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Strategic alliances, partnerships and collective action: Rubber tappers and extractives reserves in Rondônia, Brazil

Stream: Multiple Commons
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Introduction

One of the most well known examples of grassroots environmental action is the movement of rubber tappers which emerged in Brazil during the 1980s for the conservation of forests through the establishment of extractive reserves, which are defined as 'conservation units that guarantee the rights of traditional populations to engage in harvesting forest products such as rubber and fruits' (Anderson, 1992:67). The creation of extractive reserves has been promoted as 'among the most important strategies for forest conservation' (Hecht, 1989:53). The designation of extractive reserves has gained support from a diverse array of actors, particularly conservation and environmental organisations who regard it as an opportunity to put into practice an explicit linkage between conservation and development. In addition the rubber tappers' struggle to win rights to natural resources in these areas has also gained attention of media world-wide, at a time when deforestation, especially in Amazonia, is a major issues for northern environmentalists. This paper examines empowerment within the context of these initiatives. It investigates the alliances formed between environmental NGOs and other agencies and rubber tappers and how far rubber tappers have been empowered through as a result of the intervention of these organisations.

The evidence presented in the paper derives from research in the Western Brazilian State of Rondônia (see Figure 1) and involves a case-study of a project supported by one of the largest international conservation NGOs, the World Wide Fund for Nature (WWF). This project is a partnership between WWF; local rubber tappers' communities represented by the Rondônia Organisation of Rubber Tappers (OSR) and its member Associations; and a regional environmental NGO (ECOPORÉ). Research involves examination of key institutions, including the OSR and other organisations located in Porto Velho, the administrative centre of Rondônia, and case studies of three selected extractive reserves (see Figure 1).

Subsequent sections discuss the way in which empowerment has been interpreted and implemented in conservation projects. It distinguishes two dimensions of empowerment - political empowerment and economic empowerment - and examines how each of these have been affected by the alliances between rubber tappers and external agencies.

Empowerment and conservation

Empowerment can be defined as a process through which 'people, especially poorer people, are enabled to take more control over their lives, and secure a better livelihood, with ownership of productive assets as one key element' (Chambers, 1993:11). This implies finding means to facilitate and assist the efforts of resource poor groups to meet their needs, either through their own organisations or through pressure on the State or other groups to make them act in their interests (Johnson, 1992). Empowerment has become a popular concept in people-oriented conservation, or conservation that attempts to integrate development and environmental protection goals (Pimbert and Pretty, 1994). Ultimately, empowerment should work towards what Chambers (1993:92) calls a 'sustainable livelihood security'. He defines livelihood as 'a level of wealth and stocks and flows of food and cash which provide for physical and social well-being' (ibid.). A sustainable livelihood includes security against sickness, against early death and against the threat of poverty. It also includes assets or entitlements which can be used to meet contingencies (i.e. sickness, accidents). This implies 'secure command over assets as well as income' (ibid.). In addition to livelihood security, the concept of empowerment as conventionally promoted places a strong emphasis on access to political structures and formal decision-making necessary, for example, to enable people to gain control over land and resources. It is also concerned with equally important goals, such as access to markets and incomes that allow people to satisfy physical and material needs. In other words, effective empowerment should happen at both the political and socio-economic levels.

In participatory development contexts, empowerment is sometimes interpreted in the sense that some can act on others to give them power (Nelson and Wright, 1995). Some argue that disempowered people, due to structural constraints of various kinds, are normally incapable of identifying their own interests and act upon them. Batliwala (1994:131) for example, states that 'the demand for change does not usually begin spontaneously from the conditions of subjugation. Rather, empowerment must be externally induced, by forces working with an altered consciousness and an awareness that the existing social order is unjust and unnatural'. Empowerment in this light is seen as something that can be planned in order to bring about a desirable outcome, very much as a service that can be delivered. However an approach where one group, be it an environmental organisation or a development agency, can bestow power upon another is problematic, since as Rowlands (1995:104) argues, 'any notion of empowerment being given by one group to another hides an attempt to keep control'. Indeed, in conservation practice external agencies often seek to impose their own agendas on local people, even when they use the language of participation and empowerment in their projects (Pimbert and Pretty, 1994). Therefore, true empowerment has to come from within. A generic interpretation of empowerment would be a 'process by which people become aware of their own interests and how those relate to those of others, in order both to participate from a position of greater strength in decision-making and actually influence such decisions.' (Rowlands, 1995:102).

Essentially then, empowerment, is a process that cannot be imposed by outsiders or planned 'from above'. This does not preclude the role of external support, since when appropriate it can enhance and encourage empowerment. External intervention can assist in the empowerment process, but it must be local people who decide in what ways.

However, empowerment is increasingly seen as both a means and an end in people orientated conservation projects. The WWF forest conservation project with the Rondônian rubber tappers has four main objectives: supporting the institutional development of the tappers' grassroots organisations; organising and mobilising local communities of rubber tappers within the extractive

reserves; promoting the legal establishment and demarcation of the reserves by the State government; and testing and implementing activities that improve the socio-economic well-being of reserve residents without causing environmental degradation (WWF, 1995). The concept of empowerment emerges as a strong theme in these stated objectives. The project is concerned with enabling the rubber tappers to gain access to political decision-making (i.e. in issues related to the establishment of extractive reserves), and in improving their socio-economic welfare. It also includes goals such as institutional development. The paper now examines the context and experience of rubber tappers and their intervention with organisations such as WWF.

Rondônia in perspective

The western Brazilian State of Rondônia encompasses an area of 243,000 km² (see Figure 1). Forests occupy approximately 75 per cent of the State's territory. The dominant vegetation is upland wet forest (*terra firme*), although *cerrado* (scrubland) covers some nine per cent of the total, and floodplain (*várzea*), another nine per cent. The climate is hot and humid with a mean annual temperature of 26°C. The rainy season lasts from November to May with annual rainfall ranging from 1800 to 2200 mm. Only 10 per cent of the area is considered suitable for annual or permanent cultivation (Browder et al., 1996).

