

Nomination Form for the Equator Prize 2004

Please complete all questions, on a separate sheet, in five pages or less.

1. Sociedade Civil Mamirauá, Amazonas, Brasil.

2. Non-governmental organization

Initiative associated with UNESCO World Heritage site or other biological reserve

3. Description

Sociedade Civil Mamirauá (SCM) is a Brazilian registered NGO created in 1992 by researchers from various Amazonian institutions. Upon its creation, its main goal was to provide means for the conservation of the flooded rainforests of the Central Amazon and the sustainable management of their natural resources.

This NGO became, in 1992, co-manager of a protected area totaling 1 million 124 thousand hectares – the Mamirauá Reserve. When first decreed by the state government, this protected area allowed neither the residence of humans populations in the area, nor the use of its natural resources.

SCM's field experience in the management of protected areas produced the belief that the conservation of biodiversity in the Amazon ought to be closely related to the alleviation of poverty and the establishment of sustainable strategies for the livelihood of the Amazonian peoples. Brazilian conservation legislation, however, had been too conservative to allow use of natural resources within protected areas - legislation was exclusionary based on the principle that people and nature are incompatible. Therefore, SCM's initial efforts was to produce a sound scientific-based Management Plan with a conservation strategy that prescribed the sustainable use of natural resources by the local population and poverty alleviation, as a strategy toward both conservation of biodiversity and improvement of living standards. In doing so, the NGO provided the state government with practical subsidies to change legislation in order to create a protected area allying conservation and sustainable use of biodiversity – the Sustainable Development Reserve. Although, strict protection need to be advocated by policy-makers and practioners in more threatened areas. We have seen changes in the last ten years with the emergence of alternative conservation concepts such as the ones implemented at Mamirauá, which have tried to find a 'middle way' by providing a means for residents to use and benefit from the natural resources held within these protected areas. In a country where land access is restricted to a traditional, oligarchic class, the establishment of such alternatives to landscape use is crucial to the sustainability of rural livelihoods.

There are nine Sustainable Development Reserves in Brazil today. The results achieved concerning the improvement in the local population's quality of life, conservation of biodiversity and production of knowledge applicable to the management of natural resources are promising, and have consolidated the Sustainable Development Reserve model.

In 1998, another SDR was created – the Amana Reserve. Through a formal agreement with the Amazonas State Government, this NGO became the manager of two protected areas in the central Amazon basin - the Mamirauá and Amana Sustainable Development Reserves. With over 3,5 million hectares in area and about 9000 people, these protected areas are a Ramsar site (Mamirauá) and part of the Amazon Biosphere Reserve (Mamirauá) and part of the Central Amazon UNESCO World Heritage Site, comprising one of the world's largest portions of protected rainforest.

4. Poverty Reduction: How has the initiative improved the socio-economic conditions and well-being of the community? If possible, please quantify these improvements.

The populations that legitimately use and protect the Reserves' natural resources live in smallholders' communities of about 100 people in average. Most settlements are located on the river margins and are small, with an average of 13 households. They have very limited infrastructure and access to social services. High birth rates, high infant mortality (86/1000) and low life expectancy were characteristic of the area. People engaged in fishing, hunting, slash and burn agriculture and timber exploitation – with about 83% of their animal protein intake arising from fish. Household cash flow in the region was heavily seasonal, since traditional economic activities may not be developed during the whole year. Most fishing and agriculture occur during the low water period placing considerable pressure on household labour during this period. Timber extraction is carried out during high waters. Surplus was sold or bartered for other products either with itinerant river trades – *regatões* - or directly to markets in the local urban areas. River dwellers often had to commit their production before harvest to these local traders often for less than half of their production value. The combination of these factors produced a situation of extreme poverty and low standards of living, which had to be reversed in order to promote sustainability and conservation.

From the beginning, SCM's strategy was to generate socio-economic benefits from the use of biodiversity in sustainable levels and by doing so, promote a correlation between conservation and creation of benefits. The Economic Alternatives Program, started in 1998, aimed to re-orientate traditional resource use in order to achieve sustainability in activities like: fisheries management (attending 6 community associations and 200 households); forest management (helping to create 20 forest management plans every year); ecotourism (producing direct economic benefits to 7 communities and dividing the endeavor's profits among them); agriculture (helping to improve agricultural output and helping to reduce forest clearing); and handicraft production (promoting the direct access to the market economy). The Economic Alternatives Program was implemented in concert with an array of other actions such as the promotion of political organization of local producers, promotion of health and environmental education and technical capacity building of local teachers and health agents. All these actions have been implemented in partnership with local counties' governments, other NGOs and federal government.

