



The “New” Kerala Model: Lessons for Sustainable Development

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Summary. — The “Kerala model of development” has won wide international attention for its achievements in regard to social development and, to a certain extent, environmental sustainability. The “old” Kerala model, preoccupied with redistributive policies, failed, however, to induce economic development. As a result, attention is now being given to a “new” Kerala model. The new policy explicitly seeks reconciliation of social, productive and environmental objectives at the local level, and tries to develop synergies between civil society, local governmental bodies and the state government. The new Kerala model thus holds important lessons for participatory, community-based sustainable development in India and elsewhere. © 2001 Elsevier Science Ltd. All rights reserved.

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1. INTRODUCTION

Since the late 1970s, a number of international development scholars have held up the south Indian state of Kerala as a “model of development” (cf. Ratcliffe, 1978; Morris & McAlpin, 1982; Amin, 1991; Franke & Chasin, 1994). Indeed, Kerala’s development has been remarkable during the past four decades: Public action, including both progressive state interventions and popular movements, has brought about high levels of social development and improved living conditions—particularly for lower classes—in spite of low per capita income and nearly stagnant economic growth rates (Ramachandran, 1997).

Recent studies, however, have questioned the sustainability of the “Kerala model” in light of an unfolding fiscal crisis due to economic stagnation and rising social expenditure (George, 1993). Indeed, researchers as well as politicians have generally acknowledged that these economic weaknesses threaten the sustainability of Kerala’s welfare policies and, in fact, the “old” Kerala model.

Environmental sustainability has been held up as another characteristic of the Kerala model (Parayil, 1996). Most studies, however, have tended to overemphasize positive aspects of Kerala’s environmental record such as the low level of resource consumption, low population growth rates and moderate industrial

pollution. A careful appraisal of Kerala’s environmental conditions indicates a mixed record (Véron, 2000). In terms of sustainable development, what is more important than the allegedly achieved environmental sustainability, are the recent policies of Kerala’s state government, nongovernmental organizations (NGOs) and popular movements.

In the 1990s, a “new” Kerala model began to emerge—one that promised to better integrate sustainable-development goals into policy-making, and to go beyond mere state regulation (setting and monitoring environmental standards) to include community-based strategies for environmental protection. The new policy approach comprises decentralized administration; participatory planning combining productive and environmental objectives; and collaboration between the state, NGOs and civic movements. This far-reaching experiment holds important lessons about opportunities and limitations of community-based sustainable development.

Section 2 of this paper clarifies the concept of sustainable development, and introduces policy

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approaches towards this objective, including the community-based strategy and the model of co-management of resources. Section 3 examines features and limitations of the old Kerala model, and discusses the current policy trend towards a new Kerala model. Section 4 analyzes old and new community-based initiatives to achieve sustainable development in Kerala, including discussion of state action, the role of environmental NGOs, grassroots action and environmental ethics. Section 5 analyzes how the recent campaign for democratic decentralization has addressed common failures of community-based strategies and "community failures" (e.g., failure to include people's participation in defining development priorities; community failure to address the needs of future generations; failure to overcome conflicts between local interest groups; failure to reduce spatial externalities and to consider broader political, economic and ecological structures), and in how far the new Kerala model has been successful in overcoming these shortcomings. In conclusion, I argue that the new Kerala model holds some important lessons for community-based sustainable development and co-management of environmental resources, in particular by utilizing synergies between government and civil society at the local level. But, failure to implement complementary regulatory and price instruments for environmental protection at the state level limits Kerala's ability to achieve sustainable development.

2. SUSTAINABLE DEVELOPMENT

(a) *The role of natural, human and social capital*

A widely accepted definition of "sustainable development" put forward by the World Commission on Environment and Development (WCED) is as follows: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43). While the first part of this definition relates to conventional economic and social objectives of development, the second part incorporates a long-term view, including consideration of environmental issues. It has become common to isolate four factors that determine sustainable development: natural capital, physical or produced capital, human capital, and more recently,

social capital (World Bank, 1997). Sustainability, or the capability of future generations to meet their needs, is ensured when the total stock of these assets remains constant or is increased in the production process. Natural capital and social capital have generally been undervalued because both are public goods or "club goods" (i.e., goods that are indivisible but exclude nonmembers), respectively (Pretty, 1998).

Development theory has commonly acknowledged that economic and social development are interrelated. Economic growth is desirable because it makes poverty alleviation easier (Joshi, 1996). Growth is key in providing the means to meet basic needs, to ease poverty, and to generate employment. It nearly always reduces absolute poverty, but it can have varied impact on inequality and not everybody benefits from it (Fields, 1999). Economic sustainability in terms of sustained macroeconomic growth is thus a necessary, but not a sufficient, condition for sustainable development in developing countries. An even distribution of growth and of access to resources is equally important. If, on the contrary, there are strong economic inequalities, "growth without development" as well as social and political unrest are likely to occur, signifying unsustainable development.

