB.

What SUB has done to build on its initial evaluation plan is a set of “formative” evaluations designed to help SUB chart its future program directions. These formative evaluations include ones for gender/social analysis, agrobiodiversity, multi-stakeholder policy processes, medicinal plants, and local and indigenous knowledge<sup>9</sup>. Each of the reviews has provided useful recommendations for SUB’s future program work. We cannot endorse SUB’s initiative in this type of evaluation strongly enough. The formative evaluations have clearly been used by SUB to help draw lessons from its past experience and to help design its new program emphases and clarify, where necessary, SUB’s own niche in biodiversity. There is good evidence from team meeting minutes and the exchanges of drafts of new thematic areas that the SUB team is actively involved in lively and ongoing discussions about its possible new directions.

It is suggested that in future, SUB records in a more systematic way its evaluation strategy and where decisions are made to significantly adjust the strategy in the light of new needs or what the Centre itself is doing. As SUB is an innovator in the extent of its investment in formative evaluations, it would also be a valuable case study for the Centre in how a PI uses its investment in formative evaluations to make decisions on future programming.

The last external evaluation of SUB was in 1999. It made eight recommendations - although they were somewhat buried in its text rather than brought together at the end (Box 9). In reviewing how SUB responded to the external evaluation, we find that SUB has responded to almost all the recommendations. SUB’s Phase 2 Prospectus does provide a better rationale for SUB’s foci and entry points. SUB was asked to consider if it could continue to work in two large areas and it has moved along a path in Phase 2 to better integrate the work that it is supporting in the two areas. Natural products do not feature as a separate theme in Phase 2 and while the work on them is reduced, it is well integrated into the medicinal plant work. In some medicinal plant projects, SUB is examining issues such as toxicity and efficacy (Recommendation 8).

The two recommendations that still appear to be outstanding are those referring to a clearer strategy for capacity building (Recommendation 4) and that on regional strategies (Recommendation 5). We believe that SUB’s program in Phase 3 would benefit from more explicit attention to both these questions and support the earlier evaluation’s findings, while as noted above, think that the issues might be usefully analysed and discussed at Centre-wide level.

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<sup>8</sup> The decision to change the Performance Framework made it difficult to use it as a measure of SUB’s progress towards its objectives.

<sup>9</sup> Woodley, E., 2001, Review of Sustainable Use of Biodiversity (SUB) Program Initiative’s Use of Local and Indigenous Knowledge in Selected Projects; October 2001, ms.

To conclude, the review team found that the SUB team is systematically incorporating the lessons from evaluations into its future planning; believes that the team takes evaluation very seriously; and has observed that SUB has made considerable investment in its own project and program level evaluations.

#### **BOX 9: 1999 EXTERNAL REVIEW OF SUB**

##### **Recommendations**

1. Develop a better rationale for SUB's foci and entry points to sustainable use of biodiversity
2. Consider whether it can continue to work in two large areas
3. For natural products
  - a. Clarify what criteria are used to select which ones will be researched to ensure that they are not of marginal economic benefit
  - b. Place the SUB strategy within national and international policy frameworks
  - c. Make clearer link between natural products work and medicinal remedies to avoid an appearance of "forcing" it
4. Develop a clearer strategy for capacity building, especially in interdisciplinary research, including encouraging others to invest in capacity building activities
5. There is no explicit regional strategy
6. Articulate a logical model for linking outputs and impacts to proposed program actions and objectives/hypotheses
7. Explore whether farmer-led plant breeding and conservation strategies of national and international institutions are being influenced by results from networks like *Using Diversity*
8. Strengthen the scientific basis for its work, especially in medicinal plants, as it is working in highly controversial and politically charged areas

### **3. PARTICIPATORY PLANT BREEDING**

IDRC has supported projects in participatory plant breeding (PPB) for nearly a decade and has recently brought its experience together in an In-Focus book *Seeds that Give*<sup>10</sup>. The assessment of this component of SUB's work is based on a review of a number of projects (Box 8) and interviews with twelve project leaders (Annex 1), together with an extensive review of the reports, websites and other materials that have been produced by the projects (Annex 2).

Participatory plant breeding (PPB) as used in this review and elsewhere is a shorthand term that covers a wide range of activities and degrees of involvement of different stakeholders – mainly farmers but also groups involved in post-harvest production and distribution, including ultimately, consumers. Essentially it includes all approaches that involve collaboration between

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<sup>10</sup> Vernooy, R., 2003, *Seeds that Give: Participatory Plant Breeding*; IDRC, Ottawa

researchers and farmers<sup>11</sup>. In practice that collaboration can range from participatory variety selection (PVS), which plant breeders generally recognize as a valuable input to improving genetic material for local situations to participatory plant breeding *per se*, which many plant breeders find more difficult to accept.

**BOX 10: PPB PROJECTS REVIEWED**

100163	From Formal to Participatory Plant Breeding: Improving Barley Production in the Rain-fed Areas of Jordan (Jordan)
101086	Crop Development and Biodiversity Enhancement in Southwest China Phase I and II (China)
101433	Strengthening the Scientific Basis of In Situ Conservation of Agricultural Biodiversity On-Farm in Nepal (Nepal)
100827	Improving Technology Development through Participatory Research and Gender Analysis (Global)

Participatory variety selection is the selection of fixed line, including landraces, by farmers using their own criteria. It consists of four steps: (1) situation analysis and identification of the farmers' varietal needs; (2) a search for suitable genetic materials; (3) experimentation by farmers in their own fields using their usual management practices; and (4) wider dissemination of the varieties that farmers prefer. IDRC has supported some pioneering work in PVS that demonstrated that farmers do indeed have a wide range of criteria for selecting seeds and crop varieties and that these criteria determine what farmers plant. Differences in the criteria used by men and women have also been shown. Some of the pioneering projects in PVS are those in Cuba, Mexico, Nepal, China and also the SANFEC project. Some of these are discussed in more detail below.

### 3.1 IDRC work in PPB 1992-2000

In December 2001 SUB undertook a "formative evaluation" of its 44 projects in agrobiodiversity funded from 1992-93, many of which involved some degree of participatory plant breeding<sup>12</sup>. The review documented the main characteristics of IDRC supported projects up to that date:

- ❑ Projects had been supported in all regions and on the major staple crops;
- ❑ The largest group of projects focused on multiple crops cutting across open and self pollinated, and clonally reproduced crops;
- ❑ Almost all of the projects dealt with unfavourable agro-ecosystems (60% plus 37% with sites in both unfavourable and favourable areas). Only one project focused exclusively on a favourable environment<sup>13</sup>;

<sup>11</sup> PPB covers the whole research and development cycle of plant genetic improvement including: identifying breeding objectives; generating genetic variability or diversity; selecting within variable populations to develop experimental materials; evaluation of the materials (PVS); release, diffusion and seed production and distribution. It could also include assessment and improvement of policy mechanisms.

<sup>12</sup> Vernooy, R., 2001, Harvesting together: the International Development Research Centre's support for research on agrobiodiversity (results and challenges); IDRC, ms.

- ❑ Nearly 80% of the projects combined the goal of increasing productivity with that of increasing agrobiodiversity. From 1997 onwards, the projects also aimed to increase local farmers' empowerment;
- ❑ The type of participation varied considerably. Some were consultative, in which farmers have input but no decision-making power. Others were more genuinely collaborative from start to finish. A few started as consulting farmers but progressed to more equal participation;
- ❑ Gender analysis/user differentiation was integrated into 41% of the projects funded before 1997 and into 76% of those funded after 1997, whereas projects with a policy analysis component went down from 41% to 35% in the two time periods;
- ❑ Prior to 1997, SUB mainly funded NGOs (33%) and the CGIAR centres (26%). After 1997, SUB funded more work in the NARS or universities (29%), less in NGOs (18%) and about the same in the CG centres (24%).

IDRC (including SUB from 1997 onwards) made a major investment in these 44 projects over ten years. According to the internal formative evaluation, they also achieved a number of important results:

- ❑ Documentation of a rich array of specific cases of farmer maintenance of diversity in response to various environmental and economic risks in different parts of the world. The importance of this critical mass of evidence is a major contribution of IDRC;
- ❑ Development of innovative methods and tools;
- ❑ Pioneering results leading to some changes in practice such as showing that farmers use important selection criteria that were not previously used by national breeding programs;
- ❑ Production of comparative findings across cases, such as the different roles and impacts of men and women on agrobiodiversity;
- ❑ Sharing of ideas through a series of meetings and reports to get PPB onto the agendas of major players in agriculture, especially the CGIAR and national programs;
- ❑ Scaling-up and technology transfer – such as with the CIAL methodology from Colombia to many countries in Latin America; and the experience with PPB in barley from Morocco, Syria and Tunisia to Jordan and Yemen.

### 3.2 PPB Case Studies funded 2000-03

Building on the results of the earlier projects, SUB has funded additional case studies of PPB in China (maize), Ethiopia (sorghum), and East Africa (banana). Other case study work has continued under SUB's support to the PPB Working Group of the CGIAR-PRGA<sup>14</sup> as well as some important stocktaking exercises on PPB as a whole. These case studies include work on barley in Jordan and multiple crops including perennial fruits in Nepal.

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<sup>13</sup> This is no accident as participatory plant breeding has historically first been tried in those areas where farmers are already experimenting with a wider diversity of plant material or have special needs due to their difficult environment.

<sup>14</sup> System-wide Initiative of the CGIAR on Participatory Research and Gender Analysis

In Nepal, the SUB project is being undertaken by strong partners (IPGRI, the Nepal Agricultural Research Council (NARC), and an NGO - LI-BIRD)<sup>15</sup>. It is a follow-up project to earlier work that has been funded by DGIS through IPGRI and essentially fills gaps, such as market linkages and participatory monitoring and evaluation, and maintains some ongoing activities. More importantly, it supports the institutionalization of the current *in situ* programs within NARC to strengthen the sustainability of the programs over the long term (after external funds end). It also aims to directly influence the legal and policy framework for agrobiodiversity. The signs are encouraging that this will be achieved. In previous work the research teams have presented their results at a national workshop and received feedback from policymakers. Among other efforts, this has led to agrobiodiversity being included in the Nepalese National Biodiversity Action Plan and the Government's National Tenth Five-Year Plan.

The PPB project supported by SUB on barley in Jordan is likewise a follow-up project to earlier research conducted by the same researcher in Syria, Tunisia and Morocco. Like the project in Nepal, the main output is to institutionalize the PPB approach into national agricultural programs – in this case, the national barley-breeding program led by the National Centre for Agricultural Research and Technology Transfer (NCARTT), which is responsible for agricultural extension in Jordan. Two other important features of the research are trials on smaller farms belonging to poorer farmers and obtaining cost- benefit data on PPB compared to formal systems.

The earlier work by ICARDA in Syria on a cost-benefit comparison of PPB and conventional centralized breeding programs showed that there are potentially large benefits from PPB. Compared to conventional plant breeding, PPB reduced the lag time in obtaining research results and increased the yield by 10%, leading to a 90% increase in benefits. Assuming that the informal seed systems and formal extension programs work effectively, likely higher adoption for the PPB varieties would increase the benefits of PPB over conventional breeding still further. The costs of operating a participatory breeding program are about 2% more than a decentralized conventional breeding program. Clearly these are challenging results for conventional breeding and more studies comparing the costs and benefits of both approaches are urgently needed.

The project on maize in Southwest China is a Phase II activity that builds on earlier work by the researcher to assess the impact of CIMMYT's maize germplasm on poor farmers<sup>16</sup>. The earlier (doctoral thesis) work focused on the relationships between the formal and informal systems for seed selection and exchange. The IDRC project consolidates this work and takes the next step – the implementation of specific actions to develop mechanisms to link the formal and informal systems and to get key decision makers at provincial and national levels involved.

The Chinese Government has relied on the development and distribution of modern varieties (mainly hybrids) of rice, wheat and maize to achieve its goal of national food security<sup>17</sup>. The PPB research approach in the SUB project, with its participatory action research and involvement of local men and women in plant breeding and variety selection, was nothing less than revolutionary in modern Chinese agricultural research.

In January 2003, the SUB project organized the first Agricultural Biodiversity Fair ever held in China, linked to a Policy Workshop in Nanning (Guangxi Province). The Workshop included

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<sup>15</sup> Local Initiatives for Biodiversity, Research and Development

<sup>16</sup> The project is also a member of the CBNRM network in China (project 1007320)

<sup>17</sup> While hybrid maize is grown on 80% of the maize production areas in China, in the marginal upland of Southwest China, more than 80% of the maize seed comes from farmers' seed systems.

policy makers and researchers from national and provincial government bodies as well as grass root groups and farmers.<sup>18</sup> The Fair in Guangxi attracted more than 2000 people, including farmers as well as officials from Beijing and local media. It displayed 38 crops and 107 varieties including some rare local ones and some that fairgoers had not seen since the 1960's.<sup>19</sup> The project must now build on this success to convince key decision-makers of the value of PPB within the overall policy framework for agriculture in China – or at least in certain more marginal areas of the country.

### 3.3 CGIAR Systemwide Working Group on PPB

In addition to these second-generation case studies, SUB funded Phase II of the PPB work in the CGIAR Systemwide Program on Participatory Research and Gender Analysis for Technology Development and Institutional Innovation (PRGA)<sup>20</sup>. IDRC had also contributed funds for Phase I of the Program in 1995-96 (002810). An external review of PRGA was conducted in December 2000 in which two IDRC staff members participated<sup>21</sup>. Among its many recommendations was that the PRGA should focus on mainstreaming and institutionalizing participatory and gender sensitive approaches within the organizational structures and research programs of key stakeholders – chief among them the CGIAR itself – and its national partners, the National Agricultural Research Institutes.

While PVS has been relatively well accepted, one of the main blocks to acceptability of PPB within the international and national agricultural systems has been concern about the lack of scientific rigour in the breeding and selection programs and a lack of good data about the economic benefits to poor farmers. Another problem is that much of the discourse generated by the PRGA has been among the converted, particularly the social sciences working in the International Centers and NARS. The hard-core plant breeders who control most formal plant breeding programs have been left unconvinced. The SUB supported project focused primarily on reaching the core scientists of the CGIAR, NARS through three activities<sup>22</sup>:

- Impact Studies on the costs and benefits of PPB
- PRGA Quality of Science Working Paper Series.
- Workshop on Quality of Science in Participatory Plant Breeding

SUB supported the four Impact Studies, two of which have been reviewed above.<sup>23</sup> The PPB Monograph Series are an interesting set of outputs from the project that set out case studies and technical and institutional issues from the perspective of formal plant breeding (PPB Monograph 1); from the perspective of farmer plant breeding (PPB Monograph 2); with a focus on

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<sup>18</sup> Centre for China Agricultural Policy (CCAP), Chinese Academy of Science, Chinese Academy of Agricultural Science, Guangxi Academy of Agricultural Science, Guangxi University, Guangxi Department of Agriculture, Women's Federation, and local extension workers and plant breeders.

<sup>19</sup> Vernooy, R. and Song, Y., 2003, Celebrating Diversity: First Agricultural Biodiversity Fair in Guangxi, China, ms.

<sup>20</sup> This is housed at CIAT with the joint sponsorship of CIAT, CIMMYT, ICARDA and IRRI.

<sup>21</sup> Prain, G. *et al*, 2000, CGIAR Program on Participatory Research and Gender Analysis: Report of the Internally Commissioned External Review; ms.

<sup>22</sup> PRGA, 2003, Final Report on *Improving technology development through Gender Analysis (Global) II*; report submitted to IDRC Centre file 100827; 31 August 2003

<sup>23</sup> These were conducted by ICARDA on barley in Jordan; WARDA on rice in West Africa; Empresa Brasileira de Pesquisa Agropecuaria (EMBRAPA) in Brazil; and LI-BIRD on multiple crops in Nepal.

Biotechnology assisted Plant Breeding (PPB Monograph 3) and on PPB and Gender Analysis (PPB Monograph 4)<sup>24</sup>.

The PRGA Workshop (held at IPGRI, Rome, Sept-Oct 2002) brought together some of the leading practitioners in PPB with genetic resource scientists from seven of the CG Centers, and experts from NARS in five countries and from universities and NGOs. The goal of the workshop was to assess critical advances in the social and biological sciences that are shaping PPB practice; to evaluate PPB's impact to date; and to identify the key scientific challenges in PPB.

The workshop participants identified ten key issues that need addressing (Box 11).

