



## Republic of Peru: management of natural resources in the southern highlands project (MARENASS)

*After four years of work under MARENASS, two conclusions can be reached: first, to achieve success in the fight against poverty under the conditions that prevail in the Peruvian highland region, especially the Southern Highlands, it is essential to reclaim and increase the productive value of natural resources, the most important asset available to those who live in the region, and, second, it is essential to make families and communities the centre of activities, with due respect for their own proposals, potential and abilities.*

The general objective of MARENASS is to increase the capacity of communities and families to carry out their own development activities in a sustainable manner, exercising their civic rights and duties, in a framework of gender equity. This objective has made it possible to focus the project activities on improving the living conditions and overcoming the poverty of community members, strengthening and increasing their capacity for natural resource management.

The activities implemented under MARENASS have been aimed at building capacity, recognizing that local stakeholders are pivotal to its interventions and bearing in mind the three dimensions encompassed within the concept of "capacity": knowledge, know-how and ability to take action. The list of the capacities developed is long: capacity to plan (with instruments such as the "talking map," in which all can take part to "write" and "read" time and space); capacity to identify opportunities and find possible sources of support (technical assistance, indigenous or imported technology); capacity to negotiate (within the community, between the community and external actors—e.g., local institutions and governments); capacity to self-finance investments and obtain complementary external financing; capacity to contract with third parties, to oversee and utilize their



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services to best advantage and to monitor them; capacity for organization and management; and capacity to establish relationships in general. Through training, families and communities have (re)assumed their responsibility for managing the local ecosystem.

The activities of MARENASS take place in the framework of land management "projects" undertaken by the beneficiaries themselves, aimed both at increasing, adapting and capitalizing on their economic potential and at enhancing their quality of life. "Ordenamiento" (putting in order, upgrading, improving) is the term used to describe the set of actions carried out by local stakeholders, beginning with the house—the family base and main element within the ecosystem—and encompassing all of the land and the entire community. The idea of "ordenamiento of the home, the farm, the community" has become an important organizing principle for mobilizing action. MARENASS has one truly innovative aspect: it has succeeded in synthesizing the lessons learned from prior isolated, fragmentary and incomplete experiences and disseminating and replicating them. The project has also sparked the creativity of local actors.

### **Recommendation 1**

Specialized professional support is needed in order to address a broader range of issues and perspectives and to grapple with the new challenges generated by the success of the project itself. In the immediate future, action should be taken to reinforce the activities carried out under MARENASS in three main areas: (i) in the technical sphere, to provide information and approaches for deepening learning and improving decision-making; (ii) in the economic realm, since the sustainability of improved environmental management depends on the identification of economic alternative and linkages to the market; (iii) in the area of labour, carrying out interventions at the microbasin level, as a natural and necessary amplification of what has been done up to now. In this last phase of the project, local actors should be afforded opportunities to forge stronger ties with elements in the immediate and the more distant environments and to negotiate collaborations.

### **Recommendation 2**

MARENASS has demonstrated that social capital is the key to improving the local ecosystem. Now it is essential to facilitate relationship between the local and the global, between the "micro" and the "macro." To that end, it is necessary to (capitalize on) the lessons learned from the experience, to share them with the people already involved and also with other, external actors who might become commercial, institutional or academic partners or participants in the dynamic processes set in motion by the project.

### **Recommendation 3**

It is necessary to determine what bureaucratic and administrative steps are needed to extend the project to 2004 in order to complete all the activities programmed, taking into account that the project got under way behind schedule (in 1998 rather than 1996). This will entail a revision of the amounts allocated to each category of expenditure. It is also recommended that consideration be given to the possibility of seeking additional funds to undertake the activities mentioned in Recommendation 1.

*The conception that community members have of natural resources begins with their own dwelling and extends outward from there to encompass the garden, animal corrals, farmland, irrigation, organic production and pastures. They are reluctant to upgrade their corrals or farmland before improving their own houses. They have a logical conception of an undivided whole that is the space within which their lives and their productive activities take place.*

The MARENASS experience shows that, in projects of this type, it is essential to apply a vision of "the whole" espoused by the communities themselves. The families conceive their strategy for living and generating incomes in a "global" manner and they seek the highest degree efficiency in the combination of resources available.

Local stakeholders have progressively taken over the management of their natural resources, starting with those belonging to family groups and then encompassing communal resources. This is undoubtedly one of the keys to the success of MARENASS and its enormous impact, and it is what distinguishes it from programmes that focus solely on communal resources. This is not an exclusive approach, since there is no intrinsic conflict between the family and community dimensions; rather, the two are closely linked. The point of departure is family resources and, as the "family project" expands, it extends naturally into the community environment. It is a complementary sequence, not one that is automatic or mechanical. MARENASS began with "community" plans, but the talking maps method made it possible for each family to function as an individual entity within the whole and each thus became a stakeholder, not just a participant in a community initiative.

The use of comprehensive competitions, proposed and requested by the communities themselves— competitions that entail an evaluation of the systemic management of production, both within the community and between communities—makes it possible to reinforce the lessons learned from training activities geared towards the partial competitions. It also places specific activities within the global context of the production system and the community.

In the concept of "natural resource management," the strategy of

the community members includes the home and, therefore, the idea of ordenamiento extends to all the land held by the family and to all communal areas. The transformation brought about by the project thus goes far beyond a simple list of improved physical resources. Their use has been facilitated and made more purposeful, giving rise to a very powerful socio-economic dynamic in which families, most of whom were living in a situation of precarious subsistence, have been able to achieve food security and are now seeking to establish linkages with the marketplace in order to sell their surpluses.

The project's most apparent positive results are seen in the practices employed in the environment nearest to and worked most intensively by families, which have yielded improvements in the quantity and quality of production intended for self-consumption (diversification of crops and better supplies of agricultural products and vegetables, thanks basically to terracing, irrigation by means of a system of channels and use of organic fertilizer); increased availability of animal products—milk and meat—thanks to the production of forage crops on irrigated terraces and their subsequent preservation, genetic selection and the construction of stables to protect animals from the elements; and less need for commercial inputs (agrochemicals).