Figure 1 Rondônia State and the location of extractive reserves

In the late nineteenth century Rondônia became an important centre of production and commercialisation of rubber. Although remote the region was then strongly connected to world markets. In fact, the rubber trade was controlled by foreign companies and the entire production exported. Labour to exploit the region's forests came from Northeast Brazil where large numbers of rural workers were recruited to tap rubber. Around 1915 the Amazonian rubber boom ceased due to competition from Asian plantation rubber and Rondônia's economy collapsed. During the Second World War a renewed demand for Amazonian rubber occurred when Allied countries were cut off from Asian rubber markets. After the War rubber extraction declined but never halted completely. In 1950 the region's economy still depended primarily on the production of rubber for the internal market (SEDAM, 1986).

In the 1960s Brazilian policy makers began plans to 'develop' and 'modernise' Amazonia. Extraction of forest products had no place within the government's policies for the region. In fact, the extractive economy was seen as synonymous with backwardness and a hindrance to its socio-economic progress (Homma, 1993). The building blocks of Amazonian development were considered to be agriculture, cattle ranching and mining and in subsequent years these activities were vigorously promoted (Hecht and Cockburn, 1989). The push to develop Rondônia started in earnest in 1958 with the exploitation of cassiterite deposits. In 1968 a precarious dirt road (the BR-364) linking the region to the rest of the country was completed making southern markets and labour more accessible. In the years that followed small farmer settlement programmes were created bringing a significant influx of migrants to the region (Martine, 1990). A variety of subsidies were also established for the creation of cattle ranches making forest clearing for this purpose a profitable investment (Mahar, 1989).

These policies had significant social and environmental impacts. At the social level Rondônia's population increased enormously from 70,000 in 1960 to 500,000 in 1980 (Benchimol, 1989). In the process the social profile of Rondônia was completely altered and the traditional and indigenous populations living in the region became a minority[1]. New social groups included

colonist farmers, ranchers, loggers and miners. As the variety of social actors in Rondônia increased so did the range of interests in resource use. Opposing interests gave rise to conflicts which became particularly severe in the 1980s. Environmental impacts included high rates of deforestation as a result of forest conversion for agriculture and cattle pasture (Cleary, 1991).

In 1981 the government initiated POLONOROESTE, a project financed by the World Bank. The principle objective of POLONOROESTE was to asphalt the BR-364. In addition it included various provisions for promoting small farmer settlements, protection of the environment and support for indigenous communities. During the implementation of the project a series of severe problems occurred including a major influx of migrants beyond the handling capacity of government agencies; alarming rates of deforestation; high rates of abandonment among migrants settled in colonisation projects; and invasions of conservation and Indigenous areas. POLONOROESTE also gave rise to intense conflicts resulting from indiscriminate occupation of land inhabited by forest dependent communities by more powerful groups such as land speculators, loggers and cattle ranchers.

The chaotic social and environmental situation created under the POLONOROESTE programme resulted in the most vociferous protests against any project ever financed by the World Bank. Protests came from national non-governmental environmental organisations and human rights groups and their international allies, in particular North American environmentalists, and soon had international political repercussions. In effect, under political pressure the Bank suspended disbursements on its POLONOROESTE loans in early 1985 (Rich, 1994).

The involvement of the environmental movement in local struggles over natural resources also had an important impact on the situation of the social groups adversely affected by the development 'model' of Amazonia. It created conditions for the establishment of strategic alliances between environmentalists and forest dependent people.

Extractivism and extractive reserves

Rubber tappers live in isolated areas deep within the forest. Their household areas, called colocações, are small clearings surrounded by forest and rubber trails, where one or two families live. Although their main cash income derives from the sale of rubber, the tappers, or seringueiros, utilise a variety of livelihood strategies to gain their subsistence, including gathering a wide range of forest products, shifting agriculture and small-scale animal husbandry. In the course of their long settlement in the forest seringueiros have adopted methods for using resources that, for the greater part, are well adapted to the local environment, and are comparable to those of the Indians. They have developed what many view as a 'sustainable' production system, known as extractivism (Allegretti, 1990; Schwartzman, 1992).

However, rubber extraction has historically been associated with severe social and economic exploitation (Hecht and Cockburn, 1989). In effect, rubber tappers are among the poorest and most marginalised sections of civil society in Rondônia and the Brazilian Amazon in general. This situation results from a combination of factors. In the past from the extremely unequal relations of production in which extractivism was undertaken, the aviamento[2] or debt peonage system. More recently, from the prevalence of unfavourable marketing structures and the falling prices of extractive products in relation to the cost of living. Within this context rubber tappers have been a traditionally disempowered social group through economic relations, physical isolation, poor or

no access to social services, and neglect from policy makers (Hecht and Cockburn, 1989; Melone, 1993).

During the 1980s the government's development model for the region contributed to the rubber tappers' disempowerment. This development strategy privileged cattle ranching, agriculture, and logging over other forms of land use with less ecologically adverse impacts (Hecht and Cockburn; 1989 Homma, 1993). Even in the 1990s, despite the poverty associated with extraction of forest products, this activity still provides a livelihood, however meagre, for approximately 5000 rubber tappers in Rondônia.

When information about the sustainability of extractivism and the struggles of the rubber tappers to protect the forests became disseminated in the West, environmental groups enthusiastically joined forces with this politically and economically disempowered group of Amazonians (Melone, 1993). The result of this alliance was the proposal for an innovative model for sustainable land use in Amazonia - extractive reserves. These would be 'public lands designated for the specific purpose of sustainable use of forest products such as rubber, brazil nut, and palm heart by the resident population' (Allegretti, 1990:253). Modelled on the idea of indigenous reserves, or areas where the rights of native peoples to their traditional lands are guaranteed, extractive reserves rapidly became regarded as holding the promise of 'reconciling economic development and environmental conservation' (Anderson, 1992:67).