**BOX 11: PRIORITY ISSUES IN PPB**

- Joint priority setting by both farmers and plant breeders
- Trial designs that are agreed on and understood by all partners
- Start with farmers' criteria for evaluation and add other criteria in consultation with them
- Much more work needed on the impact and cost: benefit of PPB
- How to scale up – through NARS, Farmer Research Committees or farmer-breeding clubs
- Find PPB methods can be scaled up in practice
- Better documentation of the complementarities between conventional and participatory plant breeding
- Protection of farmers' rights on "joint products" developed through PPB
- Stronger focus on biodiversity in PPB
- PPB and biotechnology.

Some of these priority issues are similar to SUB's own explorations of new thematic areas (such as protection of farmers' rights through fair Access and Benefit Sharing (ABS) and the current Centre-wide discussions about biotechnology and Genetically Modified Organisms (GMOs). Other priority issues identified by the workshop parallel the recommendations in section 11 that we make for SUB in the light of this review (such as more attention to cost: benefit data).

#### **4. MEDICINAL PLANTS**

The use and conservation of medicinal and aromatic plants (MAPs) is a major programming area for SUB with 57 projects being implemented within this review period. A formative review of the Centre's work on MAPs and a related one on indigenous knowledge were made available to us and these provided important documentation. We were able to examine, therefore, the projects funded in 2000-2003 within a broader historical context.

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<sup>24</sup> See Annex 2 for full references.

The formative review which was done in 2001 only came up with the final report in February 2003. From this, the SUB team prepared the Medicinal Plants Review and Strategy Document (April 2003).

#### **4.1 Evolution of IDRC's work on medicinal and aromatic plants**

The WHO estimates that more than 80% of the world's people rely mainly on traditional remedies to address their health needs. Because of the many problems linked with the use of chemical-based drugs and modern medicine, there is an increasing demand for MAP raw materials and derived products and alternative health treatments which are basically traditional health remedies and practices. In 2002, WHO estimated that the global market for traditional therapies is around US\$60 billion a year and 25% of modern medicines come from traditional medicinal plants.<sup>25</sup>

The increasing demand for medicinal and aromatic plants (MAPs) in the global market is both an opportunity and a threat. It is an opportunity because it has the potential to improve the livelihoods of the indigenous peoples and local communities, the main stewards of these resources. It is also an acknowledgment of the validity of the traditional knowledge on MAPs which has evolved over centuries. However, it is also a threat because it can lead to the further loss of control and access of indigenous peoples and local communities to their resources and knowledge. It can also hasten the loss of species and genetic diversity on MAPs because of habitat destruction, unregulated and unsustainable harvesting and lack of or inappropriate government policies.

IDRC has been at the forefront of supporting research and developing partnerships which clearly linked traditional medicine with local and culturally appropriate livelihood and health options and conservation and sustainable use of MAPs. Support for research in medicinal plants, traditional medicine and associated local and indigenous knowledge has started in 1975 which means this has been going on for almost thirty years now.

The formative review covered 184 projects which were supported by IDRC between 1975 to 2001. These projects were implemented in 51 countries in three regions (Box 12).

As this formative review mainly focused on projects funded prior to the establishment of the SUB PI, the SUB team produced a review and strategy document on SUB medicinal and aromatic plant projects that looked at this theme through a biodiversity lens.

The many years of championing research into MAPs by IDRC and support to researchers and projects, has led to the adoption of new research approaches and has increased the visibility of MAPs and concern about them.. The clear interlinkages between conservation and sustainable use of the biodiversity of MAPs and the role of these in primary health care, livelihoods and cultural identity of indigenous peoples and communities were pioneered and firmly established by IDRC research. Many research projects supported by IDRC in the 1990s generated basic information such as species distribution, ethno-botanical usage, propagation technologies and potential for value-adding through processing and marketing.

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<sup>25</sup> World Health Organization, Geneva, 2003, WHO Traditional Medicine Strategy 2002-2005, WHO/EDM/TRM 2002.1. 61 pages. (cited by the draft IDRC Medicinal Plants Review and Strategy Document, April 2003)

**Box 12: Regional Distribution of MAP Projects and Research Support Activity (1975-2000)**

Regions	Countries	Projects	RSA
Asia-Pacific and Oceania	11	37	3
Africa and the Middle East	25	54	22
Latin America and the Caribbean	15	31	11
International		9	17

MAPs and the traditional knowledge associated with it have not remained just a local issue. These are now subjects of negotiations for policy and programs at the national and global arenas. Intergovernmental bodies like the CBD, the WHO, UNESCO, WIPO and now WTO, among others, have working groups or agenda items around traditional knowledge, access and benefit sharing and intellectual property rights related to MAPs.

#### **4.2. IDRC work in MAPs (2000-2003)**

The wild habitat still remains as the primary source of MAPs for both traditional use and commercial product development. Thus, focus of the SUB work on MAPs for Phase 2 has been on local *in situ* practices of conservation and enhancement of the knowledge and practices in wild habitats. However, some support for small-scale domestication and cultivation has also been given in this present phase. These are elaborated in the review and strategy document of SUB for Phase 2, including research questions and strategies for a future research agenda.

The main areas which were identified as the focus of SUB MAPs work in this phase are around sustainable management, livelihoods and primary health care. Cutting across all these are the themes of gender, indigenous knowledge and policy. The projects supported within this review period contain one or more of these components. A summary of these and research questions which have to be addressed are as follows;<sup>26</sup>

##### **4.2.1. Sustainable Management**

Support around this has mainly been around species conservation in the natural habitat. This is different from agrobiodiversity which deals more with varietal conservation. There is a limited but increasing support to cultivation. Support has also been given to projects which are aimed at developing and testing appropriate gender-sensitive practices in production and management systems including sustainable harvesting practices, community-based participatory monitoring, and policies to support local and equitable access to medicinal plants and other non-timber forest

<sup>26</sup> Medicinal Plants Review and Strategy Document, April 2003. Draft for Comment

products. Out of 57 projects funded for this phase, eighteen are dealing with sustainable management. The research questions which are addressed are **how can local knowledge on medicinal plants be integrated in sustainable management strategies and what are the best practices in sustainable use and management and equitable participation?**

#### 4.2.2 Livelihoods

Fourteen out of 57 projects are focused on livelihoods. In areas where projects are being implemented, most of the people rely on medicinal plants for their basic livelihood needs. There are serious issues around inequalities in benefit-sharing and decreasing availability of these resources to the poor. Since one option is towards domestication and cultivation of wild species of MAPs, it is important to identify the **technical and social issues** (social and biological impacts) which need to be addressed as a result of these. Work has been on developing propagation techniques and community-based small scale production which includes household-based agroforestry and homegardens and the linkages of these with the industry and the market.

**Another question is what are appropriate strategies to ensure more equitable benefit-sharing?** Support has been given to gender-sensitive value-added technologies (primary processing, storage and drying) which increase returns to local and small-scale harvesters and producers.

#### 4.2.3 Primary Health Care

There are four projects dealing with primary health care. Despite the increasing recognition of the value of traditional medicine, discriminatory and outdated views on this still prevail among many government health officials and employees. There may be value in making available existing information more widely on the safety and efficacy of plant-based medicines and treatments. Earlier and existing projects are doing this. At the same time work with traditional healers to improve their practices is also needed. Key research questions are: **what are local knowledge and practices on medicinal plants for health care and how can these be maintained and enhanced and how can traditional medicine be integrated into public health services?**

#### 4.3. Case studies of MAPs Projects (2000-2003)

##### BOX 13: PROJECTS REVIEWED

45010/8302	Medicinal and Aromatic Plants Program in Asia (MAPPA)
100763	Conservation of Medicinal Plants for Sustainable Livelihoods in Nepal
100859	Establishing an OAU Decade on Traditional Medicine and Medicinal Plants
55305/5581	Medicinal Plants and Biodiversity (Uganda) 11
100367	TRAMIL – Central America: Network on Medicinal Plants: Phase 111 Conservation
100568	Conservation of Embera and Kuna Medicinal Plants and Associated Traditional Knowledge.Phase 11

The projects examined in greater detail are given in Box 13.

#### 4.3.1 MAPPA (Medicinal and Aromatic Plants Program in Asia)

MAPPA (-45010/98-8302) was launched on April 1 1998, focusing initially on activities in South Asia, with existing IDRC funded projects and co-funding support from the Ford Foundation, New Delhi. It has evolved to be a network which supports research and small projects. The approach it has taken is knowledge-based and multistakeholder participation. The strategies it adopted are the development of methods for *in-situ* conservation of genetic resources, value-adding processing and utilization methods, socio-economic and cultural benefits, and promotion of traditional knowledge and necessary support services which include marketing and information.

The program currently supports 19 projects throughout South Asia, nine of which address conservation issues; six address traditional medicine and health care; and four address issues of MAP commercialization and their contribution to sustainable livelihoods. Project methodologies, results and experiences are shared and disseminated through the network. Apart from funding, the network provides considerable mentoring, technical and research support to partners, and brings together non-traditional partners such as policy makers, private sector, donors and representatives of farmers, indigenous and local communities into a multidisciplinary research process.

MAPPA has facilitated the development of institutions and programs of governments that address the need for more coherent policies and programs on medicinal and aromatic plants and traditional medicine. As a result of its work, the National Medicinal Plants Board in India and the National Medicinal Plants and Non-Timber Forest Products (NTFP) Development Committee in Nepal were created. Aside from this it enabled the declaration of 5 States of India as Herbal States. As a result of thorough discussions and debates with multistakeholders in the new State of Chhatisgarh in India, it is now taking the lead in the production of organic and certified medicinal and other non-timber forest projects.

An external evaluation<sup>27</sup> of MAPPa was done in early 2002 and this highlighted the following as the achievements of MAPPa.

- **Major thematic contributions to research:** development and transfer of technologies for the domestication and cultivation of medicinal plants on private farm lands and community and household gardens; sustainable harvesting methods; cultivation of MAPs in community maintained forests; developing marketing strategies and relationships with industry buyers and training local community members in market integration; supporting traditional healers and MAP based health care delivery systems as culturally appropriate and affordable options for health care; safety and efficacy studies.
- **Institutional Capacity Building:** logistical, technical and research support to partners particularly in the early phases of proposal and project development.
- **Community Capacity Building:** most MAPPa projects integrate community capacity building components in their program. This is done with the most marginalized groups such as the dalit and tribals.

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<sup>27</sup> Medicinal and Aromatic Plants Program in Asia (MAPPA): Mid-term Evaluation Report, Carolyn Switzer, Lead Evaluator, Nirmal Bhattarai, Co-Evaluator. 2002

- **MAPPA as a neutral convener:** Since MAPPA is formed as a program for research and not as a ‘member organization’ or a formal network, it is seen as a neutral convener and relationships with its partners are mutually beneficial and iterative.
- **Effective local level research and dissemination:** The small grants mechanism facilitates research at the local level for both emerging and established research institutions.

#### **4.3.2. Conservation of Medicinal and Aromatic Plants for Sustainable Livelihoods in Nepal**

This project (100763) is a pilot collaborative project between MAPPA of IDRC, South Asia Regional Office and the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) which was designed and implemented since Sept. 2001. The main partners of this project are FECOFUN (Federation of Community Forestry Users Group, Nepal) and various village level forest user groups (FUGs), organizations, and cooperatives in the Far-Western District of Darchula. The main objective of the project is to improve the livelihoods of the collectors, small-scale growers and traders of Darchula by increasing the benefits from conservation and sustainable use of medicinal plants. Focused target groups are the most marginalized which includes the *dalits*, women and tribals. The government agencies involved are the Ministry of Forests and Soil Conservation and its District Forest Office in Darchula.

Two years after the project began it has achieved the following;

- Initiated conservation and management systems for MAPs in natural forest areas and promotion of trial conservation of deserving species in the degraded forests and marginal lands.
- Identified the institutional and organizational gaps of district FECOFUN, community forest user groups and local organizations within the project area. This has led to the institutional development and organizational strengthening of the community based organizations.
- Research and information and community-based forest enterprise development was facilitated. Market studies were done which identified major MAP species and products, opportunities and constraints in the existing trade of NTFPs (non-timber forest products) and the opportunities and strategies to improve the benefits and access of marginalized groups to these NTFPs. Monitoring plots, trial plots, research nurseries and demonstration plots were established for the most valuable MAP species (e.g. *Cordyceps sinensis*, *Juglans* species, *Swertia chirayita*, etc.) Skills training for entrepreneurship, accessing market information and networking were done.
- Policy proposals were developed which addressed better royalty rates for the MAPs which were traded and regulatory policies for trading and harvesting.

#### **4.3.3. OAU Decade on Traditional Medicine and Medicinal Plants**

The establishment of the OAU Decade for African Traditional Medicine (2001-2010) through project 100859 is a major accomplishment that was achieved due to the effective lobbying skills of SUB PI staff at the IDRC Regional Office for East and Southern Africa (ESARO) together

with their partners. The idea evolved from a conference<sup>28</sup> supported by IDRC in 2000. The participants requested African governments and the Organization of African Unity (OAU) to adopt a decade devoted to the promotion and development of medicinal plants, traditional medicines and pharmacopoeia in Africa. This aims to draw public attention to both the heritage of African traditional medicine and to address the pressures faced by this. Through a well-planned lobbying strategy the Governments of Uganda, Madagascar and Ghana tabled a resolution on the Decade at the OAU Summit which was held in Lusaka, Zambia in July 2001.

The Declaration was adopted at the Summit with the Assembly of Heads of States recognizing the important role of traditional medicine for African societies and calling upon all governments of Africa to acknowledge and build upon the traditional knowledge and plant resource-base to help achieve health for all. The Declaration also reiterated “*its commitment and support to the ongoing process initiated by the General Secretariat of elaborating an African Model Law for the Protection of the Rights of Local Communities, Farmers and Breeders and for the Regulation of Access to Biological Resources*” (OAU/AHG/Dec 164 XXXVII, 2001). The SUB PI was also instrumental in the process which led to the formulation and adoption of the OAU Model Law. This idea came from the *OAU/STRC/DEPA/KIPO Workshop on Medicinal Plants and Herbal Medicine in Africa: Policy Issues on Ownership, Access and Conservation* (Nairobi, April 1997) which was also supported by IDRC.

These successes have far reaching effects in influencing national government policies and programs and also in strengthening their negotiating positions in multilateral bodies. There are now pending bills on traditional medicine in Uganda, Tanzania and Kenya. In Kenya, the “*First National workshop on Medicinal, Aromatic and Other Underutilized Species in Kenya*” was held from 29 October – 3 November 2001. The theme was “Towards the promotion of medicinal and other under-utilized plant species for socio-economic development”. One major output of this is a “*Strategic Plan of the Kenya Working Group on Medicinal and Aromatic Plant Species for the period 2003-2008*”.

The African model law has been used extensively by the governments. The impetus for the model law was to provide African governments with a basic text that they could draw on in drafting national legislation to comply with their evolving rights and responsibilities under international law. It specifically aims to help Africa implement the Convention on Biological Diversity (1992), the WTO TRIPS Agreement (1996) and the provisions of the FAO Undertaking on Plant Genetic Resources which has since become the International Treaty on PGRFA (2001). The Model Law is tailored to African perspectives and realities, and tries to help governments deal with external pressures to introduce laws which may not serve Africa’s interests or needs.

#### **4.3.4. Medicinal Plants and Biodiversity (Uganda) II**

The aim of the Phase 1 of this project (55305/98-5581) was to identify local perceptions of medicinal plants and their usage, and ways and means to improve the availability of the rarest and most endangered species. The second phase seeks to enable a larger community within Uganda to be aware of both the health and economic advantages of preserving biodiversity of medicinal plants and to help develop the expertise of traditional healers, ethnomedicine researchers and

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<sup>28</sup> International Conference on Medicinal Plants, Traditional Medicines and Local Communities in Africa: Challenges and Opportunities of the New Millennium, Hosted by ELCI (Environmental Liaison Centre. International) and Global Initiative for Traditional Systems of Health (GIFTS of Health) Nairobi, Kenya, May 2000.

health workers to investigate the safety and efficacy of widely used traditional medicines for common ailments.

The project built on a previous ethnobotanical survey which identified 114 families, 336 genera and 1,130 species of medicinal plants which covered 4 districts of Uganda with different ecosystems (highlands, high altitude forest, lowland rainfall areas, and savannah). The National Chemotherapeutic Research Laboratory together with traditional healers, local communities and health workers investigated 15 plant species which were rare and endangered. Gardens and nurseries were established for the propagation of these 15 plants and other species introduced by traditional healers.