The increase in the area under cultivation, which was one of the objectives of MARENASS, has been relatively small, but it has been real, thanks to the construction of terraces and to the rehabilitation or construction of irrigation infrastructure. Much more important than the increase in cultivated area, however, are the improvements on family lands already under cultivation: terracing, sprinkle or channel irrigation, fertilizing with compost and humus, crop diversification and intercropping. These improvements have led to large and stable increases in production on family farms. The higher yields have been due not to the increase in cultivated area but to the improvements on areas already being farmed. For the families, the impact has been significant in terms of the benefits obtained: production has doubled or tripled on a large part of the land farmed by families participating in the competitions between families (20 000 families, approximately 46% of the 43 000 registered families in the area).

Most of the families that work with MARENASS have placed less priority on opening up new agricultural lands than on boosting the economic profitability of nearby lands already under cultivation, improving those lands in order to obtain higher yields. And this strategy is not incompatible with the improvement of natural resources since it alleviates the pressure on more distant areas and thus favours recovery and better management of those lands. A hypothetical expansion of the agricultural frontier depends on economic and market strategies.

### **Recommendation 1**

It is necessary to fully grasp the strategy and priorities of the community members. The natural resource management practices proposed under MARENASS have great potential for rapidly improving the household economy and achieving food security, the top priority of local actors. The action taken cannot be limited simply to a "productive" or "agricultural" approach. This certainty should be transformed into appropriate methodologies and activities. The use of talking maps as instruments for planning on family farms is also recommended.

*MARENASS employed a methodology for training, production support and natural resource management based on: (i) farmer-to-farmer training in the use of technological alternatives for natural resource conservation and recovery; (ii) transfer of resources to communities to enable them to contract for technical assistance services and thus develop a market for such services; (iii) the Pachamama Raymi (celebration or worship of Mother Earth) methodology, which entailed the organization of competitions for the dissemination and extension of technological alternatives. The funds transferred through MARENASS have helped generate a local market for private (or outsourced) technical assistance services, making it possible for communities to contract for the services of technical experts and local specialists.*

The training methodology relies on farmers as trainers who carry out farmer-to-farmer training activities and on contracting for experts and specialists. The methodology includes training for farmers in the use of technological alternatives for natural resource conservation and recovery and the dissemination/extension of these alternatives through competitions, followed by evaluation of the process of change that occurs as a result of the cash awards given to the families and communities that achieve the best results. The yachachiqs are responsible for training community members, providing them direct on-farm assistance. MARENASS has achieved considerable success through the application of this methodology of farmer-to-farmer training.

The training in communities is complemented by the Environmental Education Programme carried out in schools and by competitions organized among students and among schools to teach students techniques for conserving and making more productive use of natural resources. The potential of this programme is not being fully exploited.

The competitions between communities are the instrument that has made it possible to achieve two objectives: first, community cohesion and, second, mass dissemination of resource management techniques and their subsequent application. Although the level of participation in the competitions between families is quite variable (averaging 40% of the families in each community), by decision of the assembly, the competitions

community), by decision of the assembly, the competitions between communities necessarily involve all the families in each community. The competition and the award provide a strong initial impetus. Later, concrete results become the incentive to continue with the practices introduced: production improvements that translate into higher earnings for the farmers, thanks to more effective use of their productive natural resources and the consequent appreciation in the value those resources,

The system receives funding from the Technical Assistance Fund, which transfers resources and responsibility for contracting for services directly to communities, building on the prior experience of the Promotion of Technology Transfer Project to Peasant Communities in the Highlands (FEAS). This methodology calls for the transfer of initial funds to the communities, which select, contract and pay the yachaqs directly. The latter provide both direct assistance services and training for yachachiqs. The communities apply strict cost-benefit criteria in contracting for these services (presumably stimulated by the possibility of winning the competition) and utilize the resources very prudently. The assembly decides how to contract for the services of yachaqs, which ones to hire and for how long.

The other instrument on which the system is based is the Award Fund, which is intended to finance the awards for the competitions. Funds are transferred to the communities in accordance with the schedule of competitions before the competitions take place and are administered by the community itself. The transfer of funds is an additional means of empowering the communities, which, within the rules recommended by MARENASS, have a fair amount of decision-making freedom with regard to the distribution and amount of awards (first, second, third prize, etc.). In some cases, a small portion of these funds is used to cover the expenses of the competition judges.

### **Recommendation 1**

MARENASS does not have a clearly defined strategy—beyond expressions of interest and official statements—that would ensure that families and communities have resources to contract for services after the project ends. Steps should be taken to develop such a strategy and formulate proposals for financial sustainability, both through self-financing and through transfers and cofinancing with public funds. It is recommended that the possibility of strengthening interinstitutional relationships be explored, in particular with the municipal governments, in order to maintain, at least partially, the availability of funds for awards in the communities from which MARENASS has already withdrawn or will soon withdraw.

### **Recommendation 2**

It is recommended that the performance of the Environmental

Education Programme be reviewed, with the participation of the communities. The school-community relationship through the Programme needs to be re-examined in terms of the sustainability of both the dynamics and the knowledge and abilities that are being imparted. Mechanisms such as management and control of Programme funds by the communities might strengthen their capacity for negotiation with the schools. These resources might be converted to another type of fund—one managed by the communities or by the schools themselves.

*Although families and communities have achieved good results in regard to natural resource management, especially in the "agricultural" and "productive" spheres, it is imperative to develop an appropriate approach for addressing economic issues and gaining access to and forging ties with markets. Economic issues may become the main obstacle to sustainability of the achievements generated or supported by MARENASS. Families' strategies for the future aim to end their dependence on agricultural production and diversify alternatives and occupations. Although they wish to continue living on their lands, they do not necessarily want to rely solely on agricultural activities for their livelihood. Rather than simply pushing back the agricultural frontier, what the families and communities want is to expand their economic frontier. This is particularly evident in the communities that have benefited from recent investments in infrastructure, roads and electrical power by the Fondo Nacional de Compensación y Desarrollo Social [National Compensation and Social Development Fund] (FONCODES) and other institutions.*

The physical results provide evidence of the magnitude of the change and the capital formation process. Capital formation has occurred: (1) at the level of family assets in: (i) physical assets, including the improvement of housing, corrals and facilities for animals, terraces, plot irrigation infrastructure, etc.; and (ii) financial assets, which have been generated by reducing families' expenditures on external inputs (fertilizers and agrochemicals) and boosting their incomes through increased production and sale of surpluses; the monetary awards have also become, first, financial assets and, then, in almost all cases, physical assets; and (2) at the level of community assets, including meeting halls for community use, community lands, pastures, collection and distribution of water for irrigation, etc. In addition, some communities have won awards, increasing their financial assets, which in general have rapidly been converted to physical assets.