As a result of the implementation of such activities, there has been a **rise in average annual family** income for the local population (at rates of 50% to 99% in some areas). Local communities are now organized in producer's associations, which have allowed access to the market economy (rather than participating in barter systems), and better commercialisation terms for their produce since *regatões* or middle-man have reduced importance in the commercial chain. Access to natural resources is negotiated among and within communities through participatory local forums (sector meetings), which have helped to ensure that biodiversity resources benefits are more equally distributed.

A reflection of the improvement in quality of life has been the **reduction in infant mortality** by 53% (now standing at 34/100) through health education in preventive measures, better water quality with the development of appropriate technologies for collection of rainwater and implementation of sanitation systems.

The improvement of local population's political organization has contributed to citizenship awareness, which in turn, have empowered local population to integrate themselves into the local political spectrum, rather than being represented by the local commercial elite.

Through SCM's **environmental education program**, which works in partnership with local government, 80 teachers from 54 local small schools have been trained. Around 1,800 children have received instruction or support through this program. A floating school for technical courses has been constructed. Educational and informational radio programs, broadcast twice a week since 1994/95, have impacts far beyond the borders of the reserves themselves.

5. Biodiversity Impacts: How has the initiative contributed to the conservation of sustainable use of biodiversity or to the fair and equitable sharing of the benefits from biodiversity and/or genetic resources? If possible, please quantify these contributions.

Political organization, empowerment of local groups, actions toward environmental and health education of the population, community-based protection of the area and implementation of economic alternatives were actions developed by SCM that integrated, produced satisfactory levels of conservation of biodiversity and its sustainable use.

The strategy implemented aimed firstly, to improve and equitably distribute the access to natural resources among the local population, and secondly, add commercial value to the natural resources by reducing the dependence on commercial capital, inserting the production closer to regional end-markets (hotels, restaurants, plywood industry, etc.). Communities sell their pirarucu fish for twice as much as before, and timber which is exploited through forest management plans values 100% to 150% more than timber commercialised without sustainable management.

The main threat to biodiversity in the whole of the Amazon is habitat transformation, which in Mamirauá and Amanã Reserves has been considerably reduced in the past ten years. The implementation of new agricultural techniques such as the utilisation of swamps and beaches has limited the necessity to clear and incorporate new areas for agriculture. In addition to this, the diversification of uses and increase in value of biodiversity (for forest management, ecotourism, etc.), have also reduced the incentives for habitat transformation in the area. In 1994, each village in the Mamirauá focal area would convert 12,3 hectares of natural habitats, in 1999 this total was reduced to 0,5 hectares and in 2001, habitat transformation was almost inexistent.

Population of top predators are also good indicators to determine the conservation status of a landscape. Monitoring of some species has shown either their number stability or ascendance. The population of black-caymans (*Melanosuchus niger*) has increased 100% and adult pirarucu fish (*Arapaima gigas*) has increased in 300%.

Allying sustainable use of resources to conservation has produced improvement in standards of living for local populations and thus, further conservation efforts. An example of this is the improved participation in the community-based vigilance system, which makes the protection of the area viable through voluntary environmental agents (VEAs) who are responsible for detecting, informing and

restraining poachers. This system was created in order to legitimize the protection of resources by sharing the responsibility of vigilance of the area with the people who inhabit it and use its resources.

6. Combined Impact: How does the initiative work simultaneously to reduce poverty and conserve biodiversity? What approaches, techniques, or tools are employed that bring benefits in both areas?

As mentioned above, promoting a clear correlation between conservation and income generation has been the central approach operated in the Reserves. An example of this is the formal regulation toward access to natural resources. The implementation of economic activities has triggered discussions among communities about regulating access to resources. Fishing is developed by the local fishermen's association, where to each member a quota of fish is allocated depending on the individual's performance in pre-determined criteria such as participation in the association's courses and meetings, participation in the voluntary vigilance system and refraining from poaching. Although each member has the right to a minimum quota for commercialization, the possibility of increasing their quota has encouraged many fishermen to support conservation. Ecotourism has produced a similar effect, since profits are divided among the seven communities involved with the activity, the regulation of access to these financial resources has taken place through an equivalent approach. Direct benefits (such as employment in the lodge) are possible only to those who do respect management and protection norms and communities receive profits in accordance to their level of participation in conservation. It is important to note that it was the local communities themselves who elaborated this new system of access to the natural resources and to the economic benefits derived from them. In addition to this, generation of economic benefits from the sustainable use of biodiversity has triggered further support toward conservation, which in turn will allow more economic benefits.