Community leaders, traditional healers, researchers, government officials from the National Environment Management Authority to train local communities, vendors, collectors, teachers and schools were involved. Results were disseminated widely in local newspapers, television, radio, brochures and through cultural forms like poems, dances and drama. This has influenced government leaders to acknowledge the role of traditional healers and to integrate them into the health care system in Uganda. Traditional medicinal practices were also included in the curriculum of medical schools and even in secondary schools.

A national traditional healers association was formed and this has representation on the Board of National Drugs Authority. Working committees for the project are set up in the 4 districts and these include three traditional healers and one birth attendant and three government representatives. Safety tests are carried out by the Department of Pharmacology and Therapeutics, Makerere Medical School on 58 plant species used by traditional healers on 19 priority diseases. Herbal Centers for Traditional Medicine are being constructed. The Ministry of Health together with the Project leader managed to get the Government to allot an annual grant for the project.

#### **4.3.5. TRAMIL Central America: Network on Medicinal Plants III**

TRAMIL (Traditional Medicine for the Islands: 100367) was launched in the Dominican Republic in 1982 by ENDA-Caribe to address problems related to the loss of traditional valuable knowledge of plant-based medicine and the disappearance of useful plant species. This is a multidisciplinary network which linked public and private research organizations, NGOs concerned with biodiversity conservation and public health, public health agencies and local communities to undertake research on the ethnopharmacology and traditional health practices of communities in 18 countries of the Caribbean Basin.

Its goals are: revaluation of cultural traditions using medicinal plants; provision of a scientific basis for the rational application of traditional health practices using medicinal plants based on criteria of efficacy and safety and ; identification of significant interactions between medicinal plants diversity, local people and tropical rainforests as a basis for conservation management.

TRAMIL researchers evaluated over 150 commonly used plants by rural mothers by looking at the chemical profiles of these plants and identifying the potential dangers. The results are put together in a Caribbean Pharmacopeia and these are disseminated in popular forms such as pamphlets, videos, music, dance, puppet shows and community meetings. Universities are now using this Pharmacopeia in their health education curriculum. Some impacts are as follows;

- Credibility of the use of medicinal plants has been raised because of the rigorous scientific evaluation undertaken. Health professionals and health ministries now use medicinal plants as a component of cost-effective, primary health approach.
- Collaboration with health officers led to a Central America wide meeting of health ministry representatives in 1999. This meeting supported the TRAMIL proposal for the use of medicinal plants and provision of technical support to health and education institutions.
- Involvement with local and national conservation strategies to preserve biodiversity and ensure sustainable use of medicinal plants. Germplasm was collected in all TRAMIL countries to be used in reference/teaching gardens (e.g. Agro-ecological demonstration garden in Costa Rica, herbarium in Nicaragua, etc.) A Herbaria network was established and medicinal plant gardens are set up in many communities and schools.
- Research capacities are developed in TRAMIL countries and institutions.

#### **4.3.6. Conservation of Embera and Kuna Medicinal Plants and Associated Traditional Knowledge Phase II**

The objective of the second phase of the “Conservation of Embera and Kuna Medicinal Plants and Associated Traditional Knowledge” project (100568) is the conservation of medicinal plants by maintaining, promoting and enhancing traditional knowledge of the species utilized by the Embera and the Kuna. The first phase involved the development of conservation strategies for non-medicinal plant species near Embera communities.

The methods used were the collection and identification of important medicinal plants species important in each community, recording of the environmental characteristics of their habitat, literature search and data on the toxicity and active components of these plants, and questionnaires to get answers on how traditional knowledge is transmitted. This is a project where close collaboration between different actors was involved; McGill University, University in Panama, Fundacion Dobbo Yala and the Emberas of Ipeti-Embera and the Kunas of Ukupseni.

The key achievement for this phase has been the development and nurturing of women’s leadership and gender participation in the project. This involved the inclusion of village nurses and midwives and women apprentices in the research process and as beneficiaries. This was made possible because of the presence of a highly motivated team of researchers and the selection of progressive villages which have assertive women. The most important lesson learned is that a truly participatory research requires good leadership, dedicated researchers and full involvement of the local community in the research process.

In terms of new methodologies and innovations, there are several lessons or insights reached by the researchers;<sup>29</sup>

- The cultural differences which exist between the researchers and two indigenous communities, as well as between the Kuna and the Embera made it difficult to apply the standardized, concise methodology that characterizes scientific research. A strong emphasis on community-based action and learning without formal academic

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<sup>29</sup> 26 April 2002 report of Dr. Barrios and Dr. Potvin and 8-14 March 2003 Trip Report of Merle Faminow

research component was seen as more important to ensure conservation and transmission of indigenous knowledge.

- The cross-cultural and cross-gender analysis led to the conclusion that the treatment of complex diseases required use of more plants and thus the importance of extensive conservation of plants habitats cannot be overemphasized when we talk of conservation of traditional medicinal systems.
- The historical context where western scientists exploited indigenous peoples for their resources and knowledge compelled the researchers to be very culturally sensitive in carrying out the project. Transparency about the work and information being sought were crucial in gaining the trust of the people.
- Human resources are more important sources of information than using databases to access scientific papers. Searching through databases for information on plant toxicity was short circuited when they visited people in the university and research institutes who worked on this issue.
- The problem met the criteria set by the IDRC. The request to study the toxicity levels of plant species does little to further the conservation goals of the project. It is difficult to test a specific compound's effect on a particular pathogen in order to demonstrate a cause-effect relationship between a plant's active component and its pharmacological effects. Many traditional remedies are mixtures of plants and involve cultural and spiritual elements through rituals. There is a need to develop alternative methods of verifying the safety and efficacy of traditional medicinal plants such as cross-cultural analysis of medicinal plant use.

#### 4.4. Closing the loop in MAPs

The case studies presented earlier do not cover all the projects which were supported during this phase, but they are representative enough that we can make some observations about how effective the work has been in closing the loop in regional and national policy structures related to biodiversity conservation, traditional knowledge and primary health care.

All five projects reviewed are either second phases of existing projects or pilot projects of larger programs. Therefore, the capacities of the project leaders are relatively well developed. The cases reviewed show the following;

- **Policy changes in the regional, national and local levels.** These range from the regional declaration of a decade on traditional medicine and medicinal plants; the formulation of national bills on traditional medicine; national strategies and action plans on MAPs; to the integration of traditional medicinal plants and traditional medicine into the national or local health care delivery systems or into the curriculum of secondary schools to medical schools; allotment of government budget for work on MAPs.
- **Informing multilateral bodies and international institutions:** The results of the work on MAPs are shared and discussed in global formations like the International Union for Research on Forests, World Forestry Congress, CIFOR, Expert bodies of the

Convention on Biological Diversity, WHO, WIPO Intergovernmental Committee on Traditional Knowledge, and even the WTO.

- **Institution building or institutional changes which involve multistakeholder participation:** National committees or boards on medicinal plants or non-timber forest products; working committees for MAPs projects; national or local traditional healers associations; community-based organizations; creation of herbal states and herbaria networks.

#### 4.5. Assessment of MAPs Work

The SUB Prospectus (2000-2004) reiterated the call of the IDRC senior management and the recommendations from the 2002 External Review that in the work on MAPs “there should be a clearer definition of SUB PIs ‘niche’ and a stronger articulation of the scientific basis for research supported within this theme.” It also cited the need to strengthen research partnerships, particularly for projects involving research on safety and efficacy of traditional remedies, and to examine program structures that will encourage resource expansion and collaboration (e.g. Global Medicinal Plants secretariat, regional and global electronic networks, regional “benchmark” or Centres of Medicinal Plant Diversity projects).

The niche that IDRC has developed in medicinal plants research has been identified in the Medicinal Plants Review and Strategy Document (2003) and these are the following;

- Focus on applied research (rather than development-oriented activities)
- An integrated program linking sustainable management and use; sustainable livelihoods and income generation; health and nutrition; and issues of gender and equity especially in relation to access and benefits from these resources.
- Multistakeholder approach – IDRC has managed to bring together diverse interest groups such as conservationists, industry, traditional healers, government people, health care professionals.
- Global issues are contextualized in particular regional realities. The unique development of the various regions determines the focus and orientation of the MAPs work.
- Explicit southern focus for southern needs and priorities.
- Local/community based in situ conservation and community-management
- Specific attention to local and indigenous knowledge and practices
- Issues of gender and social equity, access and tenure are addressed.

Our overall assessment of the work of the SUB PI on MAPs is extremely positive. The work around MAPs in IDRC has a span of almost three decades so the SUB PI Phase 2 program has the advantage of building on the gains and lessons learned within this long period.

In our review of the SUB PI performance 2000-2003 the strengths which we can cite are:

- **Democratization of research through the use of multidisciplinary and interdisciplinary research approaches:** New methodologies and approaches to research which involves not only parallel inputs from different disciplines but also interaction between them emerged as crucial in achieving the objectives of the MAPs work. The convergence of formal science and local and indigenous knowledge has been shown in the research on MAPs.

- **Effective capacity and strategies of SUB MAP staff and project partners for policy and institutional changes:** This has brought about policy and institutional changes in the regional and national levels.
- **Multistakeholder processes and mechanisms:** Almost all of the cases ensured multistakeholder participation in the projects. These usually involve community representatives (which may include women and indigenous peoples, collectors), traditional healers, researchers and scientists, government officials (forestry, environment or health ministries) representatives of industry and NGOs. It is to the interest of all these actors that the biodiversity of medicinal plants is conserved.
- **Cadre of committed and dedicated SUB PI staff and partners** doing work around the theme of medicinal and aromatic plants. The SUB team members and researchers working in this area are exceptional persons in terms of their capacity to lead the research, policy advocacy work, and networking.
- **Establishment of the scientific basis of traditional medicinal plants and traditional medicine.** This entailed the application of traditional and laboratory science to develop methods for safety and efficacy evaluation. The research results which established the scientific basis of indigenous and local knowledge on medicinal plants is important in changing the mindsets and values not only of the dominant population but of the young indigenous women and men who are the ones who will inherit and ensure that this knowledge will not be lost.
- **Exploration of diverse ways and means to improve livelihood options for the most marginalized peoples who nurture and depend on medicinal and aromatic plants.**
- **Regional and national contextualization of MAPs work.** While the work is done in the developing world, there are distinct regional, national, and local specificities that will define what the priorities and approaches are most effective.
- **Establishment of formal and informal networks on MAPS in the regional, national and local levels.** The existing networks and the new ones which were recently established have ensured linkages within and between regions, enriched the sharing of experiences and resources between them and facilitate the flow and communication of research results. The regional networks are: TRAMIL, Southern Cone Medicinal Plants Network, Eastern Africa Network on Medicinal Plants and Traditional Medicine, and MAPPA. The Global Network is MEDPLANeT which is more of a virtual network.

**The areas where more work needs to be done are as follows;**

- Greater articulation and focus on how the rights of indigenous peoples and local communities to their genetic resources and knowledge can be recognized and protected and how access and benefit sharing schemes are working or not for them. The Crucible 11 project contains draft model legislations and policy options to regulate access and to ensure possible benefits of the IPR (intellectual property rights) type and the non-IPR type (e.g. recognition of land and resource rights, community registries of biodiversity, etc.). GRPI was designed to use the products of

the Crucible Project 11 to help build capacities of governments and indigenous and local communities, especially in the South, who can benefit from these. GRPI, if implemented as conceived, can contribute substantially to this challenge.

- The objectives of the SUB-PI Prospectus clearly states that it will “Support the creation of models of policy and legislation that recognize rights of indigenous peoples and local communities to genetic resources and to equitable sharing of benefits on the use of these resources in the context of IPR regimes.” The reviewers would like to question what the team means when they say “..in the context of the IPR regimes”. In the Crucible Project 11 and also in the report done on this issue<sup>30</sup> it was established that many indigenous peoples’ organizations do not agree that the only way their resources and knowledge can be protected is through the use of the IPR regimes. Thus, non-IPR ways of protection like community registers, recognition of indigenous peoples’ land rights and resources rights, among others are being proposed as more effective and appropriate ways for protection. The reviewers would like to propose to the SUB-PI team to review the way this objective was phrased and see whether this is consistent with the observations they gained in the work in MAPs and also in agrobiodiversity, especially as it relates to indigenous peoples.
- The further development of cross-cultural analysis of medicinal plant use and alternative methods of verifying the safety and efficacy of herbal remedies. The efficacy of traditional medicinal plants and traditional medicine does not just lie with the chemical properties or active principles in the plant. The cultural and spiritual practices that accompany the use of these traditional medicinal plants contribute to the efficacy. How this can be integrated into the research processes remains a challenge.
- Gender-mainstreaming – while there are some successes in integrating gender into the work, much more remains to be done. The exchange of experiences between the implementers and researchers can provide more insights on how to be more effective in integrating gender.
- Correlation between MAPs and agrobiodiversity work. The continuum between nutrition-health-food security-sustainable livelihoods has already been recognized by the SUB PI team. The work on under-researched species or uncultivated food plants was seen as an area where the convergence is clear. Thus, there has been an increase in the number of projects on this within the past two years. What may be considered in the future can be impact analysis studies on the changes on state of health and nutrition of communities where these projects were implemented. These studies can also show how their livelihoods have been improved.
- More research and discussion on the tension between conservation and use. There are still issues on how the balance between these two can be maintained.
- There needs to be more internal assessments or studies done which can show more concretely what the changes have been in terms of how the most marginalized (dalits, tribals, women, indigenous peoples, ethnic minorities, etc.) have been empowered and how and what are the new capacities they developed due to the support of SUB-PI.

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<sup>30</sup> Harrison, Kate, Community Biodiversity Registers as a Mechanism for the Protection of Indigenous And Local Knowledge, Jan. 2000.

## 5. NETWORKING

Networking is a key strategy for SUB to scale its research work up and out. SUB is supporting several networks at regional and global levels. These include:

- Traditional Medicine for the islands (TRAMIL)
- Medicinal and Aromatic Plants Program in Asia (MAPPA)
- Eastern Africa Network on Medicinal Plants and Traditional Medicine
- Southern Cone Medicinal Plants Network
- Participatory Research and Gender Analysis Systemwide Program (PRGA)
- Scientific Basis of In Situ Conservation
- South Asia Network on Food, Ecology and Culture (SANFEC)
- Community Biodiversity Development and Conservation program (CBDC)
- Genetic Resources Policy Institute (GRPI) case studies
- MEDPLANeT

Although each network has its own research objectives and set of participating institutions, the SUB networks share a number of common traits. They combine both a research function and a policy/advocacy function. The research function is to develop and share methods and results as well as skills across research groups and to achieve capacity building within the institutional framework of the network. Research networks sharing research questions and using similar methods have the advantage of comparative method and comparative findings to take their research results to the next level.

The policy/advocacy function is to help researchers use the greater leverage of the network to scale up their results to the national or regional levels to reach potential users and to achieve, if possible, policy impact. The network helps the participating research groups to do this by expanding the range of possible opportunities when policy makers are receptive to any research messages. Policy makers are also more likely to value messages coming from researchers in their own country if it has been “packaged” as part of a larger set of regional or even international experiences. Thus the network helps to validate the local research for the national (and perhaps even local) policy makers.

In addition to supporting exchange of information and policy, a few networks are moving into technology transfer. For example, MAPPA has helped bring together the policy makers, researchers, and civil societies of participating countries to share experience, exchange information and *materials* such as improved MAP germplasm and market information.

This is done by sharing information such as national bio-legislation, and protocols for market information exchange. For example, Nepal and India already have recently signed an MOU to exchange biodiversity, scientific and technological information and materials. SUB’s GRPI project with IPGRI in Nepal will also be part of the network. Similarly SUB’s partnership with FAO (which already has agreement among countries for the exchange of plant materials) can assist SUB in facilitating the process of organic certification. MAPPA has been helping the national and local partners to be informed of the

prevailing legal frameworks and to work within rules and regulations of the country concerned.<sup>31</sup>

These are all clear benefits of SUB's research networks and our interviews with project leaders support SUB's view that networks are one important way of building the capacities of individuals and their institutions for research and policy impact.