Furthermore, social development, apart from being an end in itself, is also a means to promote economic growth. Drèze and Sen (1997) have argued that the expansion of social opportunity is key to development. Extension of basic education, better health care, more effective land reforms and greater access to provisions of social security would enable the marginalized sections of society to lead a less restricted life and, also, to make better use of markets (Drèze & Sen, 1997). The expansion of social opportunity calls for public action, both from the state and the civil society. But, lack of economic growth and fiscal crisis often affect the political will of governments to invest in social services such education and health (Weiner, 1999). NGOs and community organizations have limited resources and reach for replacing crucial state services. What is needed for sustainable development, therefore, are both an active state enhancing social opportunity and a strong economic basis.

Recently, the importance of social capital, including trust, norms of reciprocity and networks of civic engagement, has been stressed for the success of development (Putnam, 1993;

World Bank, 1997). As a result, “social sustainability” has received new meaning, building on previous attention to socially negative consequences of development and of environmental conservation. Now, social sustainability includes the strengthening of community-based collective action for achieving the goal of sustainable development. For example, in an environmental context, there is already evidence of local user groups playing a key role in regard to sustainable water and forest management (World Bank, 1997).

The main contribution of the sustainable-development debate has been to draw attention to environmental factors and consequences of development. Some authors have also stressed the intrinsic value of nature (e.g., Sessions, 1995). This paper focuses, however, on the instrumental value of environmental sustainability for long-term human development, and thus takes an anthropocentric view (cf. Arts, 1994).

Environmental sustainability includes the upkeep or improvement of essential ecological processes, biological diversity, and the natural resource base. Environmental sustainability is important for development because we humans are, through our bodies, part of nature. Thus, the environment is important for our survival, health and social life (Véron, 1999). Human life relies on natural capital for food production, drinking water, energy, etc. Air and water quality have a significant impact on human health. In developing countries the connections between health and environment are particularly strong because growing agro-industrial pollution and risks added to the environmental health problems rooted in underdevelopment (Smith, 1997).

In order to become sustainable, economic and social development should therefore retain or improve the ecological and resource potential to support future generations; and development of one group should have no irrevocable, noncompensable adverse (environmental) effects on contemporaries.

(b) *Mainstream concept*

The mainstream concept of sustainable development has focused on the relation between natural and produced capital. Proponents of this concept have rejected the notion that economic growth inevitably leads to environmental degradation. Rather, the outcome depends on the nature of economic growth;

that is, to what degree growth implies the depletion of nonrenewable resources and the overuse of renewable resources, including the “sink capacity” (the regenerative capacity of the environment to absorb waste). To some extent, growth can be made more environmentally sustainable and resource-efficient through the development of appropriate technologies and substitutes for nonrenewable resources (Pearce & Warford, 1993).

Yet sustainable development also suggests that many environmental problems might actually originate from the lack of development (i.e., that poverty might be a primary cause of environmental degradation) and that environmental degradation can, in turn, reinforce poverty (i.e., the poor, whose livelihoods are often directly dependent on natural resources, might be hit most severely by environmental degradation). High local and global inequality in wealth and access to resources can also lead to the unsustainable use of resources and to overconsumption by the affluent (WCED, 1987).

In sum, the concept of sustainable development suggests a potentially positive relationship between socioeconomic development and environmental sustainability. Indeed, the discourse of the 1980s and 1990s has been about how development and environment can be reconciled, and how sustainable development can be achieved (Lele, 1991). This stands in contrast to environmentalists of the 1960s and 1970s who drew attention to contradictions between development and environmental protection, and to “deep ecology” that fundamentally rejects the compatibility of the modernistic project of development with environmental preservation (Sessions, 1995).

(c) *Strategies for sustainable development*

The emphasis on natural and produced capital has also been reflected in the widely advocated market-based instruments to achieve sustainable development, in addition to developing environmentally friendly technologies in industry, agriculture, transportation, etc.¹ OECD countries in particular have considered the introduction of price incentives and market-based measures, such as environmental taxes, tradable emission permits and bonus-malus systems. These measures are generally guided by the “polluter pays” principle, and have complemented the conventional method of regulatory instruments (or “command-and-

control" instruments), such as emission standards, permissions and prohibitions. For less-developed countries, however, regulatory and market-based instruments tend to be ineffective because of state failure to control environmental standards, and market failure to give the right price signals.