MARENASS has achieved one very important success: It has enabled at least 20 000 families of community members to move from a situation of subsistence and food insecurity to one in which they are rural-producers with greater financial and physical assets, increased food security and production surpluses.

Higher yields are generating surpluses for the market. Though the volumes are still not large, they are sometimes significant, owing especially to the increase in the production of milk and

especially to the increase in the production of milk and vegetables. A growing number of families have surpluses, but they all rely basically on the same nearby market—i.e., they share the same “immediate economic and commercial scenarios.” There is a high risk in continuing to support the “success” in the boosting production and productivity without clearly identifying possible markets or addressing the myriad changes that will occur in each and every dimension of economic, labour, social, cultural life and the life of community organizations. Economic issues may become the main obstacle to sustainability of the dynamic processes generated or supported by MARENASS.

MARENASS’s real impact on physical and financial assets has been limited by its lack of a clear vision of the economic realities and characteristics of the beneficiary families and communities and of their own strategies for dealing with their economic situation and the contexts in which they operate. MARENASS continues to lack an approach and clear-cut proposals for addressing economic issues. Its success in facilitating the transition from a precarious subsistence economy to a more diverse and productive rural economy carries with it the challenge of developing new market linkages so as not to depend solely on the closest local market but also to have access to a larger market at the departmental, regional or national level.

The families that have succeeded in rising above their situation of mere survival are now seeking other opportunities and possibilities that will enable them to generate complementary or primary sources of income not necessarily related to agricultural production or use of natural resources. Generally speaking, they do not intend to reduce or abandon their agricultural production, but they do aspire to end their dependence on farming by diversifying their alternatives and occupations. Families and communities are seeking to expand their economic frontier.

### **Recommendation 1**

MARENASS, together with the communities, needs to devise strategies for addressing the “economic” dimension. The project’s very success has created new challenges, especially in relation to the market, where it is now no longer a matter simply of placing surpluses but of seeking alternatives for carrying out other productive endeavours. Thus far, MARENASS has not been able support families and communities adequately in confronting these new challenges. Little progress has been made in a sphere which should play an increasingly prominent role and requires urgent attention, given its importance in relation to the increases in production, management of surpluses and market linkages.

### **Recommendation 2**

It is necessary to formulate a clear-cut approach and propose actions and activities to support families and communities in their search for new income-generating opportunities (craftwork



search for new income-generating opportunities (craftwork, microenterprise, services, etc.)

*There has been an increase (in value, variety, circulation and amount) in the exchange and tenure of goods and services in the intra- and interfamily and the intra- and intercommunity spheres, coupled with greater dynamism and security in the availability of surpluses. Enhanced well-being is perceived in beneficiaries' homes, owing to better diet (in quantity and quality), greater physical comfort (home improvements: better shelter from dampness, wind and cold; diversification and multiplication of inhabitable spaces), and acquisition of new goods and services.*

Most of the communities involved in MARENASS are located in areas of the Southern Highlands of Peru that are at high risk from a food security standpoint. The families that initially participated in the project are among the poorest in the country. Increasing the supply of foods in order to achieve food security (defined as viable and continuous access to food commodities of good quality and in sufficient quantities to feed the family) is the number-one objective of the families involved.

Use of the various agricultural production technologies and strategies proposed under the project led to immediate increases in the productivity of the land and doubled family production. Moreover, the use of organic inputs (made from ingredients available in the community) has improved the quality of products and helped spread knowledge and practices for the control and prevention of pests and blights, thereby reducing losses. The production of forage crops on terraces and the existence of irrigated land close to the home has permitted rapid access to those areas and to a continuous supply of feed for animals (cattle, sheep, camelids, pigs, guinea pigs and rabbits). Thus far, MARENASS has offered only tentative solutions to the problems related to storage and other post-harvest activities.

The diversification of production has been remarkable. The availability of a garden and multiple feed crops has enabled farmers to acquire more animals, which can be better fed with the leavings from the garden and the forage production. For the families involved, owning more animals means having a source of funds (savings) available throughout the year to cover unforeseen expenses.

The project's technology dissemination strategy is particularly well suited to the productive and organizational mindset of the families. Training and advisory services for families are provided by the yachachiqs, members of the community who are regularly available to answer questions, repeat concepts and monitor progress. Their knowledge, not only of the language, but also of local production systems, myths and the conditions that prevail in the community enables them to transmit a new message that is more persuasive and in accord with the rural reality.

Thanks to the improvement of natural resources and the increase in family production, new goods and resources have been generated that are now available and sold all year long, including during times of scarcity, without this leading to loss of goods or reduction of family wealth. Self-sufficiency and food security have helped energize the rural economy. Application of the various technologies and production strategies proposed under the project has not only made it possible to double and even triple family production, but also to diversify it by introducing new crops and staggering their production throughout the year. With availability of these products, families have been able to utilize their few available funds to purchase medicines or supplies such as record books or to finance other basic needs.

More meticulous care of stables and corrals and a better diet for animals has led to increases in the production of meat, milk and cheese and gradual improvement in the quality and breeds of animals (in addition to the savings or availability of funds that they bring to the family). Although the diversification and intensification of livestock production has emphasized animals that develop rapidly (smaller species), an increase and improvement in the cattle available in the communities is also discernible.

35 Improvement in the quality of foods depends on the utilization of better technologies and intensive application of organic farming methods that employ inputs produced by families themselves. These inputs are, mainly, compost/humus and biocides and biological pesticides—products that result from the greater availability of animals, the establishment of family biogardens and the management of waste from all of them. All the homes visited had an area for compost/humus production, which increased in size as the family acquired more animals.