However, extractivism also has its sceptics, and in particular a growing body of literature indicates that extractivism is unlikely to provide an adequate income for forest communities (Browder, 1992a & b; Salafsky et al. 1993). Southgate et al. (1996:16) observe that 'living standards among the rubber tappers of Bolivia and Brazil are miserable, comparing poorly with the meagre socio-economic norms of rural Amazon. By contrast, profits generated through non-timber extraction tend to lodge at the top of the marketing chain. The Manaus Opera House is lasting testimony to the wealth accumulated by exporters during the Amazon rubber boom'. Observations such as these imply that although extractivism may be profitable for some people and in some instances, markets for extractive products need to be regulated. Furthermore, most studies of extraction look only at non-timber forest products and fail to consider the potential of sustainably harvested timber, as well as farming, hunting and fishing. Extraction may be an important element in a diversified livelihood strategy and this needs further investigation. However, there is perhaps resistance on behalf of conservation organisations to consider these activities, which are traditionally seen in conflict with conservation goals.

Support for the establishment of extractive reserves has grown and now includes a diverse array of NGOs, researchers, financial institutions and policy makers (Anderson, 1992). The World Bank, in particular, has also endorsed the concept, especially following national and international protests against its involvement in the socially and environmentally disastrous POLONOROESTE programme. The intense public pressures of US environmental groups supporting the rubber tappers were crucial for this shift in World Bank policy (Rich, 1994). In turn, the Bank provided the political leverage through which pressure could be applied on the Brazilian government for the establishment of extractive reserves. In effect, future World Bank loans to Brazil would be conditional upon the creation of a number of extractive reserves. In the late 1980s the Word Bank announced a US $ 167 million loan (from a total budget of US $ 228.9 million) to the Rondônia Natural Resources Management Project (PLANAFLORO), aimed at repairing the damage caused by POLONOROESTE.

The main objective of PLANAFLORO is to promote a new approach to 'sustainable development' in the State of Rondônia through a series of initiatives for the protection and management of natural resources, such as socio-economic and ecological zoning, promotion of agroforestry systems, recovery of degraded lands, environmental protection, sustainable forest management, environmental education, support to indigenous communities, and creation and management of extractive reserves and other conservation areas (Rondônia, 1994).

The 'extractive reserve movement' in Rondônia has already achieved the creation of 19 extractive reserves covering an area of approximately 885 million hectares and is currently pressing the State government for the creation of five more reserves totalling over 1 million hectares of tropical forest. While environmental conservation is an important function of these areas they should also be able to provide for the economic survival of the 434 families who inhabit them. PLANAFLORO has created some enabling conditions for the creation of extractive reserves in Rondônia. However, as it will be further discussed, this is neither a sufficient condition for their establishment nor an assurance of their effective implementation. WWF support to rubber tappers in Rondônia evolved within this context.

Recognising the validity of the rubber tappers' aspirations, the project has developed activities to enhance incomes either directly or in association with PLANAFLORO related actions. These initiatives have the potential to empower the rubber tappers in economic terms and thus contribute to improve their 'sustainable livelihood security'. Implementation is channelled through locally established rubber tappers Associations. Extractive reserves are seen as a means of reaching multiple objectives for conserving forest and providing a livelihood for extractivist communities. They have become a focus for external agencies, and a symbol of struggle of marginalised people to maintain their way of life against the powerful forces of loggers and ranchers. However, they may not be viable - in economic or political terms, without outside support. The following sections of this paper examine how alliances with external agencies have attempted to support the establishment of extractive reserves, and whether these are able to contribute to making extractive reserves politically, economically and ecologically viable spaces.

Extractivist livelihoods and economic empowerment

The livelihood of a rubber tapper family depends on a diversity of economic and subsistence activities that usually include harvesting forest products, hunting, fishing and farming. However, the main source of household income is derived from the sale of specific extractive products: rubber, brazil nuts and, to a lesser extent, copaíba oil.

The extraction of latex from the rubber tree (Hevea brasiliensis) is the main economic activity for rubber tapper households. A typical family produces an average of 900 kg of rubber annually although this varies according to the abundance of rubber trees in each landholding (colocação), the number of household members dedicated to rubber extraction, and the time allocated to other activities. However, the income derived from rubber sales is not constant throughout the year. In the wet season rubber harvests decline considerably since várzeas (floodplains), where there tends to be greater concentration of Hevea, are flooded, making rubber extraction difficult or impossible.

Brazil nuts (harvested from Bortholletia excelsa) are another important marketable forest product in Rondônia. The nuts are extremely important for the household economic strategies as they are

harvested and marketed from December to February when rubber extraction drops sharply or becomes impracticable. They also constitute an important component of household diets. However, Bortholletia excelsa is only found in upland forest (terra firme) and therefore this source of income is not available in all reserve areas.

Copaíba oil (Copaifera spp.) is a forest product that rubber tappers have long used as a medicinal oil for treating wounds, influenza and coughs or as fuel for lamp burners. In recent years the demand for copaíba oil as an homeopathic product has grown in Brazil, making it an alternative source of income for some extractivist communities. Copaíba grows in both floodplain and upland but the density of trees is low. In addition, the copaíba tree can only be harvested every few months since more frequent harvests may kill it. For these reasons copaíba oil is unlikely to be a major source of income for many households.

Forest products not only have an important economic value for rubber tapper households but also a significant subsistence value. Households use a wide range of products from the forest as food, fuelwood, building and fencing materials, and medicines. Rubber tappers hunt and fish and for many those are their main sources of dietary protein. When asked about the advantages of living in the forest instead of urban areas, rubber tappers often point out that unlike in the city where they are totally dependent on cash earnings for food, in the forest they can usually fish, hunt and plant manioc, rice or beans. Many observed that 'in the city if you do not have work you go hungry'.

Swidden agriculture is another important component of the livelihood strategies of rubber tappers. In fact, the tappers call themselves agro-extractivists rather than just extractivists. Many households farm a swidden plot (called roça) averaging 1.4 hectares in which manioc, beans, rice or maize are cultivated. Sugar cane, pineapple, banana and papaya may also be intercropped. The harvest is for the household's own consumption but in some cases a surplus is produced and sold, therefore constituting an additional source of income. The heterogeneity of Amazonia, however, means that the suitability of soils for agriculture vary from one area to another even within the same extractive reserve. Therefore, while some households are self-sufficient in food crops others can only produce a fraction of their needs.