As an alternative, the consensus emerging from the United Nations Conference on Environment and Development in Rio in 1992 recommended a community-based strategy (Leach, Mearns, & Scoones, 1997). Sustainable environmental management can only occur where active local-level support and participation exist. Particularly in less developed countries, community participation is believed to be the most effective strategy because people depend directly on their local physical environment and thus have a genuine interest in protecting it (Ghai & Vivian, 1992). Research on indigenous technical knowledge suggests that local communities are key to finding solutions for environmental problems. Often, local communities developed technologies that are well adapted to local socioeconomic and environmental conditions (Gibbon, Lake, & Stocking, 1995). Such an approach tries to make better use of (renewable) human and social capital than the regulatory and market-based instruments.²

Because of their locally adapted technical knowledge and (assumed) positive social capital in form of trust and norms of reciprocity, local communities are regarded as appropriate units to restore and manage their local environment. But the pursuit of community-based sustainable development requires "a political system that secures effective citizen participation in decision making" (WCED, 1987, p. 65). Decentralization seems an adequate instrument for providing the appropriate political system for this purpose. It is commonly argued that locally elected representatives know the local situation and are thus better positioned to deliver certain public services than authorities at the national level. Physical proximity makes it easier for citizens to put pressure on local officials and to hold them accountable for their performance. There has also been a rising interest in decentralization because liberalization and globalization in the 1990s have undercut the scope for governance at the national level (Evans, 2000). Many organizations, therefore, advocate democracy, decentralization of administration and planning, more responsibility for local communities, and

increased involvement of civil society, including NGOs and popular movements.

Decentralization does not, however, always lead to the desired participation of marginalized sections of society. Empirical research has shown that decentralization can reinforce vested interests in existing patterns of patronage if there is no synergy between local government, civil society and an active central government that is committed to support the mass of the local people in the struggle against local powerholders (Tendler, 1997; Crook & Manor, 1998).

Potential synergies between the state and civil society have been stressed by models of "co-production" (e.g., Ostrom, 1996; Lam, 1996). These synergies can emerge if "complementarity" (of resources, access, skills, technologies) and intimate connections and mutual trust between public officials and citizens ("embeddedness") exist (Evans, 1996). While Putnam has looked at social capital as an institutional endowment that is established over a long period of time, models of co-production have stressed the possibility of constructing new institutions of cooperation. For example, synergetic interaction between government organizations and civic user groups can lead to efficient production and management of particular public goods, such as irrigation and drinking-water systems, grazelands, forests, education and health systems (cf. Ostrom, 1990).

Particularly in cases where indigenous community management does not exist (anymore), co-production or "co-management" becomes relevant for achieving community-based sustainable development. Co-management of resources (i.e., appropriate sharing of planning, financing and implementation responsibilities) between local communities and the state has therefore been advocated as an effective strategy to promote sustainable development.

The state of Kerala has recently carried out a comprehensive decentralization program that encourages comprehensive citizen participation in decision making and in project implementation. Democratic decentralization has explicitly included environmental goals in its policy approach. This makes Kerala a particularly interesting case for studying the community-based strategy for sustainable development.

Even before Kerala embarked on its decentralization program, it has been suggested that this state comes "closest to the sustainable

development ideal in practice” (Parayil, 1996, p. 953). Some typical environmental problems of India are less apparent in Kerala because of high rainfall, distributed more evenly between the seasons, and a topography that has hindered the wide expansion of environmentally unsustainable Green Revolution technologies (Véron, 2000).

Kerala does not face a severe ecological crisis, but environmental problems have become more apparent and have started to affect environmental sustainability. The most important environmental problems are caused by deforestation incurred in previous decades, ongoing paddy conversions and disruption of backwater ecosystems. Of growing concern are also the “chemicization” of agriculture, pollution of water and soils, urbanization and air pollution by growing vehicle traffic. Furthermore, increasing consumerism in Kerala and rising imports from other states, boosted by the influx of Gulf remittances, suggest that Kerala increasingly externalizes environmentally unsound industrial production (Véron, 2000).

3. FROM THE “OLD” TO THE “NEW” KERALA MODEL

(a) *Standard arguments for the Kerala model*

Kerala is located in the southwest of the Indian subcontinent, on a narrow strip of land between the Arabian Sea and the Western Ghats. The state covers an area of approximately 39,000 km² (more than the size of Taiwan). According to the 1991 Census of India, Kerala has about 29 million inhabitants. The population density is among the highest in the world: 747 persons per km², as compared with 267 in India as a whole.