### **Recommendation 1**

It is necessary to continue supporting the process of achieving food security, especially in relation to storage and post-harvest activities, promote diversification of food production and strengthen training in nutrition, particular child nutrition.

*Production and Marketing Fund - Funds for Organized Groups of Women (OGW). Most of the organized groups of women or mixed male-female groups have their own bank account, those that do not have an account use the community account. The MARENASS funds are transferred into these accounts, as are revenues from microbusinesses. The businesses managed by the women run the gamut from agricultural production and livestock breeding and fattening to micromarketing and microcredit operations. This fund has achieved tremendous success: the average of the capitalization process for the project as a whole (all 360 communities have one or more women's groups) is about 50%. In four years, some groups have doubled the capital transferred by the project. But its most important success has perhaps been the*

*the project. But its most important success has perhaps been the impact on the role and presence of women in the social organization of communities.*

The fund is amply used for production and marketing and for microbusinesses managed by women's groups. In some communities, mixed groups of men, women and young people have been formed. There is considerable variety in the management, structure and level of consolidation of the groups that use this fund. Although the management of funds has generated power and prestige for the women involved and has enabled them to make a monetary contribution to the family economy, there is a latent risk that the "success" in capitalizing the women's groups will prompt these groups to put forward proposals and ideas for the creation of microenterprises without sufficient forethought and without assuring the elements needed to be able to be manage them effectively in market terms.

There is some confusion about the use of these funds for microcredit or as money that can be used to accumulate funds to finance microenterprises. Confusion also exists about whether this is a fund to support women's learning and empowerment or an investment fund that is profitable and sustainable. Owing to the high rates of illiteracy and the inability of many of the women to speak Spanish, the management of financial instruments by the women's groups is still very weak.

**Gender.** The ideas about social and family equity disseminated through the gender and citizenship training, combined with the empowerment of participants and groups under MARENASS, have led to increased attention to and better—i.e., more equitable, effective and representative—distribution of benefits among the poorest sectors of the community.

MARENASS has had a very strong impact on families, stimulating a genuine process of rethinking the roles of persons of different sexes and ages within the family and fostering new opportunities for dialogue, negotiation and planning among all the members. The improvements with regard to meeting basic food needs and time- and labour-savings on a series of activities such as cooking, irrigation and care of animals have made it possible to devote more time and effort to the improvement of living conditions in general. The participating families have enhanced their prospects for improving quality of life and they have also invested a great deal of energy in enhancing their homes and their land and in launching new economic activities.

The improvement of family living conditions and knowledge has had its greatest impact on woman in those cases in which the training and the improved practices (forage, corrals, nurseries, fruit and vegetable production) have been closely associated with the home and with organized women's groups. Affirmative action in the groups has provided an opportunity for women to expand their financial participation and demonstrate their capacity to

their financial participation and demonstrate their capacity to contribute to the community and the family. Women have been strengthened not only in terms of their skills (financing and knowledge) but also their influence, visibility and participation in the community councils. Nevertheless, there remains a huge social difference between the recognition that men and women receive for their respective experience, skills and potential contribution.

### **Recommendation 1**

In order to consolidate the women's groups, it is recommended that activities be planned to: (i) promote training and management of rural businesses among their members (men and women); (ii) support the shift, within the groups, from a farmer mentality to a business mentality; (iii) identify business modalities that are not limited by legal constraints; (iv) seek similar experiences in microcredit and microenterprise to capitalize on experiences; (v) provide training in all the foregoing areas in the Quechua language; (vi) integrate the need to monitor businesses into the thinking of the community and, especially, into negotiations with women.

### **Recommendation 2**

It is recommended that gender training be continued and strengthened, based on the current strategy of focusing on the family and the issue of the rights of persons and organizations. An effort must be made to overcome the widespread illiteracy and lack of knowledge of the Spanish language that have stood in the way of strengthening women's capacities and improving their occupations (although the improvement in living conditions brought about by the project makes it possible to anticipate a reversal of this situation in the medium term: the percentage of girls attending school on a regular basis in the communities participating in the project is now approaching 45%).

*Participation, identification, ownership. The response of all community members is: "We are MARENASS. We do the work, we make the decisions, we irrigate, we improve our homes, our farms, our pastures... What we do, we do for ourselves and it remains here for us."*

The families and communities participating in MARENASS have taken ownership of the project and, with it, of something that they feel was theirs already: the terraces, the houses, the water, the pastures, a technology with a high labour content that produces high returns with little or no external input. But, above all, they have taken ownership of a "user-friendly" project that has offered technologies that are within their reach and rooted in their culture and ancestral practices.

The methodology of comprehensive interfamily competitions—

encompassing the home, the garden, the animals, organic production, irrigation, pastures, etc.—which the community members insisted upon, involves the entire family in a reappraisal of the roles of heads of household, women and young people. The gender training, oriented basically towards establishing community, family, and individual rights and strengthened by the mechanism of the competitions between families, has had a considerable impact, directly modifying the conditions under which relationships among family members take place.

In the communities visited, the participants exhibit a high level of acceptance and seem deeply convinced of the validity of the MARENASS approach because it has been shown to produce results quickly, not only by increasing productivity but also by improving social and family well-being and encouraging a recovery of communal identity and an appreciation of the qualities the community has to offer. In the words of the beneficiaries, “MARENASS has awakened us,” “MARENASS has opened our eyes.” Word of the project’s credibility has spread quickly, creating rising demand.

The on site training and technical support in regard to improved farming practices, animal health, the environment, accounting, rural business, leadership, equity (citizenship and gender) have created new prospects for the future and strengthened the skills and potential of community members, enhancing their self-esteem and cultural identity. MARENASS has trained at least 40 000 families in the various strategic areas promoted under the project. Of those families, at least 20 000 have adopted most of the measures proposed, as evidenced through their participation in the family competitions within communities. A larger group, comprising close to 40 000 of the families that received training, have taken part in the competitions between communities.