Constraints on extractivism

An examination of the livelihood strategies of the rubber tappers demonstrates that extractivism is the main income generating activity in extractive reserves. However, at present levels this income does not meet the rubber tappers needs. Even their ability to meet food requirements, regarded as a basic indicator of well being, is determined not only by extractivism but also by the diversity of other livelihood strategies that include agriculture, hunting and fishing.

Among the major problems encountered is the dependence on a few products and the limitations imposed on their extraction by seasonality and the ecological variability of the forest. Most households rely on rubber for the greatest proportion of their income. However, findings suggest that on a monthly basis rubber earnings are usually less than expenditure in food and other essential items. In effect, many tappers assert that income obtained from rubber sales alone can only fully meet the basic needs of a family of five during the peak months of rubber harvesting. This is illustrated in Figure 2 which compares average household monthly rubber production with the quantity of rubber needed to buy a bundle of basic supplies[3]. This diagram shows that in 23 out of 34 months households did not harvest rubber sufficient to generate income to purchase

basic supplies. Rubber tappers are further disadvantaged, as rubber is supported by an indirect subsidy which has been gradually reduced bringing rubber prices down. The price of food and other essential items has also increased disproportionately in relation to prices obtained for rubber and other extractive products further eroding the rubber tappers ability to meet basic needs.

Figure 2: Rubber production required to buy basic supplies

A significant share of the profits generated by forest products is captured by intermediaries. Extractivism in Amazonia has historically been characterized by unequal relations of production. For many years rubber tappers were exploited by landowners (seringalistas) through the aviamento system. When the rubber trade became less profitable landowners gradually abandoned the rubber estates and the marketing of extractive products was taken over by middlemen (marreteiros). At present, marreteiros continue to dominate the extractivist economy in Rondônia and consequently producer margins remain low.

Interventions to strengthen livelihoods

As highlighted earlier, extractive reserves are supported by a range of different actors, and are regarded by many as an important strategy for integrating conservation and development. However, reserve inhabitants are poor, lead isolated lives, and have inadequate access to health and education. They hope for better lives and identify higher incomes and improved access to social services as their most pressing needs. In recent years efforts have been made to improve and sustain livelihoods within extractive reserves. Initiatives which have this as one of their objectives include the G7 Pilot Programme for the Protection of the Brazilian Rain Forest (PP-G7)[4]; and the PLANAFLORO project. WWF has also developed activities to enhance the incomes of reserve inhabitants either directly or by helping to strengthen the capability of the rubber tapper organizations to implement PLANAFLORO related actions. Direct initiatives include expanding the range of marketable forest products and improving marketing channels. These activities have the potential to empower the rubber tappers in the economic sphere and thus contribute to improve their 'sustainable livelihood security'.

WWF is attempting to address the economic dependence of rubber tapper households on key extractive products. In particular, it has initiated efforts to diversify the range of commercially valuable products that can be extracted from the forest sustainably. Rubber tappers use a remarkable wide range of forest products. But in reality only a small proportion is marketed and most products are harvested for their consumptive value as food, fuelwood, building and fencing materials, and medicines. An estimate in the field identified 30 different plant species regularly used by rubber tapper households in Rondônia. These represent only the most frequently harvested and the total number is thought to be significantly greater. Many studies provide evidence of a larger number of forest products used by other groups in Amazonia including colonist farmers (Muchagata, 1997).

Many of the products harvested by the rubber tappers have commercial potential and some already have established regional markets. One of the most important is the açaí fruit (Euterpe oleracea) and palm hearts extracted from a variety of palms including Euterpe. Açaí palms have the advantage that they can be easily managed on a sustainable basis for both fruits and palm hearts due to their multi-stemmed self-regenerative habit. Recently, WWF has initiated a study to analyse the economic and ecological viability of useful palm species such as Euterpe in the Jaci Paraná reserve.

Timber is the most valuable product from the forest. WWF is currently establishing a pilot project in two extractive reserves in Rondônia for the extraction of timber on a sustainable basis. Extractive reserves contain valuable timber resources which can be harvested sustainably therefore providing an alternative income source for rubber tappers. The project has generated some controversy among reserve inhabitants, in particular concerning labour inputs and distribution of benefits. Concerns have also been raised about its economic viability. The costs of implementing this kind of scheme are substantial: these include the elaboration of a management plan; adoption of harvesting methods that have a minimal impact on surrounding vegetation; and regeneration of harvested species. The economic return of timber after extraction costs being deducted is uncertain. The first stages of the project are now completed and the first timber harvests are expected to begin soon.

Given the dominance of intermediaries in the regional forest product trade WWF has helped the rubber tappers to establish alternative marketing arrangements that enable them to secure a better price for extractive products. This is the only WWF activity aimed at improving the economic welfare of rubber tappers that has been fully implemented. Its objective is to eliminate the need for marketing intermediaries in extractive reserves. However, this is not straightforward to implement. Despite the fact that they exploit the rubber tappers, the middlemen form the bridge between extractive products and faraway markets. They also supply extractivist communities with staple foods and other essential goods, transporting them to the remote extractive reserves. Therefore, middlemen could not simply be eliminated without a reliable and efficient way to supply communities with essential goods also being created. A solution found is to establish community trading posts run by the local Associations called cantinas in strategic locations within the extractive reserves, so residents could purchase basic supplies without having to travel great distances.

Setting up a marketing and supply structure requires great investment. Firstly, a workable transportation infrastructure for both goods and extractive products is needed. Secondly, storage facilities have to be built in order to keep products until a sufficient amount has been stored for making a sale to a large buyer. Thirdly, there has to be initial capital to buy extractive products from producers, and to purchase goods from a wholesaler. Transport and storage facilities were provided by PLANAFLORO and the initial capital was supplied by WWF.