The question is perhaps not so much about the benefits (although some better specification of their value-added would be useful) but what are their costs? These costs particularly accrue to the coordination and "animation" of the network, but also may relate to perceived or real constraints in freedom of action, or over-conformity in conceptual and methodological approaches at the cost of innovation. This is not to imply that the SUB networks have any problems of this nature, but simply to indicate that there are probably some downsides to networks that any future strategy needs to take account of. Networks do sometimes go wrong and work against some of the very purposes for which they were started and it is important to consider what the indicators of impending difficulties might be as well as the more common measures for success and failure.

The experience of the CBDC has shown that while the existence of the network has helped facilitate the sharing of experiences and the harmonization of some conceptual and methodological tools, some of the members feel that the diverse situations where they are located made it difficult to conform to these. Even their capacity to use their experiences to influence policies at the global level are very limited because their main work is really at the local level and the arrangements they created to influence global processes have not worked very well (see section 7.2. under 'Weaknesses of the CBDC T-line').

Several of the projects that we reviewed in detail are network projects and from these our assessment of SUB's overall use of networks and its strategy is positive. SUB has a clear strategy, particularly for using networks to scale up and out, and has put in place some very important and influential regional and global networks. We would recommend in the future that SUB might wish to do a comparative evaluation of its networks, including interviews with project leaders, to see where there are opportunities to make the networks even more effective. It would also be useful to identify and track some indicators for monitoring the networks

## **6. CAPACITY BUILDING**

### **6.1. Gender and equity analysis**

SUB is a leader within IDRC for promoting gender and equity analysis in its projects and throughout the conceptualization and implementation of its program. This stems from the early recognition that the sustainable use of biodiversity has significant gender and equity dimensions. The roles of men and women are differentiated for health care, for food security, seed selection, harvesting of wild plants, and for the nutrition of their families. Different families have different degrees of access to and control over the resources they use depending on their social and economic status. Research into the sustainable use of biodiversity therefore must take account of

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<sup>31</sup> Karki, M., 2002, MAPPA's Accomplishments; IDRC, ms.

these differences. To that end, SUB has supported both projects looking at these differences and provided research tools to help researchers to take gender and equity issues into account.

SUB has developed *Guidelines for Incorporating Gender Analysis into Biodiversity Research*<sup>32</sup> and since the beginning of the second program cycle, when it established gender/equity analysis as one of its three program objectives, SUB has expected that all its projects will include attention to gender/equity differences. SUB and MINGA supported a Gender Analysis workshop in Cuba in May 2000 and began a series of gender sessions in its SUB team meetings. In May 2001 SUB worked with the Centre Gender Unit to elaborate an evolving thematic area on *Land tenure, gender and globalization*. This was followed by a professional development seminar for the SUB team on the same theme in November 2001. In 2002 SUB prepared a literature review on *Gender and Resource Tenure* and collaborated with CBNRM on an innovation project *Building capacity for social/gender analysis in Asia: An Umbrella Program (101095)*. SUB also completed the first phase of a mid-term evaluation.<sup>33</sup>

We have documented SUB's activities for incorporating gender/equity analysis into its work to show what care and resources SUB has invested. The foundation of SUB's strategy was that gender mainstreaming in its projects depended first on mainstreaming gender among the PI team since they are the ones that engage directly with the researchers. The midterm evaluation reports a high awareness among the SUB team of gender/equity and the systematic use of a checklist in developing proposals that ascertain whether appropriate attention is given within the research design. The weakness in the strategy is that presence/absence does not signify much about the quality of the gender/equity analysis to be done within the project nor how far the researchers really understand and have the capacity to undertake the analysis. The midterm review found that more effort was put into ensuring that gender/equity analysis was in the project *proposal* than appeared to be systematically applied during follow-up monitoring visits with the researchers.

SUB has also found that gender/equity analysis has different cultural contexts in the different regions in which it works and that in West Africa, for example, it is politically charged. This means that regionally sensitive gender/equity support tools are needed rather than one set of universal Guidelines. These difficulties are compounded by a lack of social science expertise in many projects. The midterm review found that this meant many project proposals that identified gender issues did not have the methodologies to implement gender/equity analysis, and only 2 of the 10 projects reviewed included gender/equity training in their workplans<sup>34</sup>.

One of the downsides to a special emphasis on gender/equity analysis is that it is isolated from the overall research framework and tends not be reintegrated at the final stages of synthesis and conclusions. It is often left hanging as a separate side-issue in the analysis. The midterm review concludes that capacity building for researchers constitutes the biggest single challenge to mainstreaming gender/equity at the project level.

In proposing the way forward, the midterm review has a number of proposals. At the project level, these include looking for regionally based opportunities to build the capacities of researchers; strengthening the monitoring and support provided to researchers by IDRC staff; and using "social analysis" rather than gender analysis as the entry point. At the level of the SUB

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<sup>32</sup> Adamo, A. and Hovoka, A., 1998, *Guidelines for Integrating Gender Analysis into Biodiversity Research*; 16 July 1998; IDRC; ms.

<sup>33</sup> Adamo, A. K., 2002, *Mainstreaming Social/Gender Analysis in the Sustainable Use of Biodiversity Program Initiative: Mid Term Evaluation*; 15 July 2002; ms.

<sup>34</sup> Such training is often only 1-2 day workshop with no follow-up support or mentoring to the researchers.

program, the proposals are to provide more team support to SUB program officers by sharing experience and perhaps observing gender/equity analysis in the field; learning from SUB's research partners about culturally sensitive ways of dealing with gender and equity issues; and establishing stronger links for mainstreaming with other parts of the Centre.

Our own interviews with the SUB team reflect many of the same dilemmas and concerns raised in July 2002. The gender strategy of SUB has all the right good intentions but is proving much harder to implement than was anticipated. Looking forward, one of the questions for SUB is whether it should focus all its efforts in gender/equity analysis to integrate it into all areas of the program or should split its efforts by also having gender (and tenure) as a special area of emphasis. We found that project leaders and the SUB team are somewhat divided in their views on this question. Despite our assessment that SUB's strategy has developed a good strategy in gender/equity, we heard a view from outside partners that SUB was less "at the cutting edge" now than it had been in the last program cycle.

There is clearly a long way still between a good strategy and successful implementation, and SUB has to work with partners that need more capacity building in gender than can be provided in the short term within the resources available for projects. We would recommend that SUB rethink its gender/equity strategy to the extent that it explores some strategic partnerships with other donors and institutions in the regions that can provide the training and mentoring needed. Another proposal is that SUB tries to link its regional and sub-regional networks to resource institutions that can provide the support needed and share the costs across several projects.

### ***Gender in the CBDC Program***

In reviewing the SUB strategy for capacity building, one important area to look into is whether women's capacities are being developed or reinforced. SUB developed "Guidelines for integrating gender analysis into biodiversity research". Many of the proposals that came in after these guidelines were made did express their intent to mainstream gender analysis into their work. While this was the expressed intent the practice does not yet bear the needed results.

One of the areas we looked with more depth to see how gender mainstreaming was done is the Community Biodiversity Development and Conservation (CBDC) Programme. This program was officially established in 1994 as a direct result of the Keystone International Dialogue on Plant Genetic Resources (1989-92). It was designed to support and prove the viability and importance of farmer-community-led innovations in agrobiodiversity research, conservation and utilization. CBDC also links local and indigenous knowledge, innovations and practices to the national, regional and global policy debates around agrobiodiversity. It has been well established that gender is a key factor in understanding the promises and perils of agrobiodiversity conservation and use. Thus, it is important to assess how gender analysis and mainstreaming comes into the CBDC program. This program is in its second-phase (2000-2004) and it has 14 member groups and 11 institutions which cover Asia, Africa and Latin America. It enjoys support from four donors, of which IDRC is one. A mid-term evaluation of CBDC was done in early 2002 and this evaluation, together with our interviews with the SEARICE team in the Philippines, largely informs our own assessments.

The mid-term evaluators observed that there are varying levels of work in gender depending on the regions. For instance in Southeast Asia, they noted that there are many activities focused on identifying problems and needs of women related to plant variety selection/participatory plant

breeding and plant genetic resource conservation. Their recommendations on how to improve this are as follows;

- More detailed work to be done on gender roles on the production systems and management of PGR and this should include gender differentiation in labor and responsibilities and existing knowledge and skills.
- More coordinated work to be considered to ensure the inclusion of women who have special knowledge and skills which are crucial in effective natural resource management and use.
- Increased involvement of women in project planning, implementation and more training for women with the CBDC projects.

In Latin America, while there are serious attempts to integrate gender, on the whole much more work is needed to document gender roles and issues to be more effective in promoting gender-defined roles and relationships within the projects in the region. In Africa, the mid-term evaluators noted that “*work on gender is for the most part limited to studies related to different roles in PGR conservation and development, impacts of different roles and empowerment of women.*” The Mali CBDC project is an exception as this had great success in integrating gender issues in the management, enhancement and effective use of natural resources.<sup>35</sup>

It is clear from the mid-term evaluation and the interviews done by the evaluators with the CBDC staff in the Philippines that the weak link in the CBDC program is on gender. While all project implementers expressed the importance of this T-line, in practice much remains to be done. The 2002 evaluation cited that the implementation of the gender T-line suffered from staffing changes, meaning it was orphaned within the system. SEARICE assumed coordination of this T-line in the third quarter of 2002 after the partners in Latin America gave it up. In our discussions with SEARICE, they said that there is still much difficulty in integrating this as there is a low level of capacity among the partners in understanding and doing gender analysis and gender mainstreaming.

The 2002 evaluation recommended that more capacity building in gender analysis should be undertaken. The capacity building process could include a sharing of different understanding and methods, systematic exchanges of information and materials, exploration of how gender analysis can be integrated with and improve the work in other T-lines, and actual training on how the partners want to pursue this. There are already many experiences in terms of gender-informed approaches in the PPB/PVS, SSS and NDNSDB T-lines that could be written up and shared. This could be a priority activity.

The excellent *Guidelines on Gender Analysis* should be applied on a wider scale to see what its impacts are in terms of changing the attitudes and behaviour of policy makers and community people. Even in the work around medicinal plants, the work on gender was done on an informal and ad-hoc basis. In the Kuna-Embera project, gender analysis was considered in the design of the project. The research design aimed to find whether there is a gender differentiation on the use of medicinal plants. However, it is usually the case that as the projects get implemented gender considerations fall along the wayside. It is the gender consciousness of the program staff that in the end ensures that women come into the picture.

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<sup>35</sup> Moore, Monica and Dr. Melaku Worede, Mid-Term Evaluation of the Community-Based Biodiversity Conservation (CBDC) Programme during its Second Phase, Final Draft Report.p.21.

## 6.2 Policy Advocacy Skills building

Since IDRC research is meant to influence changes in policies it is important that IDRC management, program staff and project partners are equipped to do policy advocacy themselves or that they support or collaborate closely with other NGOs who are experts in policy advocacy work. One of the objectives of the SUB PI is to “*support the creation of models for policy and legislation that recognize the rights of indigenous and local communities to genetic resources and to the equitable sharing of the benefits of these resources.*” This objective can be achieved both through research and effective policy advocacy work. The Performance Framework<sup>36</sup> also states that the performance target for this objective is “*increased community control over genetic resources by developing model laws/agreements that protect local and indigenous knowledge and enhance community benefit sharing*”.

The successes in this phase in terms of policy influence (see Section 7) would indicate that the policy advocacy skills of program staff and partners are quite developed. The way in which these skills were developed was obviously through learning-by-doing.

In our interviews with some of the program implementers of the CBDC and PPB, a frequent comment is that they were trained to become skilled not only as natural scientists or technicians but also as social scientists and community organizers. In the CBDC, most of the technical or “hard science” staff far outnumber those with social science backgrounds. Many of the program staff members are technicians who are skilled in training farmers and doing technical and scientific research. If they use the participatory research approach, however, it is inevitable that they have to look into the socio-cultural and political context of the areas where they are working.

They then understand better why it is important that they should be involved in policy advocacy because this will facilitate the achievement of their objectives in doing biodiversity conservation or participatory breeding. Some of those interviewed are not sure whether this is a good or bad. Most of them think it is good because their horizons, skills and knowledge are expanded. However, there are few who think they have to remain technicians and not be involved in politics.

The need to rationalize or systematize better the policy work within CBDC was stressed by the 2002 CBDC Evaluation report;

*We recommend that the Program Coordinating Committee (PCC) and the Regional Coordinating Units (RCUs) explore how the CBDC might better support partners in developing and pursuing policy changes based on work at the regional level. Opening complementary new policy fronts that build on the work in different regions would facilitate scaling up of local and national achievements, and contribute to policy change at the global level.*

Based on the programs and projects we examined in detail we can see that there are still gaps between the concerns of indigenous and local communities and broader policy issues. The

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<sup>36</sup> Appendix VI of the “Sustainable Use of Biodiversity Program Initiative Evaluation Plan”

Crucible II project was one attempt to bridge this gap. To ensure that the results of the Crucible II project will be used to inform and change policies, the Genetic Resources Policy Initiative (GRPI) was designed. This is meant to “*respond to the emerging need articulated by southern researchers to support the development of research and negotiating skills for dealing with issues of policy and access to proprietary technology...*”<sup>37</sup>

The earlier phase of SUB PI has supported the participation of indigenous peoples in policy dialogues. The participation of indigenous peoples in various CBD working groups has led the Conference of Parties (COP 5) of the Convention on Biological Diversity to recognize the *International Indigenous Forum on Biodiversity* as a legitimate voice in the Working Group on Article 8j. It seems, however, that there are very few activities in this present phase aimed at building further the capacities and skills of indigenous peoples to translate the gains achieved in the Working Groups on Article 8j and on Access and Benefit Sharing to the national and local level. The GRPI which is designed to do this has yet to take off from where it is now.

In the work on MAPs, the policy advocacy work has resulted in a regional policy and a model law (OAU Decade on Traditional Medicine and the African Model Law on the Protection of the Rights of Local Communities). In South Asia, the creation of National Boards on Traditional Medicine and Non-Timber Forest Products and the participation of project partners in SANFEC in formulation of national laws and strategies in biodiversity.

The main factors which helped program staff and project partners to be effective in policy work are the following; the interdisciplinary and participatory approach to research, the excellent research outputs, the conscious efforts to involve key government people in the various components of the projects and the existing skills and quality of the SUB PI program staff and partners on policy advocacy clearly contributed to these.

We propose that the SUB PI continues to strengthen the research work aimed to change policies and develop training materials for skills building on policy advocacy. We have not seen any training material from the documents we reviewed for this evaluation, although there is on the IDRC website a document entitled “*Multistakeholder Policy Processes, Lessons for Genetic Resources Policy Development*” which was prepared for IDRC. This had the Crucible II Project as one case and it came up with recommendations on how to adapt lessons learned from various multistakeholder processes to the GRPI.

The various stories on how policies got changed, from the local to the global level are already good starting points. The lessons learned and the insights of the program staff and partners, themselves, will be very valuable in developing these materials. The experience of the indigenous peoples in influencing the Working Groups of the Convention on Biological Diversity is also another source. There are many positive and negative lessons which can be culled from this.

We also noted that there is underway in the Centre an evaluation activity on “The Influence of Research on Public Policy”. It is to be hoped that this study will look into the fit between local concerns and IDRC’s support to policy advocacy.

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<sup>37</sup> SUB PI Four Year Program Prospectus (2000-2004),p.14.

## 7. INFLUENCE ON KEY BOUNDARY PARTNERS

In addition to the researchers funded by SUB, two key groups identified by SUB as target groups for influence through SUB's throughputs, outputs, and outcomes are the international and national agricultural research centres that are supported by the Consultative Group for International Agricultural Research (CGIAR) and policy makers in developing countries. In consultation with the SUB team, the reviewers selected the CGIAR and local decision makers as two groups that would serve as a measure of SUB's influence on its boundary partners.

### 7.1. International partners: the CGIAR

One of SUB's desired outcomes for the second program cycle is to have influenced the CGIAR to adopt more participatory approaches, especially in plant breeding, and to integrate gender and equity sensitive analysis into its work. The CGIAR is a hard nut to crack. Nonetheless SUB has had measurable impact and achieved some notable successes, particularly in demonstrating the validity and acceptability of participatory varietal selection (PVS).

Our interviews with project leaders, biological and social scientists as well as management in the CGIAR centres suggests that SUB has had influence on the CGIAR in the following ways:

- SUB built successfully on a long-standing positive relationship with many of the CG Centres both as an innovative and supportive donor and in terms of many personal relationships between CG staff and IDRC staff.

They had tremendous impact in the 1990s in building an understanding of managing connections between biodiversity and human knowledge and human needs. In the 1980s and early 1990s people weren't putting those ideas together. That is a lasting and very important impact of IDRC.