The project’s most significant impacts among the members of the communities visited is perceived in the optimism, skill in management and performance, security about their own capabilities and activism of the MARENASS participants, as well as their empowerment and greater weight vis-à-vis “wealthier” social groups in the community and the traditional administrative authorities in their environment. All these impacts are patent and real.

The farmer-to farmer training system, yachachiqs and community leaders (men, women and young people) is contributing to the creation of a broad and growing human capital base. It is interesting to observe the process through which young men and women become yachachiqs, some of them going on to become community leaders or yachaqs. Some community leaders participate in the elections at the district municipal government level, and some community facilitators are becoming local leaders. Recent political and economic changes in the country, coupled with the control of political violence, have prompted some emigrants to return to the region. While this is not a massive

emigrants to return to the region. While this is not a massive phenomenon, it is important because these returning emigrants bring back a new vision and expectations and many also return with new experience and skills, which are being disseminated in the communities.

The project's sustainability rests largely on the concept of "regaining ownership" and on acceptance of the idea, oft-repeated by the community members: "We are MARENASS."

### **Recommendation 1**

The formation of human and social capital is not complete. Frequent changes of yachachiqs and community authorities necessitate an ongoing training effort which is far from finished. The weakness and shortage of community leaders is one of the most obvious obstacles to consolidation and self-sustainability of the process. Continued training in the project strategies and methodology is needed, especially because so many community members migrate.

### **Recommendation 2**

The creation of human capital is an ongoing task, and MARENASS should therefore develop a proposal for making the communities themselves responsible for assuring the sustainability and maintenance of the process and negotiating future support with other institutions or programmes.

*Community organizations have become stronger as a result of the development and transfer of responsibilities under the project, including planning for the community's future, managing funds and overseeing interfamily and community natural resource management processes; regulating livestock grazing in communal areas; and participating in competitions between communities. Community organizations have thus been legitimated and strengthened, reversing a trend in which the idea of community was associated with "collective" and community organizations were thus viewed as a hindrance to the "private" initiatives of families. As for the bank accounts and community organizations, the transfer of funds to communities is very useful as a means of generating and strengthening dynamic processes in the communities and encouraging investment by rural inhabitants in improving their ecosystem and land*

Most of the communities in the project area have been battered by the economic crises and social conflicts that have occurred in the country in recent years and by macroeconomic policies that marginalized them. Individual and social interest groups and traditional structures had virtually disappeared. More than half (180) of the communities with which MARENASS has worked or is still working had not attained legal recognition and official designation or their statutes had lapsed. Thanks to their work with MARENASS, the community organizations and interest groups

MARENASS, the community organizations and interest groups have been re-established, reinforced or revitalized, to a greater or lesser extent, depending on the areas and communities involved. In the 260 communities participating in 2001, institutional and social structures are noticeably more dynamic. In fact, this has been one of MARENASS's greatest impacts: improving the linkages between stakeholders and strengthening the complementary ties between the family and community spheres.

The project has engendered a true empowerment of local stakeholders, an empowerment which is growing. But the very success of the project in this area has created new challenges, new perspectives that necessitate the continuity of the process, which could be cut short if local initiatives are not met with positive responses in the surrounding environment (social, economic, cultural, technological) and if the aspirations of local actors and their undertakings do not yield positive new results.

The system of opening bank accounts for each community participating in the project, a methodology tested and validated earlier under the FEAS project, is a powerful instrument for involving communities in civil society and in the formal economy. This raises a series of related issues that warrant consideration: the empowerment that occurs as a result of direct management of resources; the training needed to maintain an orderly system of accounting; the strengthening of community organizations that results from having resources and being able to make decisions about their use; and the strengthening of their capacity to negotiate with civil society, local public institutions and other programmes and projects.

The community councils have been re-established or strengthened through official designation and legal recognition of the communities, training of community leaders, selection and planning of joint activities (community plans) and the capitalization of social goods and community assets or the regulation of their use.

In addition, the members of the community councils are now more motivated, thanks to the availability of (i) financial resources (from technical assistance funds, competitions, expansion of areas—both individual and communal—under cultivation) to enable them to carry out planned activities; (ii) the knowledge that is now available in the community; (iii) larger supplies of inputs and tools of better quality for carrying out community works; and (iv) the presence of support personnel (yachaqs and yachachiqs). The communities' capacity to negotiate with local entities and other programmes has been strengthened enormously. Several communities are currently executing irrigation works and investments in roads and electrical power, with financing from various sources obtained through the efforts of the communities themselves.

The communities have taken the reins of the system of

The communities have taken the reins of the system of competitions and are managing it directly, organizing juries, resolving conflicts, establishing the dates and amounts of awards, preparing the corresponding celebrations and administering the award funds provided by MARENASS.

### **Recommendation 1**

This is still an incipient process, owing to all the social, cultural, economic and technological changes it has entailed and to limitations in the support provided in this area. These limitations are linked to weaknesses in MARENASS itself and to a failure to grasp the true magnitude of the dynamics that the project was generating. For example, there has not always been sufficient attention to other interrelationships, such as those that might be established between the parent community and its ancillaries, between communities and between the various stakeholders, including trade and labour organizations. It is necessary to continue providing support for the strengthening of human capital and the training and development of leaders, including men, women and young people.

### **Recommendation 2**

While the role of the facilitators has been basically positive, there are some risks and weaknesses at the moment. It is recommended that the MARENASS strategy be revised, with greater emphasis on training for community facilitators, clarifying their relationship with the community and the role they are to play in it.

*MARENASS methodology comprises a group of mechanisms, tools and approaches and cannot be reduced to a single instrument or method. Its essential features are the focus and approaches that have enabled the Pachamama Raymi strategy to go beyond simple technology transfer and become the generator of an intense and promising dynamic in the hands of the beneficiary families and communities themselves.*

The success of MARENASS is prompting various public and private institutions to try to incorporate the strategy and methodology applied under the project into their own operations. The MARENASS methodology, because it emphasizes capacity-building and development of relationships, and does not focus only on "objects" (technology transfer as such), has made it possible to take full advantage of the virtues of the Pachamama Raymi method and the funds provided by the project. The methodology has not only contributed to technological change, but has also made it possible to better incorporate techniques advocated as part of family and community strategies to improve living conditions.