Problems with the workability of these new marketing structures have arisen from the local Associations' lack of experience in management. As a result the local Associations have gradually lost their initial capital making the sale of extractive products through the new system difficult. The cantinas have also not been able to replace their stocks. Therefore, this initiative has not had a great impact on the economic well-being of the rubber tappers. Some have never ceased interacting with middlemen due to relationships of patronage developed over many years.

The PLANAFLORO project in Rondônia includes a component to support the establishment of extractive reserves and to improve the socio-economic welfare of rubber tappers. Its participatory objectives mean that the project should involve its beneficiaries and therefore extractive reserve actions have been developed in collaboration with the rubber tapper organizations (OSR and local Associations) (Rondônia, 1994). WWF has helped to strengthen the organisational and administrative capability of these organizations, especially of the OSR, to implement PLANAFLORO related initiatives. More specifically, it has helped the rubber tappers to establish

the physical infrastructure of the OSR and local Associations (acquisition of headquarters; office equipment including computer, printer, and fax machine); and assists with maintenance expenses such as phone and electricity. WWF also provides financial resources to staff the rubber tapper organizations. This support has allowed the OSR and local Associations to pay a salary to the rubber tappers' leaders so that they can spend more of their time working in extractive reserve related activities. It has also enabled ECOPORÉ to appoint two technical and legal advisers to work with the OSR. In addition, the tapper organizations have been able to employ a secretary to help with administration and accountancy.

WWF has thus contributed to build the capacity of the rubber tapper organizations. As a result the rubber tappers are better prepared to negotiate, implement, and administer PLANAFLORO initiatives. The exact contribution of this type of support to the economic welfare of extractivist communities is difficult to establish. So far PLANAFLORO has already provided substantial infrastructure support to extractive reserves with the construction of storage facilities; and acquisition of vehicles and machinery (rice peelers, sugar cane threshers, outboard engines). There are also plans to establish a factory to process rubber and a series of small processing units to shell, grade, and package brazil nuts. How rubber tappers will benefit from these PLANAFLORO initiatives depends greatly on their ability to manage and take control of them. Improving the organisational capability of grassroots organizations may be a decisive factor determining the extent to which PLANAFLORO can generate long-term economic benefits to extractivist communities.

In summary, there are a number ways to address the disadvantages of extractivism so as to improve the socio-economic well-being of the rubber tappers. The WWF support to the Rondônian rubber tappers has attempted to do this by providing financial and/or technical assistance for the development of several economic activities. These include the establishment of alternative marketing networks; development of income generating activities based on new products; search and expansion of markets for rain forest products; and local processing of extractive products. Some of these activities are still at a very early stage of development, and thus it is difficult to anticipate their impact on the economic well-being of extractivists. Where results are already visible, namely in the establishment of alternative marketing networks, significant management problems have arisen and as a consequence proposed objectives have not been met. This is partly because the activities supported by WWF are related more to the creation of extractive reserves than to the development of income generating activities that improve the socio-economic well-being of reserve inhabitants. So far, the alliances with different external agencies have not resulted in the significant socio-economic empowerment of rubber tappers. There are other areas, however, where rubber tappers have been empowered.

Political empowerment: Actors, 'projects', and public policy advocacy

Social mobilisation and organisation

In Rondônia there is a long history of resistance to deforestation involving seringueiros, especially during the execution of POLONOROESTE. However, past resistance was isolated, and often resulted in unsuccessful actions. It was only in 1989 that efforts to organise the rubber tappers were given a strong impetus by the National Council of Rubber Tappers (CNS), following government plans to establish a number of reserves in the State.

In February 1989 the CNS, with the support from national and international organisations[5], promoted an important meeting of rubber tappers in the municipality of Guajará Mirim where a number of interventions, workshops and discussions concerning the problems faced by the extractivist population of the area took place. In particular, the concept of extractive reserves, its applicability to the region, and the necessary steps for their creation were extensively debated, emphasising the need for community organisation as a means to legitimise the proposal for their establishment.

Similar meetings were subsequently arranged in other parts of Rondônia. As a result, several local leaders emerged who were prepared to take over the social mobilisation and organisation work initiated by the CNS, and to establish horizontal linkages between extractive communities, giving the rubber tappers movement in Rondônia a context specific direction. The OSR is the result of this organisational work and the leaders that came out of it.

Great emphasis has been put on continuing the process of mobilisation and organisation of extractivists, particularly by promoting the creation of local rubber tappers Associations. The importance attached to social organisation arises partly from the legal requirements for the creation of extractive reserves. Government rules stipulate that it must be a representative organisation of the local inhabitants of a given forest area to formalise the request for that area to be declared extractive reserve. Moreover, because extractive reserves remain the property of the government and only the rights of use are transferred to rubber tappers through a community-use title, a representative organisation of reserve inhabitants is needed to claim that land-use title from the government.

An important part of the process of organisation of rubber tappers is the 'base community work' or 'trabalho de base' which happens at 'reuniões de base' or base community meetings. The creation of a local Association, for example, is normally preceded by a number of 'reuniões de base' in which the facilitators explain the purpose and the procedures for the creation of an extractive reserve and motivate the local inhabitants to organise themselves into an Association as a means to legitimise their claims. The role of the OSR as the State level representative of rubber tappers and that of the local Associations as its subdivisions is also explained. When the extractive areas are threatened by land grabbers, loggers or cattle ranchers, rubber tappers are encouraged to resist and organise confrontations to defend them. Community base work is thus at the same time a consciousness raising and organisational activity.

Once the Association is created base community meetings continue to be held periodically in the extractive reserves and they fulfil three important functions. Firstly, they are the participatory channels through which local communities can express their needs and priorities as well as their views on matters that affect them, thus generating important information that feeds back into the Associations and OSR. Secondly, they are the vehicles for the dissemination of information regarding the present and future plans of the OSR and Associations and the activities and negotiations in which they are engaged. Thirdly, they are also arenas for discussion and decision making on important issues of general concern to the community.