CG researcher

- SUB has closest relationships with IPGRI where the shared vision about the sustainable use of biodiversity is the strongest. With other CG centres, the degree of shared vision is less because of their stronger emphasis on commodities and increased production, and because they have their own in-house scientific capacity.

It is a very close match of views between SUB and IPGRI regarding both substance and the way of approaching it. IPGRI is unique in that it is the only CG centre with no lab, no gene bank yet works with national programs. We contract research especially to developing country experts, very much in line with the IDRC philosophy to help countries build their own capacity through working with them. (IPGRI)

There is a shared interest but it would be too strong to say that there is a shared vision. (CIP)

Saying there is a shared vision is too optimistic. There is still a lot of resistance to participatory research. Some colleagues claim they have done participatory research because they have had coffee with a farmer. (ICARDA)

- Within the CG donor group, SUB has played an important advocacy role for initiatives like gender analysis and participatory research and followed this up through its early support to the Systemwide Program on Participatory Research and Gender Analysis (PRGA).

In the Annual General Meeting, IDRC has influenced CG thinking way beyond the funds involved. Because IDRC expresses opinions at that table about PPB and Indigenous Knowledge etc., it has helped strike a more receptive environment for those ideas. The far out people in the CG gain credibility and respect.

CG researcher

- SUB has helped to build partnerships between CG centres and NGOs and CBOs and has facilitated the publication of materials and outputs that are NGO-friendly (such as *Seeds of Choice*) and can be used by local level workers.

There were two points that IDRC greatly influenced. First, they pushed for the involvement of developing country people who had a lot of experience on the ground but perhaps did not enjoy communication skills or simply couldn't communicate in English. Second, they made us consider not only conservation of biodiversity but also its use and they wanted us to include experiences that combine conservation and utilization.

IDRC funded several critical projects. They played a big role both *vis a vis* the CG and also in influencing NGOs to do PPB work

CGIAR researchers

- SUB has influenced the ideas of those in the CG system with whom it has worked directly. It has played more than a strictly donor role and has contributed intellectually to the work being done within the CGIAR.

The role of SUB is over and above that of donor. It is a combination of donor and partner. It is very much working together. The interaction was good at keeping use on our toes and in reminding us of the realities of the developing countries. (IPGRI)

Generally IDRC has provided very valuable intellectual input. We have far out and innovative people within the CG. Those people have been able to bounce ideas with IDRC staff. IDRC has helped to construct an environment for new ideas. (CIP)

IDRC's role was substantive. They acted as a donor but in addition they gave us some technical direction. They asked different questions that affected the orientation of our work. Their input was constructive. (IFPRI)

- For a few CG scientists, SUB had a major influence on the development of their ideas and their own careers.

I can't trace the influence of IDRC directly but it certainly has helped to shape my work and that of [my colleague] and through us it has influenced CG approaches.

SUB helped chart my career – it was capacity building

Without IDRC, I would not be where I am now.

- However, SUB has had much less influence on CG scientists and programs with which they were not directly involved and have not been able to mainstream either gender

analysis or participatory research in terms of what most scientists are doing within the Centres.

The mainstreaming of PPB has gone on in the development areas where people are comfortable with the concept but not with the high science people. Latecomers like ICARDA and WARDA are discovering it and making good progress. What will happen in a few years? Will the momentum be sustained? I don't know.

CIAT

- Part of the reason for this lack of influence on the core programs of the CGIAR is that the results of much SUB supported research are qualitative. As a research approach, gender analysis and PPB have not yet demonstrated scientific method, rigour or replicability as understood by its critics and it has generally not yet entered peer-reviewed scientific journals.

We need to produce peer reviewed papers. Project reports are not enough. Peer review papers are the way to mainstream PPB. The more you publish on the topic, the more respect it will get. We should focus on methods and show that PPB can be systematic and that there is a lot to be learned from this approach. We need to work in avenues that our colleagues find acceptable.

PPB researcher

- Finally, many CG collaborators emphasized the important influence of SUB on research processes for the projects that they had supported in the CG.

They helped us to monitor, to draw lessons and to implement good practices. They linked similar projects into networks. When we need help, they help.

They are good at field networking. They are good at sharing their experiences; at insisting that certain mechanisms such as an oversight board be included in projects. They are very good on process.

The twelve CG collaborators interviewed for this review all provided very positive evaluations of SUB's work and all except one expressed unqualified enthusiasm for their interactions with SUB program staff.

When asked to identify weaknesses or failures in SUB's work, some could not cite any. Most cited as their major concern that SUB does not have much money. Compared to many other donors, SUB is described as having more intellectual than financial input. Some added that its 4-5 year program cycle encourages it to move on to new topics rather than staying the course and maintaining its influence within the CG. One project leader complained that as funds from SUB went down, there was increasing pressure to disburse the project funds in smaller grants so that the total transaction costs became larger and less was available for research itself. Several CG collaborators also felt that SUB needed to strengthen its own team with additional scientific expertise – most notably in biology and biotechnology. There was some concern expressed that SUB was strong on the social science and policy sides but lacked some of the core biological skills needed for a program in biodiversity.

The strategy SUB adopted for closing the PPB loop within the CGIAR was to support a number of initiatives in the Phase II of the PRGA. These included a number of written outputs in the form of a monograph series; national case studies; and a workshop that identified a new generation of research issues. More generally, SUB's support to the Systemwide PRGA Program

was to try to mainstream PPB (including PVS) into the plant breeding programs in the CGIAR and its national partners, the NARS.<sup>38</sup> Many of SUB's projects in this cycle have been with the CG Centers. The advantage of working with the IARCs is that they can mount multi-site research trials, they have strong biological and social scientists on staff, including many plant breeders, and they are major players internationally in plant breeding and improving agricultural production.

One of the challenges for SUB in working with the CGIAR (apart from the fact that they are expensive partners with international level salary and cost structures) is that the two organizations do not share the same vision about biodiversity. Most CG Centers operate on a commodity basis and that is the focus of their concern about diversity while SUB is concerned with biodiversity not only of individual crops but sustainable farming systems and ecosystems. Within the CGIAR, only IPGRI shares SUB's approach to biodiversity. This production focus within the CG also reveals itself in the "mainstream" view that working with land-races and PPB will keep farmers poor.

Another challenge is that within the CG Centers, PPB doesn't resonate well with the prevailing organizational culture. In addition, the PRGA had some operational problems in liaising with its own "champions" or focal points in the different centres. Although 80% of the group is made up of plant breeders and agronomists, the managers of PRGA are social scientists. Several scientists within the CGIAR said that the PRGA had failed to make much in-road within the Centers because it had not incorporated the norms of science – rigorous research design, scientific peer review and cost-benefit data on impacts.

The PRGA is too social science driven. It is a group of believers. The danger is that there is no critical analysis that applies to their work. The skeptical or the more critical are not on board. Some of the more conventional plant breeders say that PPB is plant breeding done by social scientists. There is a grain of truth in this.

Mainstreaming PPB through PRGA is a problem because it is always being promoted by a social scientist. Plant breeders are like medical doctors – they only listen to other plant breeders.

PPB is not yet mainstreamed but it is no longer a joke.

PPB is not mainstreamed in the CG. It is to the extent that most centres are dabbling in it and there is lip service paid to it.

CGIAR researchers

However, in one important respect, the PRGA did achieve early recognition for PPB within the CG system when the TAC recommended that participatory research be integrated into all Centre activities.

SUB's strategy to mainstream PPB has focused mainly on practicing plant breeders. However, many plant breeders in the CG Centers are working on genetic resources at the molecular level and

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<sup>38</sup> In its outcome mapping exercise for the second program cycle, SUB identified the CGIAR International Centres as key boundary partners that it sought to influence, particularly with respect to PPB. Section XX examines how far SUB has achieved that objective.

They wouldn't know a sepal from a petal. What we need are more of the mud-on-the-boots type of plant breeders.

CGIAR manager

The influence of SUB on the CGIAR has been considerable – both in being leaders in getting both PVS and gender/social analysis much more widely accepted than before. Success in influencing mainstream plant breeders to work more closely with farmers has had only limited and mixed success, but like field taxonomists, field plant breeders are a disappearing race and SUB might wish to spend less effort preaching to the hard-to-convert and more investment in capacity building within the universities for forming a new generation of plant breeders to whom PPB is a natural part of their toolkit.

Our overall assessment is that SUB has influenced program work within the CGIAR in several important and impressive ways, including the wider acceptance of participatory research and gender/equity analysis and the increased collaboration between the CG Centres and NGOs. SUB played a role in the TAC decision to support these two approaches, which in itself is a milestone. Beyond its immediate sphere of influence among the research groups that it has supported in various ways, SUB has had much less impact on the content of the core scientific activities of the CG but frankly, this is not surprising. As one collaborator said

The CG is a Titanic. It doesn't turn away from the iceberg that quickly.

## 7.2. Local decision makers

The main projects which were reviewed in relation to how local partners are influenced are the *Community Biodiversity Conservation Program, Phase 11 (100356)* and the projects under the Medicinal and Aromatic Plants theme. The CBDC is one of the most interesting areas of work undertaken by SUB. We went into more depth into the CBDC programme in the Philippines and the role of SEARICE as the Regional Coordination Unit (RCU) for the South East Asian Program and as the Global Coordination Unit of the global program. This was identified, specifically, because SEARICE, which plays a key role in CBDC, is based in the Philippines where the second-reviewer is located. In addition, a mid-term evaluation had been done, which was referred to in Section 6.1. This had very rich insights and recommendations on how local people and local decision makers have been influenced by CBDC projects.

Our review of several projects under MAPs also highlighted the various ways in which these projects influenced local decision makers.

### ***Strengthening capacities of farmers as breeders and to do research and the interaction and collaboration between informal and formal scientists***

The most impressive influence of SUB on local partners has been the strengthening of the capacity of farmers in Asia, Africa and Latin America as *researchers* better able to interact and collaborate with formally trained breeders and scientists. Many of these farmers were already breeders but their skills, capacities and confidence were increased significantly. There were many who did not used to do breeding but were eventually trained to become breeders. In all the regions there are formal working relationships between farmers and universities and research institutes. In several CBDC areas there is now a thin line between informal and formal breeding and active cross-fertilization of ideas and knowledge of farmers and formal scientists is taking

place. Aside from this, strong working relationships have been developed in recent years between formal scientific institutions from the local to the national levels. Signed agreements of cooperation now exist between universities and national institutions in Vietnam, Brazil, Burkina Faso, Sierra Leone, the Netherlands and Norway.

The empowerment of farming communities to preserve and increase biodiversity in their fields and even their forests has also led to increasing their confidence to assert their views on how agricultural programs should be designed from the municipality to provincial level.

The 2002 mid-term evaluation showed that farmers in various regions they are capable of co-planning and implementing sophisticated breeding programs that preserve and improve valuable, locally adapted materials; managing highly functional seed supply systems; preserving domesticated, semi-domesticated and wild biodiversity and of training other farmers to acquire these skills. These achievements have definitely brought about a shift in the power relationships between the formal plant breeding sector and the farmers. The dominance and monopoly control of the formal breeding sector is slowly being chipped away.

In addition, the farmers together with the scientists and community organizers, were able to bring about policy changes. The program in the Philippines, for instance, did have concrete policy impacts in the province of Bohol. First, starting in 2001, this project helped in the formulation of the Provincial Framework for Sustainable Agriculture. The framework incorporated provisions to ban GMO field-testing and propagation in the province as well as the protection of local genetic resources against biopiracy. Second, in 2003 the province enacted a provincial ordinance banning GMO field-testing and propagation in the province. Third, a Bohol Network for Farmers' Rights (BNFR) was created which is now actively campaigning for farmers' rights and awareness raising against the Plant Variety Protection Act. They participated in trying to influence the Plant Variety Protection Act of the Philippines. Unfortunately, in this case the farmers and their supporters did not succeed as the US-AID gave full support to both the Department of Agriculture officials and the formal plant breeding industry to shape the PVP within the UPOV 1991 framework.

In the Mekong Delta, rice production is fully integrated into the market system. The CBDC Mekong Delta (Vietnam) Project enabled the farmers to play a key role in producing good quality seeds which is crucial in stabilizing the seed supply in different communities. Because of this, several local governments are requesting the CBDC to open sites in their provinces and they are even providing counterpart funds to ensure sustained implementation. The project is coordinating with province-level authorities in 11 provinces and local authorities are adopting the CBDC approaches. Extension centers are also making available their trainers and workers to support the project in organizing farmer field schools (FFS) in the communities. Since the CBDC project is part of the Can Tho University's Farming Systems Research and Development Institute, there is now a greater awareness in the academe on the importance of community-based conservation and development of plant genetic resources.<sup>39</sup>

It is to be hoped that the participatory plant breeding T-line will have a significant impact in changing the thrusts and programs of the CGIAR. The reviewers spoke with the implementer of the PPB program in Central America, particularly in Cuba. He reported that they have created very good relationships with CIAT in Colombia, which is now a key proponent of PPB. However, this same relationship is not seen with CIMMYT, in spite of the fact that this is based in Mexico which is nearer Cuba.

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<sup>39</sup> Accomplishment Report, CBDC Regional Coordinating Unit, Southeast Asia Program, for the period of April to June 2003.

### ***Weaknesses of the CBDC T-lines***

One innovation of the CBDC was what it called transversal lines or T-lines. This was designed to address the concerns by partners and donors that the CBDC program was not structured to support coherent development or advocacy of common concepts, standards, policies or basic programmed communications at the inter-regional or global levels. The T-lines are expected to provide a functional framework to develop and implement common collective concepts and standards in six areas: participatory plant breeding and participatory varietal selection; seed saving systems; semi-domesticated and non domesticated biodiversity; gender; policy; and mainstreaming. In the 2002 evaluation report, it stated that “*in practice, neither the individual T-lines nor the T-line system as a whole are meeting the expectations and needs of the CBDC partners as originally intended. The goals of every T-line are either overtly ambitious, unclear, unfocused, not shared among participants, or any combination of these.*”

The policy T-line and the gender T-line were among the weaker areas among the six. The weakness in the policy T-line is more in the gap between the work in policy at the global level and how this links with the local or national policy. The Policy T-line coordinating organization is the ETC group. Its role in providing the cutting-edge discourse and groundbreaking analysis of new and emerging issues cannot be underestimated. However, there is a weak link between what it does in the international arena and the work done on the ground. This is the observation of the SEARICE people whom we interviewed and they raise this specifically in relation to the work they had been supervising in South East Asia.

### **Influence of MAPs work on local decision makers**

In our review of the SUB-PI work on MAPS we were impressed with how this has brought about changes in the health systems and also in educational institutions. The effective collaboration between various government ministries in the national and district levels has also been seen in various projects. The influences on local decisions and decision makers which were seen in the MAPs work were as follows;

- the regional declaration of a decade on traditional medicine and medicinal plants (OAU Declaration) which had direct effects on national policies and programs on medicinal plants and traditional medicine.
- the formulation of national bills on traditional medicine (Kenya, Uganda, Tanzania)
- national strategies and action plans on MAPs; (Kenya, Uganda, Malawi, etc.)
- integration of traditional medicinal plants and traditional medicine into the national or local health care delivery systems or into the curriculum of secondary schools to medical schools and also as part of the programs of reference or teaching gardens. (Costa Rica, Nicaragua, Uganda, etc.)
- allotment of government budget for work on MAPs (Uganda)
- formulation of policy proposals to address the issue of better royalty rates for MAPs which were traded and the regulatory policies for trading and harvesting. (Nepal, India)
- establishment of working relationships between universities (national and local) and traditional healers to carry out safety and efficacy tests and studies on medicinal plants. (Uganda)
- creation or strengthening of associations of traditional healers and the bridging of relationships between them and the medical profession and health ministries. (Kenya, Malawi)

- development of institutions and policies of government that address the need for more coherent policies and programs on MAPs and traditional medicine. (Nepal, India)

These influences on decision makers coming from various government departments or ministries whether on the national, district and local levels cannot be underestimated. For a long time most of the people in developing countries who were educated in schools largely influenced by western education have looked down on the use of traditional medicinal plants and traditional medicine. The work of SUB-PI on medicinal plants definitely has influenced the changes in the knowledge, attitudes and behaviours of these western-educated technocrats and bureaucrats. The strategy to involve them in the programs and activities of the various projects was very effective in getting them to have ownership over these. Some have even gone to the extent of allotting budgets to support this work.