In addition to contributing to the development of technical,



planning, managerial and other skills, the MARENASS methodology reveals, takes advantage of and multiplies existing potential in the local and regional environments: the investment capacity of families and communities; the knowledge of numerous yachaqs and rural researchers; etc. MARENASS shows that the demands, vision and expectations of the poor families and communities in the Highlands are not oriented solely towards solving problems related to the degradation of their natural resources. Rather, their efforts are aimed at broader objectives, such as starting rural businesses, improving their homes and maintaining local roads. In short, they are seeking to improve their quality of life as "part and parcel" of managing their natural resources.

A very important aspect of the methodology is the level of self-confidence that communities can acquire, for example, as a result of successfully managing the competition programmes (for which the funds for awards are transferred prior to the start of the activities) and being recognized as reliable actors. Communities and families should be considered responsible parties, not mere beneficiaries under the "tutelage" of the project. MARENASS seeks to encourage communities to formulate and execute their own initiatives. Thanks to this approach, the practices promoted in regard to management of productive natural resources reflected the holistic mindset of the beneficiaries. Another fundamental characteristic of the MARENASS methodology is that it finances and rewards results, not undertakings or mere intentions or processes. Hence, the primary investment is made by local stakeholders, in keeping with their actual possibilities, not just based on a model.

The instruments employed by MARENASS and, especially, the way in which they have been applied, are crucial to the possibility for replicating and disseminating the methodology and successes of the project. The development of talking maps, the first activity undertaken by communities when they begin to work with MARENASS, has proved to have enormous potential as an instrument of motivation, planning and monitoring in the hands of communities and families.

The system of competitions that characterizes Pachamama Raymi, which utilizes the natural competitiveness of these inhabitants of the Andes, has also shown itself to be a very effective and useful instrument. Farmer-to-farmer training (with yachaqs and yachachiqs, and with internships) is another pillar of the methodology. Among the chief advantages of this approach—in addition to the fact that the participants share a common language and culture—is that the participants learn by doing (not by listening to theoretical explanations) and the training takes place in their own environment (their lands, their house, their animals). More than a traditional "transfer" of knowledge, this method involves "guided experimentation" within an intensive dynamic by virtue of which the community territory becomes a veritable school. with its own courses and exams.

The transfer of funds to the communities, in the context of MARENASS, goes beyond being a simple incentive for self-management. It is a factor that unleashes dynamic processes, initiatives, decisions and undertakings. It helps communities to resume responsibility for managing and improving their ecosystem, learning by practice and establishing new relationships. This is only possible if accountability for the funds is transferred, not simply responsibility for their management.

### **Recommendation 1**

It is recommended that, in the desirable process of replicating the methodology, it be borne in mind that MARENASS comprises a group of mechanisms, tools and approaches and that it cannot be reduced to a single instrument or method. Its essential features are the focus and approaches that have enabled the Pachamama Raymi strategy to go beyond simple technology transfer and generate intense and promising dynamic processes.

### **Recommendation 2**

It is recommended that national authorities, the institutions concerned, MARENASS and IFAD initiate a policy dialogue and an analysis/debate in order to begin "translating" the MARENASS experience into policy lines and methodologies for rural development, especially in the following areas: (i) transfer and management of funds by organizations; (ii) outsourcing and the market for services; (iii) natural resource management and organic farming; (iv) technology transfer and farmer-to-farmer training; and (v) the role and relationships of communities and families.

*The high level of efficiency and effectiveness in the implementation of the project have been possible thanks to a Project Coordinating Unit (PCU, now the Project Executing Unit-PEU) that has demonstrated excellent managerial capacity. Despite the institutional problems and other difficulties that arose in the early years of project execution and that limited, for example, its administrative autonomy, the PCU/PEU has succeeded in maintaining the project's focus and methodology. The unit, staffed entirely by Quechua-speakers selected by means of rigorous competitions, has operated with extremely few resources (22 people) in relation to the target group, the number of beneficiaries directly involved (no fewer than 40 000 families) and the size of the project area.*

MARENASS is an example of how a good design and a good project proposal can be substantially improved upon in the implementation stage by an efficient executing unit, supported by consultant services when needed and by coordination with other IFAD programmes.

MARENASS has applied an approach that places man, and families, at the centre of its values, culture and interests. This means establishing relationships of mutual trust, listening to the opinions of community members and offering new information and contributions. The staff has developed an extraordinary level of commitment and technical skill. The process of staff selection (through competitions and workshops), the fact that all staff speak Quechua, the very low turnover rate and the existence of an ongoing training process have yielded highly positive results.

The success of MARENASS resides largely in the methodology applied in framework of a management system that has utilized human resources and capabilities to maximum advantage. Ongoing training has enabled very efficient use of the entire staff, making the most of their potential. As an example, the training for drivers has turned them into "driver-facilitators" with specific operational responsibilities.

The management system of MARENASS has made it possible to interact "culturally" with the communities, adapting to the reactions and proposals of local stakeholders. An integral part of this relationship is the formalization of commitments between the communities and the project by means of agreements or contracts that respect the mythical/religious traditions of the communities. MARENASS has implemented a system of project management that has successfully combined the management of processes with the capacity to learn while doing and to translate the lessons learned into action and operational plans. This management system should be analysed with a view to making it a guide for the implementation of other rural development projects. The project management methodology utilized or "invented/adapted" by MARENASS offers an important lesson and is one of the fundamental keys to the project's success.

The very small staff has developed a truly remarkable level of commitment and technical skill. It is not at all an exaggeration to say that the staff's commitment has represented a real sacrifice and that their salaries have hardly compensated for the difficult working conditions and for the hardships they have had to endure, in particular in two of the four area coordination offices. The PCU/PEU has functioned with an extremely modest staff (22 people) in relation to the number of families involved (40 000). The physical presence on the ground of project staff is exceedingly limited. Each area coordination office, for example, has only four staff to serve more than 100 communities, in an area in which the distances are enormous and in a mountainous region in which visiting many of the communities meant walking long distances and spending the night in emergency shelters.