Another important aspect of conservation and expansion of natural resource availability is the impact that this may have on the subsistence of the local population. The importance of natural resources for subsistence of Amazonian population is known, so better conservation levels, and availability of resources, are important to provide food for locals.

The possibility of permanence of the population in rural areas, and decreased rural exodus to impoverished urban centers, depend on these key factors: food availability, basic education for children, presence of some health care and access to market economy. The actions developed with and by the communities in Mamirauá and Amanã have produced the occurrence of all the elements mentioned above and the permanence of population in the area. To illustrate this, we may cite that the population growth of rural areas not affected by the Reserves is rated at 0,1% a year, whereas the population inside the Reserves have grown at 1,7% yearly.

7. Partnerships: For each partner, describe the nature of the partnership, its origins, and how the partnership has contributed to the success of this initiative.

MCT – Brazilian Federal Ministry of Science and Technology. SCM was linked to MCT as a providers of services through a five-year management contract, where it receives a certain amount of funds to implement pre-establish actions and achieve pre-established goals.

WCS – Wildlife Conservation Society. US non-governmental organization. This organization works through an institutional agreement with SCM in order to provide strategic funds for conservation and research; and to provide technical and fundraising support.

IPAAM – Institute for Environmental Protection of the Amazonas State. State institution, which has agreement with SCM, conceding to the latter the co-management of the protected areas. It provides technical support for training human resources, institutional capacity building and financial support for environmental vigilance system.

MMA/PPG7 – Brazilian Federal Ministry of the Environment. Provides some funding for forest management implementation and fisheries research (PRO-MANEJO and PRO-VARZEA).

8. Sustainability: Describe the sustainability of the initiative? How long has this initiative been in operation? What are the key social, institutional, financial, and ecological elements that make this initiative sustainable?

SCM was created in 1992, and it is a unique NGO in a country where most of such organizations' do not last for over 3 years.

The undoubted importance of the conservation of this area, has led SCM to focus its efforts in establishing long-term schemes and structures attempting to build on its institutional and administrative capacities in order to successfully manage these protected areas. One of its strategies was to formally

integrate the Brazilian Ministry of Science and Technology as one of its research units. For this purpose, the Mamirauá Sustainable Development Institute (MSDI) was created in 1999. MSDI was created as a 'social organization' or a 'quasi non-governmental organization' (QuaNGO), an institution that receives a certain amount of government funds in order to achieve pre-established targets in its domain of action.

The economic alternatives implemented have shown to be economically sustainable. Fisheries and Ecotourism, for instance, have found markets and have generated profits for the local communities without more than an initial investment on infrastructure and technical development. A small loan fund has also been put in place as a source of credit for the implementation of new economic alternatives by local communities.

9. Gender: Describe how the initiative has addressed gender equity in its approaches to biodiversity conservation and poverty reduction.

The UN Conference on Women (Copenhagen, 1980) reported: "although women constitute half of the world's population and perform nearly two-thirds of its work hours, they only receive one-tenth of the world's income and own less than one-hundredth of the world's property". Research has shown that in the world's periphery, gender inequality is even more widespread and poverty has its most damaging effects over women. A strategy toward sustainable development has, therefore, to approach gender relations. This is why a concerted effort was made by SCM to try and integrate local women in the conservation and development process. The organization and promotion of political awareness of women was important to empower them so they could guarantee their own access to natural resources and economic benefits. In addition to that, formal organization of women in producers association has eased their integration into the market economy, providing them direct access to capital and more decision-making power in the household, village and association. Women participate more at leadership levels in the communities and in the formal associations. Other actions developed by SCM were the improved access to adult education (evening classes) and information in family planning and training of women health agents.

10. Other Information: Is there anything else of importance you wish to convey about the initiative?

These good results achieved by the work developed by Sociedade Civil Mamirauá have promoted the replication of this novel conservation model with its resource management techniques to other protected areas in Brazil and abroad. For example, in Amapá, Pará and Tocantins states, other Sustainable Development Reserves have been created taking into account Mamirauá's experience. In Argentina, a vast protected area known as Yabuti-Misiones has been developed based on exchange with Mamirauá's expertise. In Guiana and Peru, Mamirauá's locals together with management technicians have taught to apply traditional knowledge combined with scientific knowledge in order to better manage natural resources.

11. Contact Information

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