### *Combating discriminatory attitudes and behaviour*

One of the areas where the evaluators would have liked to have more insights are the impacts of the SUB work in medicinal plants and in CBDC in changing the discriminatory mindsets of government people and the dominant population in general. While we have seen some significant shifts on how educated people regard traditional medicinal plants and traditional medicine and even indigenous seeds, it is not clear whether this has also changed discriminatory behaviour. Discrimination against indigenous peoples and also against poor farmers is prevalent in the dominant population in most countries where indigenous peoples are found. Thus, one long-lasting and strategic influence is to change these discriminatory mindsets, attitudes and behaviour. It would be interesting to see whether there have been the changes in behaviour and attitudes among the policy makers and among the dominant population in the various regions as a result of the programs and projects under the SUB-PI.

Since one of the objectives of the SUB-PI Prospectus is to ‘promote, use, maintenance and enhancement of the knowledge, innovations and practices of indigenous and local communities that conserve and sustainably use biodiversity’ it is important to link this objective with the changes in the knowledge and behaviour of the dominant society towards indigenous peoples.

## **8 CLOSING THE LOOP**

Within IDRC, bridging the research-policy gap has been characterized as “*Closing the Loop*”. This term covers a range of related concepts, or *loops* to be closed with different groups:

- Providing feedback to project participants: to those groups and institutions that have provided expertise and resources to the research projects;
- Meta-studies in which the results from different case studies or projects are compared and combined to provide broader insights often more useful to policy;
- Going to scale through extrapolation from pilot projects to broader geographic or organizational scales
- Contribution to scientific knowledge: ensuring that the results are known to other researchers
- Feedback into IDRC programs: ensuring that lessons are learned internally

- Showcasing the achievements of IDRC to Canada and beyond, especially to the key stakeholder groups of Canadian federal government departments, CIDA and other donors.

In section 7 we discussed in detail how SUB has influenced two of its key boundary partners, the CGIAR and local decision-makers. Here we review how it has also sought to close the loop with researchers and with policy makers at local, national and international levels.

## 8.1 With other researchers

SUB has made remarkable strides towards closing the loop from the results of the projects it supports to providing input to the work of different target groups. One key group of course is other researchers and the scientific world of new knowledge in general. From the project files and the list of project outputs provided by SUB, we were able to obtain an overview of the project outputs and find that they respond to the objectives of the projects reviewed.

Some projects (e.g. 100555 on *Spatial-Temporal Dynamics of Sorghum Genetic Diversity and Farmer Selection*) produced many scientific papers designed to reach other researchers. A paper produced by another PPB project (100163 on *Formal to Participatory Plant Breeding: Improving Barley Production in Rain-fed areas of Jordan*) was awarded the CGIAR prize for the Outstanding Scientific Article Award in 2000.<sup>40</sup>

The monograph series produced by PRGA was a response to the challenge to produce some consolidated findings on PPB and is directed mainly to students and to researchers/practitioners. While the documents are a useful compilation of experience in different parts of the world, together with some practical advice, they do not meet the test of peer-reviewed journal articles – a direction that SUB might to further encourage with its research partners to obtain more recognition for IDRC-supported research and greater acceptance for PPB within the scientific world.

## 8.2 Moving downstream at local level

SUB works closely with local communities and recognizes that research results should benefit them directly in helping to improve their own management practices. The MAPPA project has been a pioneer in ensuring that in addition to closing the loop with researchers and national policy makers, it also provides materials in local languages where necessary for local communities and local researchers (box 14).

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<sup>40</sup> Ceccarelli, S. et al, 2000, Methodological Study on Participatory Plant Breeding 1. Selection Phase in EUPHYTICA , 111: 91-104.

**BOX 14: Knowledge management through targeted extension (MAPPA)**

*Knowledge-enhancing Publications:* In addition to electronic provision of the information, print dissemination remains a priority for MAPPA, as many users of the information lack Internet. Directories and technical publications include: directories of researchers and partner institutions; indices of publications; taxonomic information and field guides; information sheets and brochures on particular species or products; and country reports.

*Newsletter:* The *Medplant Newsletter* is distributed quarterly to over 500 readers in 25 countries. For many network partners, the newsletter is serving as a bottom line access to the latest information in the field; and through letters and articles, it provides a forum for discussion and debate on issues of concern.

*Technology Manuals/Monographs:* Although interest in MAPs in the South Asian countries has increased steadily over the last decade, there is still lack of practical and state-of-art technical manuals and monographs. Drawing upon the vast traditional knowledge systems of diverse South Asian communities, research experience and results of MAPPA partners and national programs of the countries monographs and manuals in English as well as local languages are prepared and distributed as handbooks to researchers and the field workers.

### 8.3 Scaling up to national level

#### *PPB projects*

The three PPB case studies reviewed that were funded in the second program cycle share some important characteristics. First, they are second-generation projects that build upon successful earlier work by the same researchers. In other words, SUB is backing winners rather than taking risks with unknown researchers. They are also with strong partner institutions in the countries. Second, SUB is working closely with other donors that have a track-record of supporting PPB work to help build a critical mass of evidence from different case studies around the world; and where needed, to “plug information gaps”. Third, they are taking the PPB work forward in several significant directions:

- ❑ Making a stronger link to national policy and educating key decision-makers
- ❑ Internalizing the results of the PPB research into the operations and structure of key national agricultural institutions
- ❑ Working with poorer farmers
- ❑ Obtaining some economic data on costs and benefits of PPB (in Syria and Jordan).

In all these areas, SUB and its project partners have had considerable success. The area where most progress has been made is that of influencing national policy and national agricultural institutions and probably the least progress is in obtaining economic cost-benefit data across different national situations. In Syria, SUB provided additional support to a project originally funded by GTZ to enable the researchers to transfer the project from ICARDA to the Ministry of Agriculture so that it can be scaled up across the country. In Jordan, NCARTT is using its own resources to apply the PPB experience with barley to wheat.

These two success stories point to the advantage of SUB working directly with national agricultural authorities and allowing researchers within those institutions to internalize the PPB approach without having to advocate for PPB from outside. It is a key strategy for the future sustainability of integrating SUB's approach at the national level.

One of the questions the review asked of PPB project leaders was - With which institutions should SUB be working? The responses (even from those within the CGIAR) stressed the importance of working directly with the NARS, thus confirming SUB's partnership strategy for PPB.

For biodiversity, IDRC should encourage that nothing is undertaken by the CG that is not led by the NARS.

When it comes to biodiversity, if you want to change attitudes, you have to deal with the big guy who is in charge of national plant breeding. Change the way the national plant breeder does his job. This is much more important than working with universities or NGOs that are working on a much smaller scale. The issue of institutionalization is crucial. I make it a point of working with the people in charge of national plant breeding whether I like them or not.

You have to pick each country and each institution on its own merits. Funding can go to a NARS with some of it earmarked for contracting with a CG Center. The client becomes the national program rather than the donor.

PPB Project Leaders

Project leaders and CG partners believe that SUB should work with a range of research partners, from NGOs and universities to the CG Centers, but that key groups in any partnership strategy are government institutions involved in research, extension and policy. That is where the best opportunities lie for scaling up and out and future sustainability. We agree.

### ***Medicinal plants work***

There are a number of important success stories for SUB in having influenced national policies for medicinal plants, including the MAPPA project.

Among the recommendations from a meeting convened by SUB<sup>41</sup> was a proposal to establish an autonomous *National Medicinal Plants Authority* for providing holistic approach to Med-plant biodiversity conservation and socio-economic development. The Government of India set up a Medicinal Plants Board in November 2000, based on follow-up by MAPPA and other partners. The Board is now fully functional and SUB-MAPPA is working closely with the Board in setting research priorities and initiating its work.

The MAPPA project is currently assisting the Government of Nepal to set up similar Board. MAPPA has already commissioned a Sub-sector review study and is currently carrying out participatory and broad-based stakeholder consultation to form the basis for constituting the

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<sup>41</sup> MAPPA convened a two-day national colloquium in 1997 in collaboration with Indian Drug Manufacturers' Association (IDMA), Indian Association for the Study of Traditional Asian Medicine (IASTAM) and two industrial philanthropic organizations.

Board in Nepal. Based on MAPPA's research information and recommendation, the Government has replaced the ad-hoc system of royalty fixing on Med-plant products by a more rationalized system. As a result, the ban on wild harvesting of some species such as *Cordyceps sinensis* has been removed. MAPPA is now carrying out necessary groundwork in Bangladesh, Pakistan and Sri Lanka for influencing similar policies<sup>42</sup>.

SUB has also had policy impact at state or provincial level. For example, at a workshop supported by SUB and other partners for two newly created Indian states of Uttaranchal and Chhatisgarh, which are extremely rich in medicinal plant biodiversity but lack policy and technical expertise, it was recommended that the state government declare the state an "herbal state".<sup>43</sup> The State of Uttaranchal has been declared an 'Herbal State' and a comprehensive Med-plants Sector Development Policy has been adopted.<sup>44</sup> SUB-MAPPA was later approached by the second new state of Chhatisgarh, which has also declared itself an 'herbal state'.

#### 8.4 International level

SUB is working within the overall framework of the Convention on Biodiversity (CBD) and it has already had some impact on the Conference of the Parties to the Convention, although not as much as the SUB team would like to see. At COP V, the International Indigenous Forum was recognized as is a legitimate representative (equivalent to country representation) in discussions of Article 8j of the Convention, which addresses the rights of indigenous and local communities. It also agreed to support case studies on gender in systems of indigenous knowledge. SUB-supported researchers are actively involved in both exercises.

Crucible II provided a neutral forum for discussion of genetic resource policy among stakeholders with very different and contradictory views and "stakes". Crucible II is a model of an evidence-based multi-stakeholder process that links local concerns with national and international priorities. Stakeholders such as NGOs, farmers, indigenous peoples, governments, industry and international organizations were able to discuss the issues without having to agree – and therein lies the key to the success of the process.

Crucible II built upon the pioneering project Crucible I and attracted five other donors to co-fund it with SUB. It also resulted in an important publication, *Seeding Solutions*.<sup>45</sup> While the number of cases of successful uptake of the recommendations of the Crucible process into national legislation are perhaps disappointingly small (Laos, Vietnam, Zimbabwe) the process is being invigorated with a new project supported by SUB and IPGRI – the Genetic Resources Policy Institute (GRPI). It is early days yet for any impact from GRPI, which is just establishing its six national pilot projects. The overall objective is to build the analytical and technical capacity in

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<sup>42</sup> Karki, M., 2003, Revitalization of the South Asian Heritage: Story of IDRC's Medicinal Aromatic Plants Program in Asia (MAPPA), SARO/IDRC; ms.

<sup>43</sup> Workshop on Medicinal Plants cultivation in Uttaranchal: Policy, Production, collection and Distribution; March 3-4, 2001.

<sup>44</sup> One of the MAPPA partners: *Society for Himalayan Environmental Research (SHER)* has been designated as the certified source for Nursery seedlings for cultivating medicinal plants.

<sup>45</sup> Crucible II Group, 2000, *Seeding Solutions; vols 1 and 2*; IDRC/IPGRI/Dag Hammarskjold Foundation; Rome

the South to analyse and negotiate genetic resource policy issues that flow from TRIPS, WIPO and institutions like the IMF and even the CGIAR; to produce domestic genetic resource-related laws and policies; and to institute self-regulation among communities, commercial and research institutions in managing genetic resources. While it is too soon to count on GRPI's impact, the potential for impact is great.

## 8.5 Outreach tools

In addition to its reports targeted at other researchers and its workshops and policy documents for decision-makers, we want to note two innovative tools developed by SUB for outreach. The first is a CD-ROM on *Writing for Change*. This is an excellent example of what can, and needs to be done to help researchers close the loop. It helps researchers to prepare outreach materials for dissemination to a variety of audiences, including policy makers. It is available in different languages and has been used in training workshops in India, Chile and Africa.<sup>46</sup> In order to make its benefits more widely accessible, the *Writing for Change* program has been made into an on-line six-week course that is now being evaluated by twelve of SUB's partners. *Writing for Change* was originally built as a capacity building component of a SUB research project. This is exactly the kind of initiative that we think other PIs should try to emulate.

The second outreach tool that we want to highlight is an In-Focus book, linked to a series of policy briefs and an in-country dissemination process to reach decision-makers. The decade of research on PPB that has been supported by SUB and its previous incarnation "BIO" has been brought together in a book in the Centre's new 'In-Focus' series that is designed to help 'close the loop' with governments and organizations concerned with agricultural research and development.<sup>47</sup> This is a very useful synthesis that describes the problem of decreasing agrobiodiversity and the role that PPB can play in combining sustainable use of biodiversity with conservation. It includes six case studies supported by IDRC including four that have been reviewed here. Part 4 addresses some of the successful outcomes like the transfer of the CIAL methodologies across Latin America and Seed Fairs, as well as some of the major challenges like the lack of effective government policies to encourage PPB and protect farmers' rights. Part 5 provides six recommendations for decision-making in government and research. Part 6 is perhaps the most unusual section – it takes a trip into the future of 2012 to see the impact of implementing the recommendations.

The book is available in English, French and Spanish on the IDRC website ([www.idrc.ca/seeds](http://www.idrc.ca/seeds)) where it is linked to the SUB website and the PPB projects, to additional resources like a slide show and to other websites on PPB. The target groups for the In-Focus series are decision-makers and policy analysts. *Seeds that Give* is well written and structured with both clear recommendations that respond to the kinds of questions decision-makers would have and a good table summarizing the results of the case studies. An earlier review of the IDRC In-Focus book series as a means of reaching policy makers was skeptical that an overview and synthesis of the length of the In-Focus books is going to either be read by its target groups<sup>48</sup>. It found that the In-

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<sup>46</sup>IDRC and Fahamu, 2001, *Writing for Change: An Interactive guide to effective writing for science and for advocacy*. SUB supported the production of this CD-ROM and user's guide within a SUB project, together with three workshops on effective writing for scientists, policy advocates and community based development professionals held in Chile, Kenya and South Asia.

<sup>47</sup> Vernooy, R., 2003, *Seeds that Give: Participatory Plant Breeding*; IDRC, Ottawa.

<sup>48</sup> Whyte, A., and Auger, R., 2002, *In-Focus Pyramid and Policy Workshops: Report for IDRC Communications Division*; October 2002, ms.

Focus series would likely have two main uses: as an educational text by students in Canada and elsewhere; and as a “corporate” accountability and promotional document that can be distributed by IDRC to provide a well-written summary of the “state of the art and IDRC’s contribution to it”.

The case studies and the recommendations in the In-Focus book have also been prepared as 3-4 page In-Action project briefs. Although these are more like research reports than policy briefs, they are better formatted than the In-Focus book to reach the policy community. The strength of the *Seeds that Give* case study briefs is that they root the PPB experiences into their national contexts. The weaknesses may be that while they summarize the research, they lack some of the key information that policy makers are likely to be looking for – what are the costs and benefits of PPB in economic terms for different stakeholder groups and what are the relevant factors in the case study situation that facilitated successful implementation of PPB?

SUB has learned from the experience of the first In-Focus book and has provided support to its research partners to help promote their own work in PPB with their policy makers, with the help of a number of outreach products including the In-Focus book and the In-Action project briefs. The RSA also includes support for inputs to workshops and meetings with policy makers and to the development of teaching materials. Chinese partners are translating the In-Focus book into Chinese to be used to “close the loop” with national and provincial policy makers for the results of the PPB project in China.

The In-Focus book and research briefs draw mainly on outputs from projects that were funded in the previous program cycle. They are important examples of the innovative ways that SUB is using to produce substantive syntheses of the work that it has been supporting, together with tools to reach beyond the audience of other researchers. We are very impressed with these initiatives to close the loop.

## **9 SUB’S NICHE WITHIN THE FIELD OF BIODIVERSITY**

Loss of biodiversity is widely recognised as a global crisis. Less understood is that loss of knowledge of biodiversity is taking place worldwide through the erosion of traditional natural resource management practices by the processes of globalisation. Enter into this scenario, the increased pressure from the North to increase intellectual property rights over plant genetic resources; the push to have national control over germplasm; and ongoing the international negotiations under the Convention on Biological Diversity (CBD) and the World Trade Organization’s TRIPS<sup>49</sup>, and you have a fulcrum for intense competition and policy conflict.