The process used to select the personnel, most of whom were natives of the Highlands and all of whom spoke Quechua, coupled with the stability of the staff and the ongoing training they underwent, fostered a high level of cohesion among the group and

underwent, fostered a high level of cohesion among the group and enabled it to perform in a way that assured positive results. MARENASS's success is due in large measure to its methodology and, especially, to the way it has been applied in the framework of a management system that has known how to utilize capabilities and human resources to maximum advantage.

### **Recommendation 1**

The project management methodology utilized or "invented-adapted" by MARENASS offers an important lesson and is one of the fundamental keys to the project's success. It is recommended that other projects of the same nature assimilate and learn from its lessons and that they apply the mechanisms, processes and system of management of this project, which has successfully combined the management of processes with the capacity to learn while doing and to translate the lessons learned into action and operational plans.

### **Recommendation 2**

Documents should be prepared as soon as possible (in the form of manuals), with detailed descriptions of all the phases and processes, with their variants, thoroughly analysed and discussed, so as to make it possible for others to understand and apply the MARENASS methodology and its project management system.

*Withdrawal process. Beginning in 2002, the first 99 communities incorporated into MARENASS in 1998 will conclude their participation in the project. A lower level of activity has been perceived in these communities compared to those that began participating in 1999. The latter have a higher percentage of families participating and have undertaken more of their own activities and initiatives. It is recommended that the strategy and proposal of the PEU for the withdrawal process be defined taking into account the fact that the 1998 communities probably deserve some "compensation" for their contribution to the learning curve of the MARENASS personnel.*

As from 2002, MARENASS is entering a new phase in which no new communities are to be added, and the agreements signed in 1998 will gradually come to an end. In this year, the 99 communities that first began applying the Pachamama Raymi strategies will conclude their participation. The withdrawal process will continue until 2004, when the project will conclude with the withdrawal from the last 101 communities that were incorporated in 2001. In the overall context of the positive results and impacts that have been observed in the families and communities, one discrepancy should be noted: generally speaking, the first communities to become involved in the MARENASS process in 1998 exhibit a lower relative level of development, strengthening of their community institutions and consolidation. This is explained by the prevailing political-institutional context and by the fact that both the project personnel and the communities necessarily had

both the project personnel and the communities necessarily had to undergo a learning process.

Given that the project timetable calls for MARENASS to withdraw from these communities, it is essential to devise a plan or mechanism that will enable an orderly withdrawal and a "restitution" to these communities of the service they rendered to the project by serving as the testing ground for the methodology, making it possible to introduce adjustments and corrections that have enhanced the activities undertaken subsequently in other communities. Assuring the sustainability of these activities represents a significant challenge for MARENASS. The current strategy proposed by the PEU envisages the possibility of continuing to work with the two best communities in each sub-area (formed by five communities). Those communities would be chosen by means of a competition, based on a participatory evaluation, in each of the 15 sub-areas. The evaluations would look basically at the capacities the communities have developed with regard to organization, appropriate and sustainable management of their productive natural resources and management of community funds.

It has been observed that (i) communities and women have been empowered (they manage funds, they contract for technical assistance, they have visibility and can negotiate); (ii) certain organizational practices and features have been assimilated (management, statutes, trained leaders, planning instruments); (iii) the communities have a vision and plan for the future (talking maps); (iv) community leaders recognize their responsibilities and functions, they can appraise and prioritize activities; (v) there is a level of social control over leaders; (vi) community organization has remained essentially untouched by politics, violence and religion; and (vii) returning emigrants are being trained and named to leadership positions.

Nevertheless, the process is not fully consolidated, since (i) community leadership changes every year or two; (ii) the level of managerial and leadership capacity varies from community to community; (iii) institutions with different approaches or with a paternalistic vision continue to operate in the project area; and (iv) the number of communities served probably exceeds the project's capacity for supervision and support.

Activities remain to be completed in the following spheres: (i) the role and the liaisons that sustain the yachaqs and yachachiqs; (ii) identification of systems for compiling, reproducing and disseminating experience, knowledge and values within and between communities; (iii) identification of opportunities for discussion and exchange of experiences; (iv) reflection, in the framework of meetings of facilitators, on their role and potential for liaison, action and facilitation; (v) recording and relating of project experiences, strategies and technologies; and (vi) responsibility for project formulation, equity in relationships, clarification of the roles of each actor in the community. culturally

based economic strategies and capacity for establishing relationships and alliances.

### **Recommendation 1**

It is recommended that the strategy and proposal of the PEU for the withdrawal process be defined taking into account the fact that the communities incorporated in 1998 probably deserve some "compensation" for their contribution to the learning curve of the MARENASS personnel.

A trial strategy that can be fine tuned along the way should be developed and applied.

### **Recommendation 2**

It is recommended that the funds allocated for expansion of the agricultural frontier be used for competitions between communities that have been participating in the project for all four years. The communities should compete on the basis of investment and business proposals. The funds for expansion of the agricultural frontier will thus be transformed into funds for "expansion of the economic frontier," perhaps applying an approach of "shared risk" between local stakeholders and the project.

*Monitoring and evaluation. M&E activities did not get under way until July 2001. As a result of the delay in establishing the computerized system, although there is a highly qualified and dedicated team in place, the system is still hampered by the errors and flaws in its origin and design and it is expected to fulfil purposes that are already being addressed by a parallel M&E system developed in response to the needs and realities of the project. The most paradoxical aspect of all this, however, is the fact that an outside team had to be brought into a project designed to strengthen participatory methodologies in a context of promoting sustainability in the local environment.*

The project now has a computerized management information-type system. The content of the system is not transferable to other entities in the area, nor was it designed for that purpose. The system is intended to be used to support the community system of M&E developed early on in the project and to supplement the information available on microbasins, collecting and compiling material on the natural resource conservation works that communities are carrying out.

There is a sizeable information base derived from the participatory assessments used to develop the talking maps (past, present and future) that form the basis for the community plans (the participants' objectives for the project). There is also considerable graphic documentation of the situation in all the communities (360) prior to the project, as well as a pre-project statistical sample of 25 of the 101 communities served since 2001. Using

sample of 25 of the 101 communities served since 2001. Using these data, together with the talking maps and community plans, it might be possible to estimate the distribution and scope of the change, or lack thereof, (immediate impact) achieved in and by communities through their participation in MARENASS.