Coalition forming and empowerment

The contract provisions of PLANAFLORO anticipate the creation and legal establishment of a number of extractive reserves in the State of Rondônia, as well as resources to promote their social and economic viability (Rondônia, 1994). Higher incomes, access to social services, secure

access to land, good markets for their products, and a diversified resource base are important dimensions of what rubber tappers consider an improved standard of living. In this sense, the PLANAFLORO project is an important vehicle through which some of these aspirations can be realised. In theory, therefore, when WWF initiated support for the rubber tappers in 1991 there were already some enabling conditions for the establishment of extractive reserves.

However, during negotiations for the formulation of PLANAFLORO several NGOs in Rondônia, with support from national and international organisations, raised criticisms about the capacity of the project to achieve its proposed objectives. Their main concern was the lack of participation of the project's intended beneficiaries, who include not only rubber tappers but also small farmers and indigenous peoples, in the formulation of the initial PLANAFLORO proposal. This was considered unacceptable in a project which, according to the World Bank, should constitute a 'model' of popular participation for following Bank ventures (Millikan, 1994).

Some of these NGOs had already been working with communities of rubber tappers, small farmers and Indians and were aware of the social and economic reality of their situation. They envisaged that without effective participation, meaning a mechanism through which local people could express their needs and priorities, there was the danger that the full social and environmental potential of PLANAFLORO would not be realised, and, more seriously, that project beneficiaries would become the losers in the process. As a result of popular mobilisation in Rondônia a number of representatives from NGOs and rural peoples' organisations, including the rubber tappers, were invited to a meeting with the State government and representatives of the World Bank in June 1991. The outcome of this was the signing of a 'protocol of understanding' which established forms of participation by civil society in the planning, monitoring and evaluation of PLANAFLORO (Millikan, 1994).

However, true participation requires that peoples' views are effectively taken into account (Nelson and Wright, 1995). Many popular organisations, if left to themselves, do not have the voice to make their claims heard by policy makers. In other words, although the World Bank and the government of Rondônia opened the channels for the participation of disadvantaged rural groups in PLANAFLORO this was no assurance that their needs would be given credit.

Negotiations for PLANAFLORO take place within a highly technocratic environment. Generally, participation in these negotiations requires involvement in bureaucracies and in the elaboration of proposals, discussions, meetings and so forth. Many rural groups possess neither the skills or the information to take part in these institutional practices where technical or legal language is the norm. For participation of rural civil society to have an impact in the planning of PLANAFLORO rural groups are required to 'speak' the language of policy makers. For rubber tapper leaders, for example, this is not easy since, apart from other disempowering circumstances, they also have little formal education, which in some circumstances can be a limiting factor for their participation.

NGOs often have the knowledge and expertise that grassroots groups need to negotiate, lobby and pressure government institutions to obtain benefits or services. In some instances they also have the means to organise large networks of support constituencies that go beyond national borders and take popular claims as far as multilateral lending institutions. This creates opportunities for strategic alliances between different sectors of civil society. Such is the case of

the partnership project, in which environmental NGOs and rubber tappers work together for a common goal - the protection of the forests.

This is not to say that the interests of each partner in forest conservation arise for the same reasons. Therefore, it is important to understand how environmentalists and rubber tappers pursue their goals. This is where the concept of 'actor strategies' becomes useful (Long, 1992:36; Long and van der Ploeg, 1994:79). It refers to the way social groups use their available power resources, or their knowledge and capability, to resolve their particular problems.

The rubber tappers strategy to further their interests, in particular the establishment of extractive reserves, has been to use their image as the defenders of the forest as a tool to raise their position and bring attention to their struggle. They have successfully enrolled other actors (i.e. WWF and other environmental NGOs) in their 'projects', getting them to accept particular frames of meaning, such as the sustainability of extractivism and its role in conserving the 'environment'.

Environmental NGOs also have their own agenda, which includes conserving nature and ecological processes, that is translated into particular strategies. They have also discovered the strategic value of supporting the rubber tappers in their struggles for the establishment of extractive reserves. The rubber tappers became the means to achieve an end - conservation.

In the PLANAFLORO negotiations and in other contacts with the government this alliance has provided the means by which effective participation of the rubber tappers in the programme has been guaranteed. The rationale is simple. On the one hand, the rubber tappers have legitimate claims to pressure the government into creating and supporting extractive reserves, which incidentally are also thought to be an effective way of protecting the forest. However, they lack the technical and legal resourcefulness to achieve this.

Environmental NGOs, on the other hand, are interested in forest preservation and have the know-how to pressure the government into adopting environmental protection measures, but they have a fragile base for their allegations. Thus, by supporting the rubber tappers, the NGOs' position is strengthened by claims that they are defending human rights and the rights of oppressed, politically disempowered people, rather than the preservation of flora and fauna. This is important since the empowerment process here, if not reversed, at least is working in both directions. In other words, this alliance empowers environmentalists as much as it empowers rubber tappers.

Further alliances

The participation of the rubber tappers in PLANAFLORO was a substantial achievement which in the absence of the support of WWF and other NGOs might have not been possible. Yet, this was still no sufficient condition for the creation and implementation of extractive reserves. Efforts for the creation of extractive reserves are met by strong opposition from political and economic elites, particularly those associated with cattle ranching, logging and land speculation (Hecht and Cockburn, 1989; Schwartzman, 1992). Indeed, extractive reserves contain valuable resources (i.e. wood, land), coveted by different actors. As shown in Table 1 these actors have also their particular strategies to further their interests.

Table 1 Actors and agents in forest management in Rondônia

The table distinguishes seven principle groups of actors, and sets out their interest, scale of influence and means to achieve aims. The groups are not exhaustive, nor necessarily exclusive, but they demonstrate the range of actors. Alliances have formed between a number of these different groups at various times, when common interests and aims are identified.