IDRC-SUB is one of many organizations that are active in the field of biodiversity, but is one of the very few donors that have a specific program on biodiversity. Among many others, IDRC expanded its work in biodiversity following the establishment of the Convention on Biological Diversity (CBD) in 1992.<sup>50</sup> It is not that there are too few players at the international level but there are very many and SUB has carefully defined its niche accordingly. Apart from the

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<sup>49</sup> TRIPS: Trade Related Intellectual Property Systems

<sup>50</sup> IDRC’s biodiversity program (BIO) was part of Canada’s formal response to UNCED (Earth Summit).

Clearing House Mechanism of the CBD itself, major UN players include FAO, UNESCO (for ethno-botany), WHO (for medicinal plants), UNDP, UNEP and the Global Environment Facility (GEF). Major NGO players include IUCN, WWF, WRI and the Center for International Environmental Law. In food production and biodiversity, the CGIAR is also a major player.

The international arena for biodiversity has a framework of Conventions and Codes of Conduct that play an important role in the regulation of the use, transfer, protection, management and trade of biological diversity at regional, national and international levels. In addition to the Convention on Biological Diversity, the international Conventions and Codes of Conduct on biodiversity relevant to food and agriculture include:

- International Treaty on Plant Genetic Resources for Food and Agriculture
- Code of Conduct for Plant Germplasm Collecting and Transfer
- Code of Conduct for Responsible Fisheries
- International Plant Protection Convention
- Ramsar Convention on wetlands
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The problem with many of the international agreements and current practice is that, despite increasing pressure to do so, they either tend to ignore the *rights* of local communities to access the biodiversity that they have traditionally managed and used; or they are not able to benefit from learning *lessons* from the knowledge and experience of local peoples; or both. Addressing these issues is SUB's very important niche.

SUB's three objectives define its niche in relation to the sustainable use of biodiversity:

- Promote the knowledge and practices of indigenous and local people
- Develop policies and options to support local practices
- Help to create models for policy and legislation that recognize these rights and practice

SUB is therefore linking macro policies at the international, regional and national levels to local level impacts and local level initiatives in key areas for poverty alleviation and local empowerment. It focuses on the understudied and little understood links between biodiversity and poor communities where resource conflict and competition is greatest. National level policies are a key focus since they can both facilitate and undermine the rights and access of communities and thus also imperil the biodiversity that those communities are maintaining. SUB also emphasizes throughout its work gender and equity sensitive conceptual and methodological approaches, and has been a leader in these areas.

In response to lessons learned in the first program cycle, SUB has focused in the current program cycle on those genetic resources that are most vital to food security, nutrition and primary health care, especially for poor and often marginalized peoples. These poor communities rely on the conservation of genetic diversity in crops, wild foods and plants that they use for nutrition, primary health care and remedies (medicinal plants). The distinction made between food crops and medicinal plants has become less sharp as the program has evolved during this program cycle, especially when seen from the perspective of the communities with which SUB works.

SUB's niche is clear and important in a crowded field. It builds well on IDRC's strengths and the Centre's history in research in natural resources management. SUB has the potential to provide research results and experience that can influence particularly national policies but also international negotiations and guidelines for future practice. Its focus on local communities is

increasingly recognized as important at the international level but few other organizations have the capacity and experience to work at community level in all developing regions **and** to link the local perspectives into national and international policy debates.

We think that SUB's niche has been well defined and appropriate to IDRC's strengths and to what others in the field are doing. In discussions with some of SUB's partners, SUB's four areas of emphasis were identified as critical issues for research:

- Strengthening biodiversity-rich production systems
- Local perspectives on Access and Benefit Sharing (ABS)
- Strengthening local seed systems
- Gender, biodiversity and tenure.

We commend SUB for being among the leaders in bringing work in medicinal plants and agrobiodiversity closer together. IDRC has played a lead role in the Crucible I-II- Genetic Resource Policy Institute (GRPI) Process for policy formulation at international level. As we have indicated in the review, SUB's work is also well recognized by other important international players in biodiversity conservation, with several of which it has working partnerships.

## **10 ASSESSMENT OF SUB'S WORK IN PHASE 2**

We have structured our comments on SUB's work in three parts – on PPB, on medicinal plants and our overall assessment. This is followed by some recommendations and suggestions for the next program cycle (section 11).

### **10.1 SUB's work in PPB**

Our overall assessment of the work that SUB has done in supporting research on PPB is extremely positive. Admittedly it is a decade long rather than the four years of the current program cycle. That continuity of support for an innovative but controversial approach also speaks volumes about what is needed from research donors and what can be achieved with patience and persistence. A decade of support to PPB has allowed IDRC to:

- Play a genuine and recognised leadership role;
- Work with key research and donor partners in mutually supportive ways;
- Support second generation projects that allow scaling up to take place; and
- Bring a longer perspective to bear through syntheses of work undertaken both by SUB's partners and by the SUB team itself that have enabled some closing of the loop – mainly with researchers but to some extent also with national policy makers.

IDRC was one of the first donors to support work in PPB and was the first donor to support the Systemwide Program for PRGA. IDRC promoted PPB and gender analysis at the donor forum of the CGIAR and used its small funds and political voice effectively. Four to five year program cycles are generally not long enough or conducive for such achievements. Through program restructuring and changes in internal leadership SUB has somehow managed to keep its eye on

the PPB ball, and yet remain alert to new research questions as they emerge. One of the strengths of SUB's work in PPB is that of its own team.

On agrobiodiversity, they're at the cutting edge. They are good at bringing new ideas. They are seminal thinkers.

IDRC is not a major player [in funding] but they were important in developing the PPB concept.

It has been an outstanding program. It has consistently been at the cutting edge, and courageous in recruiting people that are credible.

They are a very good group of colleagues even though they are not big donors. They are good process people, good thinkers and good at taking stands that other don't take.

IDRC has provided very valuable intellectual input. We have innovative people and they have been able to bounce ideas with IDRC staff. IDRC has helped to construct an environment for new ideas.

PPB project leaders

There are some areas where SUB's PPB work has been less successful in producing results so far are:

- ❑ Linking local level perspectives and interests in PPB with what is going on at the international policy level, including the CBD.
- ❑ Scaling up at national policy in all but a few countries;
- ❑ Transforming policy insights into practical instruments that address the intellectual property rights issues that arise from PPB;
- ❑ Examining impacts on poverty and on poor farming families;
- ❑ Providing the economic and other data on cost and benefits that will help to scale out PPB into national programs.

While the main focus of the review of SUB's work in agrobiodiversity has been its support to PPB, SUB has also done some important work in other areas of agrobiodiversity. These include projects on semi and uncultivated foods in Africa and Asia and wild fruit trees in Burkina Faso; and innovative research on strengthening local seed systems in post disaster situations such as in Afghanistan.

## **10.2 SUB's work in medicinal plants**

The strengths of SUB's work in this area are:

Its starting point is an acknowledgment that the indigenous and local knowledge in the identification and use of medicinal plants by indigenous peoples is scientific. This is important in changing the mindsets and values not only of the dominant population but of the young indigenous women and men who are the ones who will inherit and ensure that this knowledge will not be lost.

In this work, it is necessary to create various forms of collaboration and partnerships between different actors, such as traditional healers, youth, women, natural and social scientists from the academic world and their institutions, government officials and ministries, local entrepreneurs and maybe in some cases, the pharmaceutical industry and the intergovernmental bodies like the CBD, FAO, among others. In this collaborative work, however, it is necessary to ensure that indigenous peoples and local communities do not become marginalized.

This is also an area where the convergence of indigenous or local knowledge and the formal scientific knowledge takes place. At the same time, the areas where productive tensions between the two can emerge and the resolution of these tensions can be addressed.

The actual and future potentials that this work brings in terms of changing policies and discourses from the local, national and global levels are immense and we can already see actual results in terms of getting “the global to support the local and the local informing the global.”

SUB’s partners pointed to many success stories within the work supported by SUB in medicinal plants including the network projects like TRAMIL and MAPPA. One of SUB’s important contributions is to demonstrate that research in biodiversity must be approached in a holistic manner that includes attention to the interface between the social and biological systems. The experience of projects such as the Embera-Kuna (100568), SANFEC and CIMMYT (04461) underscores that the flow of benefits from diversity is more apparent and greater when people and resources are both integrated and complementary. For example, the efficacy of medicinal remedies is reinforced by the belief system in which it is administered.

### **10.3 Overall assessment**

In addition to the key review areas of Participatory Plant Breeding and Medicinal Plants, SUB has done considerable work in capacity building and mainstreaming gender/equity analysis (section 6.1); and informing policies with local perspectives (section 8.3). It has also done some work in traditional knowledge, mainly linked to medicinal plants. As we observed in section 5, networking mainly at regional level but also at sub-regional and global levels is a key strategy for scaling up and out.

In all these areas, SUB has made some impressive achievements in this program cycle. In its work on PPB it is regarded internationally as a leader. More generally, SUB is viewed by its partners as an innovative program, providing strong intellectual input to its projects and networks, and supporting projects that are consistently at the cutting edge both methodologically and in the “alternative” view that they often provide to mainstream science and ideology. The words we heard to describe SUB’s contribution to its research partnerships were “innovative”, “outstanding” and “cutting edge”.

Clearly, SUB has been able to make more progress in some areas than others but it has managed across all its activities to focus its program definition to keep its work intellectually on-track and it has developed sound and explicit strategies for what it planned to do and to achieve. The SUB team operates as a team, sharing information and providing mutual support despite its geographic dispersion. It is well managed and well-led.

When asked about success stories, both external partners and the SUB team tend to focus on the major results achieved in PPB, the regional medicinal plant networks and the Crucible I,II, GRPI policy process that has brought such accolades to the Centre. We agree that these are major accomplishments for SUB, but we also see other dimensions that relate to SUB’s value-added as a distinct program within IDRC.

SUB's achievements include its processes as well as its results. One process dynamic is the use of formative evaluations to identify and elaborate new areas of emphasis so that the research directions supported by SUB are on track and responding to emerging issues in biodiversity. Some of these areas of emphasis have been discussed in the review. Here we want to emphasize the value of the ongoing intellectual process within the SUB team and their collaborators that has led to the evolving areas of emphasis. In addition to the *social and gender analysis for equity and sustainability* and the *networking as a way to scale-up and scale-out* areas that are discussed in the review, there are three other areas that SUB may expand in Phase 3:

- Local perspectives on access and benefit sharing (ABS)
- Strengthening local seed systems
- Strengthening biodiversity-rich production systems/livelihoods

Another important process dynamic within SUB is its focus on linking conceptual development of its thematic areas to an implementation strategy – no mean feat in a program that genuinely seeks to bring local, holistic worldviews to better understand some of the key drivers of globalization in world food production and pharmaceuticals. This accounts for the appreciation shown by SUB's partners for the PI's intellectual contributions to their work.

SUB's value-added also includes its contribution to syntheses of knowledge for the areas in which it has worked, and its outreach tools, some of which we believe are models for the Centre. It has led the way in integrating the work in medicinal plants and agro-biodiversity and in conceptualizing the continuum that exists between plant (and animal) products that are grown or collected for food, dietary diversification and nutrition and primary health care and remedies.

SUB has demonstrated its impact on policies at the state, national and international levels with its main target and main successes at the national level. More can obviously be done but SUB has already been able to scale up its work within a number of countries for both participatory plant breeding and medicinal plants (see below). Admittedly these achievements are the culmination of work in the first and second program cycles, as is SUB's impact on national legislation from the Crucible process. This underscores the need for continuity in programming to achieve a critical mass of results and/or significant impact.

There are a few areas where SUB has made less progress than expected. These include the work on mainstreaming gender/equity analysis, which is both more complex and slower than SUB probably realized at the outset. Having said this, we believe that SUB is a leader within the Centre programs for attempting to mainstream gender/equity and the roadblocks that it has hit are lessons for IDRC's gender strategy. These include strong cultural differences in the regions that make the use of Centre guidelines problematic and the lack of capacity among researchers to carry out the analysis, thus necessitating some rethinking of how researchers can best be supported or trained. We would link some of these difficulties to a weak regional strategic planning focus in SUB.

SUB has also had more difficulty in attracting other donors to co-fund its activities than expected, especially IDRC's "sister" organization, CIDA. This is partly because most donor organizations are not structured to have a program focus on biodiversity or the sustainable use of biodiversity. IDRC is one of the very few and its leadership in this respect stems from its designation as the Agenda 21 agency for Canada's response to UNCED.

Perhaps our main criticism of SUB would be that it has not yet developed a good strategy for capacity building at program level - one that ensures synergy between the *project* level capacity

building activities and what is needed within the context of different *thematic* areas and different *regions*. SUB has worked on some of the main building blocks of such a strategy – stronger partnerships between NGOs and national research establishments; insisting on strong research process within its projects; and providing some of the outreach tools researchers need to scale out and reach policy makers. SUB emphasizes capacity building within its projects and has capacity building in gender and social analysis as one of its areas of emphasis. Yet we hear that many researchers in MENA, for example, still are not able to implement gender analysis and participatory methods and we have made some suggestions for using regional networks and mentoring to develop such capacities. In PPB, there are proposals to develop the capacity of farmers themselves and ensure that new plant breeders are trained to use participatory research methodologies.

These elements among others need to be put into a framework that is strategic, synergistic and cost-effective over the timeframe of the next program cycle, and one that considers the needs of the different regions in which SUB works, and what capacity building projects are needed to fill gaps and/or be supportive to other SUB projects in the regions. In essence, we suggest that SUB could well articulate a capacity building strategy for each area of emphasis and each region and see where synergies can be found to produce a capacity development strategy that will support SUB to reach its overall program goals. Part of the implementation of any such strategy might be to find other donors to partner with.

In terms of the strategic directions that SUB set for itself in its Prospectus in 2000 (section 2 Box 8), we believe that SUB has made excellent progress. It has maintained a strong community-based approach and one that is more integrated between cultivated crops, uncultivated foods and medicinal plants. It has been a leader in developing research methodologies that involve men and women farmers and has continued to use global and regional networking as a key program strategy.

SUB has collaborated with other PIs as it said that it would do in its Prospectus but it is difficult to assess whether the collaboration is more or less than hoped for, or needed. It has funded three projects jointly with CBNRM, two with MINGA and one with EcoHealth as well as another one with the Communications Division and PBD. Other joint activities have been, and are under discussion.

SUB has created a Genetic Resources Policy Institute in collaboration with IPGRI (where it is housed) and is supporting the coordinator of the program. The strategic direction about which we are least certain is how far SUB has managed to support interdisciplinary research as well as multidisciplinary. Our sense is that it has made some real achievements in the direction of interdisciplinary research, both in terms of the research team composition and in terms of the outputs, but in the absence of firmer yardsticks, it is again hard to say whether SUB has achieved its own objectives in this respect. There has certainly been some progress in Phase 2 towards greater interdisciplinarity but it is hard for us to say whether it is more or less than might be expected.

Finally, SUB has promoted the work of its research partners in publishing research results but we are not sure if there is “brand recognition” within the policy community. We rather suspect not. We would suggest that SUB might wish to encourage more publications by its partners in peer-reviewed journals as this is one way to mainstream the research results and methodologies with other researchers.

To sum up, SUB has followed the strategic directions laid out in its Prospectus and has made major contributions to science, to policy, to institution building and to the work of the Centre between April 2000 and March 2003.

## **11      **LOOKING FORWARD****

While most of our proposals for the future have been integrated into the body of the review report, we would like to highlight a few issues for SUB and the Centre.

### ***Problem definition***

We have already commented that in general we find that the program objectives would be more useful to guide the PI if they included more specification of targets or some measures of achievement. We believe that it would help SUB in its problem solving approach to programming. How does SUB know when the problem has been adequately “solved” to move on to new thematic areas?

For example, SUB has reached some level of synthesis in its participatory plant breeding work and is proposing to focus its attention in the next program cycle on strengthening local seed systems and on local perspectives on Access and Benefit Sharing. Our review suggests that there may be some benefit in continuing some of the work of the present program cycle because the results are not yet consolidated enough to make some major gains in impact and scaling up. SUB may move on and miss the impact that a strategy of “staying the course” for a little longer might bring.

There are two main areas in PPB where we recommend SUB may wish to support additional projects in order to create a critical mass of results across different situations:

- Studies of the costs and benefits of participatory plant breeding, including (but not only) the economic impacts on incomes, especially of poor farmers;
- Development of tools to help farmers manage information and be more systematic in their approach to PPB so that their capacities are also increased.