A parallel system of M&E reflection/action has been developed within the project. At present, this system comprises five subsidiary systems for (i) collection of information (case studies, travel reports, talking maps and pictures); (ii) management information for tracking the progress of activities and preparing reports; (iii) periodic evaluation of results; (iv) impact evaluation by the communities; and (v) feedback from lessons learned. In order to achieve the long-range objective of the M&E system, which is its institutionalization, the M&E team should orient its efforts towards improving the existing systems in communities, economic interest groups (such as the women's groups), municipal governments, etc., in keeping with the project's participatory approach.

### **Recommendation 1**

Effectively linking the elements available will lead to an M&E system that is better suited to the work done in the field by technical experts, extension agents and participating communities, which is essentially visual and verbal and is aimed at collecting the (oral) experiences of the participants. The project currently has an enormous number of documents and information derived from the experiences of its own team and the communities in which it operates. Although this information is far from being complete and is not readily comparable, it is still quite valuable.

It is recommended that the current systems be strengthened and integrated so that they can perform the function for which (intentionally or not) they were created, establishing clear objectives for them within the system, linking each one to a computerized information base containing not just numbers but also narrative text, equipping the personnel responsible for collecting information in the community with digital cameras and secretarial support to transcribe the information collected, training project technical personnel to read maps and interpret photographs (training that is acquired by "listening" to those who already know how to do these things), corroborating graphic and verbal information with numeric data on concrete results of proven validity and reliability, and recording all of the above in a database to which new indicators of success and progress may be added as they are identified.

### **Recommendation 2**

Dissemination of information should be a responsibility shared by the entire PEU, but coordinated and systematized by the M&E Unit. The availability and permanence of the vocabularies and

unit. The availability and permanence of the yachacums and yachaqs has prompted a form of training based on the modalities and in the language most appropriate for the families, coupled with the provision of technical support better tailored to the needs and production conditions and systems of the community. However, in most cases, more than training per se, what occurs is a dissemination of knowledge and development of capacities that to some extent had already been introduced or existed in the communities.

*Local governments, especially the district municipal governments, have played a leading role in promoting and establishing the project in their jurisdictions, fostering contact and dissemination of MARENASS among the communities. In the process of carrying out the project, it has been necessary to establish framework cooperation agreements with other institutions and entities working in the area of development and natural resource management, such the Consejo Nacional de Camélidos Sudamericano [National Council on South American Camelids] (CONACS), Proyecto Nacional de Manejo de Cuencas Hidrográficas y Conservación de Suelos [National Programme on Watershed Management and Soil Conservation] (PRONAMACHS), Proyecto Especial de Titulación de Tierras y Catastro Rural [Special Programme on Rural Land Titling and Registration] (PETT), Servicio Nacional de Sanidad Agraria [National Animal Health Service] (SENASA), Unidad Operativa de Proyectos Especiales [Special Projects Operations Unit] (UOPE), Instituto Nacional de Investigación Agraria [National Institute for Agrarian Research] (INIA) and various NGOs and grass-roots organizations.*

In accordance with the objectives and strategies for institutional participation included in the project design, carrying out interinstitutional coordination has been an indispensable and ongoing task. MARENASS's impact on these institutions has been significant, though "lateral." There is strong interest on the part of all the institutions and technical bodies involved, prompted by the success achieved by MARENASS and by the high level of credibility it enjoys among communities and beneficiaries. Real possibilities for transferring the practices and methodology of MARENASS to other programmes currently under way remain limited, however, since it is very difficult to have an effect on approaches, programmes and plans that are already in place. Nevertheless, the current interest on the part of ministries, including the Ministry of Agriculture (MINAG) and the Ministry of Economy and Finance (MEF), and institutions such as the National Compensation and Social Development Fund (FONCODES) open up some new and very interesting prospects.

MARENASS has had an impact in the institutional and policy spheres at two levels—the national level and the regional and local level. Nationally, MINAG and MEF, particularly since 2001, have shown a keen interest in the achievements and advances of MARENASS. The results attained have suggested to both ministries that they should conduct a careful analysis of the



project methodology with a view to replicating it in similar areas of the Highlands and other areas in which rural poverty is prevalent. The National Compensation and Social Development Fund (FONCODES), which is the institution responsible for implementing the Puno-Cusco Corridor Development Project financed by IFAD, is also very interested in the experience of MARENASS.

At the local level, especially in its interaction with municipal institutions, MARENASS has had a much more significant impact. In 1998, municipal governments served as the entry point for establishing the initial contacts with rural communities. Now, they are evolving from communication and procedural channels to true cofinancers and stakeholders in the project strategies. MARENASS has made great strides in collaboration with local governments.

Currently, some 20 municipal governments in districts located in the provinces of Chumbivilcas, Espinar, Grau, Aimaraes and Puquio are participating in the project and sponsoring competitions related to natural resource management, thus supporting the MARENASS strategy. In this effort at linkage with local authorities, the communities are assuming a growing role, now that their leadership in managing natural resources has been reinforced and they have developed the capacity to negotiate with external institutions (to complement the contributions of MARENASS, to carry out their own plans in areas not covered by the project, etc.).

It should also be noted that MARENASS has had an impact on schools and, consequently, on the Ministry of Education, through the Environmental Education Programme, which involves students, teachers and schools.

### **Recommendation 1**

It is recommended that the responsibilities and roles of each institutional actor be clearly delineated. The implementation of MARENASS has demonstrated that the roles of the community and the municipal governments are different and complementary. Unlike communities, municipal governments cannot assume direct responsibility for the management of natural resources, while communities, which are responsible for the management of collective but "private" goods, are not and cannot become mini-municipal governments.

### **Recommendation 2**

MARENASS should seek to expand its interinstitutional relations, in particular at the local and departmental level, in order to institutionalize the process and facilitate consolidation and transition after the project ends. At the national level, linkage and collaboration with the authorities in the sector and with other programmes should be strengthened.

programmes should be strengthened.