To overcome these political impediments, rubber tappers have built strategic alliances with different social and institutional actors. These alliances have been formalised by their participation in the NGO Forum of Rondônia. The Forum was created in 1991 following the commitment of the World Bank and the State government to allow a greater role for civil society in the PLANAFLORO negotiations. It is composed of non-profit organisations representing small farmers, rubber tappers, indigenous communities, local rural unions, researchers, educators, environmentalists, and groups involved in the defence of human rights. The main activity of the Forum has been to monitor and co-ordinate the participation of its members in PLANAFLORO (Millikan, 1994).

By joining the Forum, the rubber tappers took advantage of a particular situation in which a multilateral financial institution is funding a project that is bringing a major capital influx into Rondônia. In fact, PLANAFLORO provided the political leverage through which pressure could be applied on the government into taking notice of the rubber tappers' claims for the creation of extractive reserves. The Forum, through its large network of support, has been able to channel the seringueiros' claims directly to the World Bank.

In view that many contract provisions of PLANAFLORO were not being implemented by the government, the Forum submitted a request to the World Bank Inspection Panel asking for an investigation on the project. Among the contractual arrangements of PLANAFLORO was the establishment of several extractive reserves which the government had covertly tried to stall until then. These protests led the World Bank to review the project and command the Brazilian government to create the extractive reserves without delay (Forum de ONGs, 1996).

In July 1995, after years of delay, the creation of a number of extractive reserves totalling almost 900,000 hectares was finally announced. The claims of the rubber tappers would almost certainly go unnoticed before the World Bank if they had not been integrated into a wider protest coming from diverse sectors of the Rondônian civil society represented by the NGO Forum. Once more, the rubber tappers were able to enrol others in their particular 'projects'.

Conclusion

The research reported in this paper finds that intervention by WWF and strategic alliances with other NGOs have empowered the rubber tappers in political terms, but have not been so successful in economic terms. The rubber tappers have won recognition of their rights to certain resources through the establishment of large tracts of land designated as extractive reserves. On the other hand they continue to lead precarious and impoverished lives and struggle to generate income to meet basic needs. These findings have a number of implications for our understanding of the role of interactions and alliances between NGOs, especially large international agencies and environmental NGOs and grassroots organisations. The findings also inform the focus of integrated conservation and development projects and so-called people orientated conservation, as well as the potential of extractive reserves and similar conservation designations in meeting conservation and development objectives.

The case reviewed here reveals some of the complexities and dynamics of the alliances or relationships between grassroots organisations and outside agencies and NGOs. Where the objectives are mutually beneficial and are not in conflict then such alliances can be successful in furthering multiple interests. The example here demonstrates that such alliance may empower environmental groups, as well as grassroots organisations. Thus the analysis also highlights the complexities in these relationships and their impacts. Alliances may form for specific purposes - for example the legal establishment of extractive reserves - although the objectives and interests of different groups and actors are quite different and they will be impacted upon in different ways. This has implications for people-orientated conservation projects, which often assume a homogenous community with shared interested represented by a grassroots organisation. Little is known about social and economic differentiation among rubber tappers (an exception is Campbell, 1996); who in the community gains from the alliances between organisations and who loses. So far this has not been examined in the case of the Rondônian rubber tappers. Whilst many organisations - environmental and development NGOs and governmental alike - speak of 'partnerships', it is necessary to dissect the relationships between groups and understand the complexities of who participates, the power dynamics, how they are negotiated and how they are transformed and evolve.

This research raises questions about the viability of extractivism as a means of providing secure livelihood for rubber tapper communities and extractive reserves as sustainable conservation designations. Evidence presented here suggests that much needs to be done before extractivism can provide rubber tappers with secure incomes. This research highlights the extreme poverty of some rubber tapper households, and a lack of a 'sustainable livelihood security', is apparent. Many rubber tapper families feel economically and socially disempowered. Rubber tappers perceive two development priorities: first, higher incomes in order to satisfy physical and material needs; secondly, access to social services such as health and education. So far, alliances with outside agencies has been unable to meet these aspirations to a significant degree. There may be reasons for this outside the scope of the current alliances - for example, prices set by world markets and structural impediments which require alliances with much more powerful groups to influence and effect change.

There is mixed evidence of the environmental and ecological impacts of extractive reserves. A few researchers have questioned the ability of these areas to represent a meaningful reservoir of biodiversity if they remain the only areas of forest amidst a sea of ranching. Their designation as just one component of a broad based land use strategy needs to be examined (Salafsky et al., 1993), as opposed to them being promoted as a panacea for deforestation, biodiversity loss and political and economic marginalisation and impoverishment. However powerful logging and ranching interests make this kind of integrated land use planning difficult to implement in Amazonia.

In conclusion, strategic alliances between grassroots organisations and environmental NGOs and other agencies can empower grassroots organisations in certain circumstances, and can contribute to meeting conservation and development objectives. In the case of the Rondônian rubber tappers these interactions have helped to politically empower rubber tappers to gain legal rights to extractive reserves. These interactions have facilitated the process by which extractive reserves have become politically viable spaces in terms of being legally recognised and established, but these areas have yet to prove to be economically and ecologically viable in terms of providing secure and sustainable livelihoods for forest dwellers such as the rubber tappers.