### ***Program framework***

Without substantially changing SUB’s definition of its problematique, it may wish to consider recasting it within a scientific and policy framework that is more “legible” to its present and potential future partners. For example, one interesting and useful approach might be to consider the main drivers of globalization, including the very relevant one of globalization of food production and distribution, and structure SUB’s thematic areas as alternative responses to mitigating those drivers for communities. This might better link SUB’s research outputs to some major research endeavours such as the *Millennium Ecosystem Assessment (MA)*.

The MA involves nearly 600 scientists from all regions of the world to work together on global and sub-global assessments (regional, national and local) of the state of the environment for national governments and four major international conventions (Biological Diversity, Desertification, Wetlands and Migratory Species), which have established formal procedures to incorporate the MA into their decision making processes. The MA represents the largest assembly of scientific expertise in preparing these “states of knowledge” for the purposes of

national and international policy making. With the support of various partners that act as facilitators, the MA is engaging in an ongoing interaction with government officials, civil society and indigenous organizations, universities, business associations and others in a number of countries. SUB might wish to become engaged directly with the MA, and possibly other such science-policy initiatives in order to mainstream its work more broadly. It has a lot to offer the MA in strengthening its local perspectives on the key drivers for global change.

The other suggestion we would make with respect to SUB's overall program framework is that it might identify itself more closely with the Millennium Development Goals (MDG) adopted at the UN Millennium Summit in 2000. Most, if not all, OECD donor agencies have accepted these goals and have structured their programs to meet them. Other donors might more easily be able to partner with SUB if its programs were more clearly targeted to MDG goals like poverty alleviation.

### ***Regional strategies***

We would suggest that for the next program cycle, some more consideration is given to the different priorities and capacities in the regions to further elaborate regional strategies for SUB. We would also suggest that SUB might explore with other PIs and within the Regional Offices about how SUB might best collaborate with other IDRC programs at either regional and/or country level. One area that we think might immediately benefit from this approach is gender/equity analysis and capacity building.

### ***Capacity building strategy***

We understand that the Centre is considering a Centre-wide review of capacity building starting next fiscal year. If so, we would propose that SUB use that mechanism to undertake a program-wide review of its support to capacity building before the next Prospectus is prepared. This review should include capacity building within research projects and those projects whose main objectives are training and capacity building. We feel that this would help SUB to better define its objectives and future strategy for capacity building.

More specifically, we wonder if SUB should consider capacity building at more local levels than it has in the past, especially the need to inject some of the approach and findings of SUB in university and high school curricula for biology, biodiversity, plant breeding, medicinal plants and primary health care. As we have pointed out, some of these changes in attitude are best instilled in the next generations where the return on investment may be much higher.

### ***Evaluation***

We would suggest that in future, SUB records in a more systematic way its evaluation strategy and where decisions are made to significantly adjust the strategy. We would also suggest that the Centre might wish to use SUB's experience in formative evaluations as a valuable case study of how a PI uses its investment in these sub-program level evaluations to make decisions on future programming.

### ***Networks***

SUB has a clear strategy, particularly for using networks to scale up and out, and has put in place some very important and influential regional and global networks. We would suggest in the future that SUB might wish to do a comparative evaluation of its networks, including interviews with project leaders, to see where there are opportunities to make the networks even more effective. It would also be useful to identify and track some indicators for monitoring the networks. We would also like to see more attention to the "value-added" of networks and the

costs and benefits to the groups participating in them, and also as a return on the Centre's investments.

***Gender/equity analysis and mainstreaming***

SUB has put great effort into mainstreaming gender/equity analysis and has to be commended for that. But there is clearly much more to do to successfully implement it in all projects, especially after the proposal has been approved. The key stumbling block seems to be that SUB's partners need more capacity building than can be provided within the projects' resources and timeframes. There is also a danger that in some regions and countries, the whole strategy is seen as Ottawa-driven.

We would suggest that SUB rethink its gender/equity strategy to the extent that it explores some strategic partnerships with other donors and institutions in the regions that can provide the training and mentoring needed. Another proposal is that SUB might link its regional and sub-regional networks to resource institutions that can provide the support needed and share the costs across several projects.

***Looking forward***

SUB is an impressive program with dedicated staff and major achievements in this second program cycle. We believe that the Centre has a great advantage in having a program focused on biodiversity within its program structure. As SUB's Prospectus points out, plant genetic resources are at the heart of major policy clashes that are often played out between North and South; between local peoples and their national governments and between the public and private sectors. They are crucial to poverty alleviation and to empowerment of the most marginalized groups. The Centre needs to maintain a program focus on genetic resources, and perhaps expand it to focus more on the role of biotechnology. Issues like GMOs are already over the horizon and are already having positive and negative impacts on developing countries. SUB's problematique could not be more on target for tackling the emerging issues in these areas.

## ANNEX 1. PEOPLE INTERVIEWED FOR THE REVIEW

Jacqueline Ashby  
Director – Rural Innovation and  
Development Research  
CIAT

Cosje Hoogendoorn  
Deputy Director General – Programs  
IPGRI

Mauricio Bellon  
Human Ecologist – Senior Scientist  
Economics Program  
CIMMYT

Devra Jarvis  
Senior Scientist  
In Situ Conservation of Biological  
Diversity  
IPGRI

Dindo Campilan  
CIP – Philippines  
UPWARD Coordinator and CIP Liaison  
Scientist

Melinda Smale  
Research Fellow  
Food Consumption and Nutrition  
IFPRI

Salvatore Ceccarelli  
Barley Breeder  
Germplasm Program  
ICARDA - Syria

Louise Sperling  
Former PPB Coordinator  
CGIAR Systemwide Initiative on  
Participatory Research and Gender  
Analysis  
CIAT

Stefania Grando  
Barley Breeder  
Germplasm Program  
ICARDA

Bhuwon Sthapit  
Scientist  
In Situ Crop Conservation Specialist  
IPGRI Malaysia

Michael Halewood  
Legal Specialist  
IPGRI

Graham Thiele  
Liaison Scientist  
CIP Ecuador

Geoff Hawtin  
Ex-IPGRI  
Director, Global Crop Diversity Trust  
FAO, Rome

Joachim Voss  
Director General  
CIAT

## **SUB Team**

Wardie Leppan	Team Leader
Ronnie Vernooy	Program Officer
Brian Davy	Program Officer
Daniel Buckles	Program Officer
Erin O'Manique	Research Officer
Rana Ghose	Intern
Liz Fajber	Program Officer – SARO
Lamia El Fattal	Program Officer – MERO
Merle Faminow	Program Officer – LARO
Francois Gasengayire	Project Staff - ESARO
Madhav Karki	Project Staff - SARO

## Interviews/Group Discussion Participants , Bohol, Philippines, 4-6 August 2003

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Jeremias Rubilla, Sr. Zamora, Bilar, Bohol. August 4, 2003.  
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Pedro, Retchel. CBDC-Bohol, August 4, 2003.  
Lugasip, Socrates. CBDC-Bohol. August 4-6, 2003.  
Mahinay, Epigenio. CBDC-Bohol. August 4-6, 2003.  
Otara, Merigine. CBDC-Bohol. August 4-5, 2003  
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Elenita Dano – Executive Director, SEARICE  
Wilhelmina Telegrina – Deputy Executive Director, Coordinator, Technical Assistance Unit  
Angelina Uycoque – Administrative Officer  
Alwyn Darle Arnejo – Program Coordinator, CBDC, Bohol

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## ANNEX 3 RESEARCH INSTRUMENTS

### 1. INTERVIEW QUESTIONS FOR KEY PARTNERS

IDRC has asked for an external review of the Second Cycle (2000-2004) of its Program on “Sustainable Use of Biodiversity” (SUB). The review is being undertaken by Dr. Anne Whyte (Canada) and Dr. Victoria Tauli-Corpuz (Philippines). Your name has been given to the external reviewers by IDRC-SUB as someone who has worked with SUB. Your responses are confidential to the review team and will not be shared directly with IDRC, but you will be acknowledged as one of the experts providing input for the assessment. Your information will form part of the evidence for the recommendations for the Board of IDRC in the review report.

#### COLLABORATION WITH IDRC-SUB

1. What have been the main areas of collaboration with IDRC’s Program, *Sustainable Use of Biodiversity (SUB)* in which you have been involved?
  - 1.1. What is SUB’s role in the collaboration?
  - 1.2. What has been the influence, if any, of SUB on that area within the CG system?
2. Would you say that there is a shared sense of vision for sustainable use of biodiversity between IDRC-SUB and the CGIAR and/or your own Center?

#### PAST PERFORMANCE

3. What have been IDRC-SUB’s main successes and failures or constraints?
4. For the fields with which you are familiar, how would you assess the strengths and weaknesses of SUB’s approach and work in relation to the current state of the field?

[SUB’s main areas of work for its second program cycle are:

- Agricultural biodiversity (including Participatory Plant Breeding)
- Gender dimensions of biodiversity use and conservation
- Indigenous knowledge
- Medicinal plants
- Informing national and global policies with local perspectives]

#### FUTURE PROGRAM PRIORITIES

5. What do you think should be the future priorities for the SUB Program (in the light of their current resources and track record and the research activities of other organizations)?

5.1. In particular, do you have any comments on any of the following proposals for program focus:

- Integrated approach to plant genetic resources for food security/nutrition/health care
- Natural resources management for medicinal plants
- Focus on neglected/underused/uncultivated species in agrobiodiversity
- Seed systems
- Gender, biodiversity and tenure
- Local perspectives on ABS (Assets and Benefit Sharing)

5.2. Which organizations should be their key partners in the next program cycle (CGIAR, Universities, Governments, NGOs)?

#### PARTICIPATORY PLANT BREEDING (PPB)

6. What progress has been made in mainstreaming PPB within your own Center; within the CG system and with the NARS?

6.1. What role, if any, did IDRC-SUB play in this mainstreaming?

7. What are the key future directions for PPB?

7.1. Which of these do you see as good foci for SUB's future work?

#### OVERALL ASSESSMENT

8. What is your overall assessment of the work of the SUB program?

9. Is there anything else that you would like to add? Anything that I haven't asked, that I should have?

## **2. CBDC PARTNERS**

### *Collaboration with IDRC-SUB and other Donors*

1. Considering that IDRC is just one of the donors for the CBDC project what has been SUBs role in the partnership collaboration?

2. What were the advantages and disadvantages of working in a project which has multiple donors?

Implementation of recommendations from the previous evaluation

3. What have been the correctives done after the recent evaluation undertaken for the CBDC project?

### ***Policy Advocacy***

4. How were the results of the project used to advocate for changes in policies from the local, national, regional and global level?
5. What were the problems encountered in the policy advocacy work in the various levels?
6. To what extent has the project worked with local decision makers and what were the lessons learned in forging this partnership?

### ***Gender Mainstreaming***

7. What were the main achievements in gender mainstreaming considering that this has been identified as a priority and one of the T-lines in the project is gender?
8. What were the problems encountered in mainstreaming gender?

## **3. INTERVIEW QUESTIONS FOR SUB TEAM**

Thank you for agreeing to be interviewed as a member of the SUB Team. Your responses are confidential to the review team. You will be acknowledged in the report as one of the experts providing input for the assessment. Your views and information will form part of the evidence for the recommendations we make in the review report.

10. What have been the main areas of SUB in which you have worked?
  - 10.1. How long have you been on the SUB Team?
  - 10.2. What percentage of your time is devoted (officially and unofficially) to SUB? Has this changed over the years?
11. Would you say that there is a shared sense of vision for sustainable use of biodiversity between members of the SUB team? Between SUB and IDRC Senior Management?

### **PAST PERFORMANCE**

12. How well is SUB reaching its three objectives for Phase 2?
  - To promote knowledge, innovations and practices of indigenous and local communities that conserve and sustainably use biodiversity
  - To support policy models that recognize the rights of indigenous and local communities to genetic resources and to ABS in intellectual property regimes
  - To develop gender sensitive incentives, methods, livelihood options and policies that facilitate community-based participation in in-situ biodiversity conservation.

- 3.1 Do you have any comments on these objectives?

13. From your perspective, what have been SUB's main successes and failures (or constraints) since April 2000?
14. For the fields with which you are most familiar, how would you assess the strengths and weaknesses of SUB's approach and work in relation to the current state of knowledge and the field generally?
- Agricultural biodiversity (including Participatory Plant Breeding)
  - Gender dimensions of biodiversity use and conservation
  - Indigenous knowledge
  - Medicinal plants
  - Informing national and global policies with local perspectives
15. How would you assess SUB's achievements in capacity building since April 2000? What are the main success stories?
16. Do you have any comments about SUB's regional strategies?
17. What main successes and failures/constraints would you highlight in SUB's achievements in 'Closing the Loop', including with national policy makers?

#### FUTURE PROGRAM PRIORITIES

18. What do you think should be the future priorities for the SUB Program (in the light of expected resources and what other organizations are doing)?
- 18.1. In particular, do you have any comments on any of the following proposals for program focus:
- Integrated approach to plant genetic resources for food security/nutrition/health care
  - Natural resources management for medicinal plants
  - Focus on neglected/underused/uncultivated species in agrobiodiversity
  - Seed systems
  - Gender, biodiversity and tenure
  - Local perspectives on ABS (Assets and Benefit Sharing)
- 18.2. What do you see as some of the main program challenges for SUB in its next program cycle?
- 18.3. Which organizations should be SUB's main research partners in the next program cycle (CGIAR, Universities, Governments, NGOs, CBOs)?
19. What, if anything, should SUB do differently in the future?

OVERALL ASSESSMENT

20. How would you describe SUB's "value-added" as a PI over and above the activities that it supports?
21. Is there anything else that you would like to add?

## **ANNEX 4 REVIEW TEAM BIOGRAPHIES**

### **Victoria Tauli-Corpuz**

Victoria Tauli Corpuz is an indigenous activist who finished nursing from the University of the Philippines in 1976. She did primary health care work in the villages in her province for many years after she finished university. She is presently the Executive Director of Tebtebba Foundation (Indigenous Peoples' International Centre for Policy Research and Education) since 1996. This NGO based in the Philippines is mainly involved in enhancing the capacity of indigenous peoples to assert their rights and to influence decision making in the national and global levels as well as to advocate for their issues and concerns. Before that she was the Director of the Cordillera Women's Education and Resource Center (1986-1995) an indigenous women's centre which is involved with organizing indigenous women, raising their social and feminist awareness, supporting socio-economic projects and engaging in campaigns on issues relevant for them as indigenous women. She does some consultancy work such as evaluation, research and training. Some of these are the evaluation of the Third World Network (TWN), an international NGO based in Malaysia, in 1994 and the Asia Pacific Women Forum on Law and Development (APWLD), which is based in Thailand, in 2000. Some of her other involvements are as follows; Chairperson of the Board of Trustees of the UN Voluntary Fund on Indigenous Populations (1993-present), Commissioner of the World Commission on the Social Dimension of Globalization, Member of the UNDP Civil Society Organizations Advisory Committee, Convenor of the Asia Indigenous Women's Network, and she was recently elected to be a Board Member of CIAT (2003-2006).

### **Anne Whyte**

Anne Whyte is President of Mestor Associates, a Canadian consulting company specializing in international development, particularly program planning and evaluation; environmental policy; and organizational management and innovation. In addition to her consulting work, she is active in a number of NGOs and international scientific bodies, including serving as Vice Chair of ICIMOD (International Centre for Integrated Mountain Development) based in Kathmandu; Treasurer of SciDevNet, an Internet based Network providing free access scientific information; Co-Chair of the Review Board of the UN Millennium Ecosystem Assessment; Chair of Technical Advisory Committee for the Zayed International Environment Prize; and Member of Advisory Group for the International Council for Science Consortium on Science and Technology for Sustainable Development. In 2002 she was awarded the Queen's Jubilee Medal for service to Canada. From 1986-1996 she was a senior manager in IDRC, with overall responsibility for all IDRC's work in environment, agriculture and earth and engineering sciences. From 1975-1986 she was a Professor in Geography and Environmental Studies at the University of Toronto, with a two-year leave of absence to work in UNESCO's Man and the Biosphere (MAB) Programme in Paris. She is trained in the natural sciences (geomorphology and hydrology) and the social sciences (human geography, anthropology and psychology). She received a BA in 1963 and MA in 1967 from the University of Cambridge, England and a Ph.D. in Geography and Environmental Engineering in 1971 from the Johns Hopkins University, USA. Her PhD was on risk perception and agricultural decision making of Zapotec Indian farmers in Oaxaca, Mexico.