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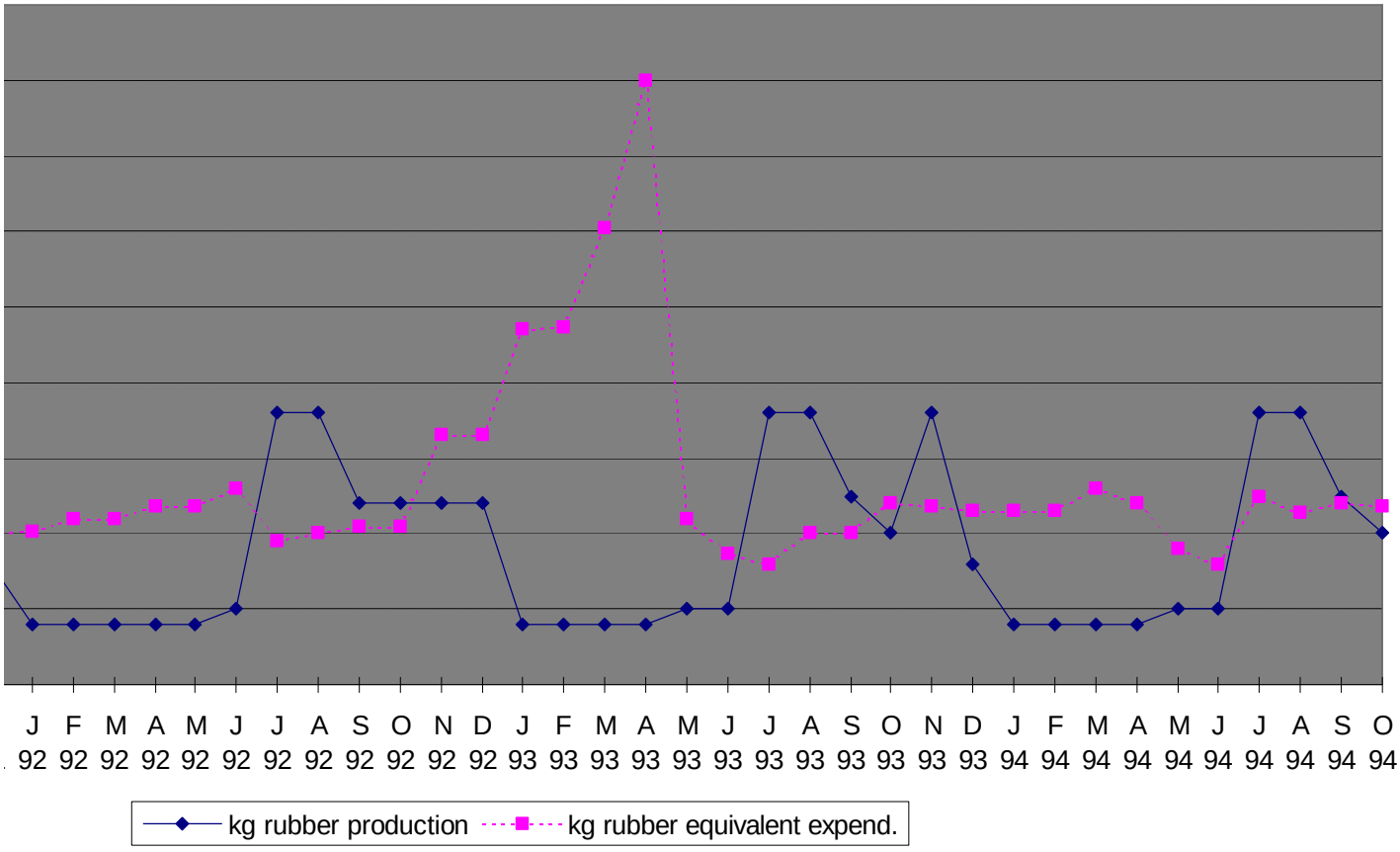
Table 1 Actors and agents in forest management in Rondônia

	Position in the political economy	Scale of influence	Source of power	Interests/aims	Means to achieve aims
	integrated into the national & international economy but in disadvantaged position; marginalised & ignored by the government	local and regional	limited but increasing	livelihood maintenance; secure access to forest resources through the creation of extractive reserves	coalition formed with other social increase influence beyond the "lo environmental language to captur support
	very diverse	regional	strategic alliances; drawing on each other power resources	ensuring that PLANAFLORO meets its social and environmental objectives; enable the participation of disadvantaged groups in PLANAFLORO	lobbying; networking with nationa NGOs; legal and technical advice groups
	flourishing business; most important source of revenue in Rondônia	local, regional and national	economic importance; Gov. support; ability to earn foreign exchange	profit; easy access to areas rich in high value timber often within extractive reserves	illegal logging; lobby Gov. officials to prevent law enforcement; buy t from some tappers
	own large areas of land; important activity in Rondônia; links to the logging industry	local, regional and national	many land owners hold important positions in local, state and national governments	profit; expanding pasture to areas occupied by extractive reserves	pressure the government to delay creation of extractive reserves
	includes politicians with direct or indirect interests in logging and ranching	local regional and national	political and administrative	mixed attitudes regarding the establishment of reserves; safeguard vested interests of elites; economic growth, national development	voted legal provisions for creation satisfy conditions imposed by the shows little political will to create bureaucratic barriers for the estal reserves
s	self appointed defenders of the world's ecological integrity	international	financial support from individuals; business and Govs.; scientific knowledge; large network of support	conservation of biodiversity and ecological processes	support local struggles to protect and technical support for local gr World Bank and national governn
	multilateral financial institution	international	economic; institutional	economic development of region	imposes conditions on the Brazili for the protection of environment

Figure 2 Rubber Production Required to Buy Basic Supplies



[1] Traditional peoples refers to non-tribal social groups long established in Rondônia. The term as it is used here comprises two main groups: *ribeirinhos* or riverine people living in floodplain areas (*várzeas*) whose livelihoods depend primarily from a combination of permanent agriculture and fishing; and rubber tappers. Both groups are the result of a rich racial mixture of Europeans, Africans and Indians. Indigenous peoples or Indians is used to refer to the native or tribal population of Amazonia.

[2] Hecht and Cockburn (1989) provide a detailed account of the aviamento system.

[3] This data derives from a survey undertaken in 1994 by the Institute of Amazonian Studies (IEA) in the Ouro Preto Extractive Reserve, Rondônia. IEA gathered data on household rubber production and incomes over time and compared it to the cost of a bundle of basic supplies needed to maintain an average family for 30 days, the components of which were identified by the rubber tappers themenselves.

[4] The PP-G7 supports a number of extractive reserves in the Brazilian Amazonia, one of which is the Ouro Preto Extractive Reserve in Rondônia.

[5] These included rural workers unions, and environmental organisations such as the Institute of Amazonian Studies which played a key role in supporting the rubber tappers movement in Acre (see Melone, 1993).