Kerala has become well known for its unique development pattern. Despite its poverty in terms of economic indicators, the state displays a set of very high social indicators of development that are outstanding in comparison with the rest of India. Since Kerala’s development achievements have been widely discussed elsewhere (e.g., Ramachandran, 1997), this article mentions some remarkable characteristics only very briefly. For example, Kerala’s life expectancy of 72 years, infant-mortality rate of 13 per 1,000 life births, and literacy rate of 91% follow only slightly behind those of industrialized countries.³ Apart from being important for gender equality, the inclusion of women in

education appears to have had a positive influence on children’s health and reduced fertility rates. Furthermore, formal education has contributed to higher social mobility of low-caste people and to better opportunities for migration. The advances in the field of social development have failed, however, to spur economic development. Kerala’s per capita state domestic product of about Rs. 8,200 (about US\$270) in 1994–95 and average annual growth rate of 0.3% during 1980–90 were very low, even below the Indian average.⁴

Kerala’s unique development pattern and its outstanding accomplishments, achieved with little foreign aid, have gained respect in international circles. This kind of development through public action has become known as the “Kerala model of development.”

Already in the 1950s and 1960s, the indicators of social development exceeded those of other Indian states. Since then, much more progress has been achieved at low levels of income through appropriate state interventions, mainly by Communist-led state governments, and effective popular movements (Ramachandran, 1997). State interventions have comprised important welfare policies and social reforms such as the effective public distribution of food, systematic extension of public health and education facilities, and effectual land reforms. Governments often acted in response to popular pressure. Popular movements, including the caste-based reform organizations of the late 19th and early 20th centuries and the class-based peasant and labor associations in the second half of the 20th century, struggled effectively for social justice and radical reforms (Franke & Chasin, 1994).

Kerala offers some general lessons on how appropriate public action can improve social opportunities. Unlike an independent nation, this subnational entity even had limited scope for taking action. Kerala cannot, however, offer an easily reproducible model for other countries because of particular historical and geographical contingencies and conditions that facilitated the development of positive social capital and the emergence of popular movements, creating strong accountability of the state (Sen, 1992). Stressing the importance of public action, the proponents of the Kerala model furthermore tended to neglect the substantial influence of Gulf remittances since 1973 in alleviating poverty.⁵ Since the 1980s, more attention has also been paid to Kerala’s development failures. Some now question

whether this state, or what I call the “old” Kerala model, really represents an example of development.

(b) *Limitations of the old Kerala model*

Kerala’s great social potential for economic development in form of human and social capital has not translated into actual achievements in the productive sphere. Economic and other failings include industrial backwardness; agricultural stagnation; massive “educated” unemployment; persistent poverty, especially among tribal populations, the fisherfolk, Tamil labor migrants, elderly women and widows; high and still rising suicide rate among young people (Prakash, 1994; Iyer, 1996).

The economic stagnation has been explained by the following: overemphasis on redistribution and welfare policies; quick responses to populist demands due to political stalemate; inconsistent policies of successive state governments; discriminatory policies of the center towards Kerala regarding the allocation of public sector investment; power shortage; labor militancy;⁶ inappropriate curricula of higher education; use of Gulf remittances to catch up with consumption rather than to invest in production; and excessive party-politicization down to the local level (Oommen, 1993; Prakash, 1994; George, 1997).

Kerala’s economic stagnation has resulted in an increasing scarcity of financial resources to pay for costly welfare schemes such as pensions, unemployment relief and the public distribution system of food (George, 1993). The fiscal crisis together with the underdevelopment of productive sectors and the high reliance on Gulf money have threatened the sustainability of the old Kerala model with its redistributive policies and radical reforms. The emerging consensus among scholars and politicians in Kerala suggests that the current development priorities are to strengthen the production basis and to realize economic growth in order to overcome unemployment and to sustain the outstanding social achievements made in the past (Véron, 2000).

Yet Kerala’s human capital, particularly its educated and skilled workforce, could be a good basis for economic growth. In turn, achievements in the spheres of social justice, redistribution of assets, education and health may ensure that increased attention to productive aspects would not lead to “growth without development” but to equitable devel-

opment so that Kerala can become a real example of development.

(c) *The “new” Kerala model*

Recent policy trends, including increased attention to productive needs and democratic decentralization, may constitute the beginning of a “new” Kerala model. Local self-government and decentralized planning were imposed by amendments in India’s constitution in 1992. Like other states, Kerala passed the corresponding legislation (the Kerala Panchayat Raj Act of 1994), held local elections in the three tiers of panchayats at the village, block and district levels (in 1995), and delegated 29 administrative functions to the local bodies. Kerala has, however, taken the national directives for decentralization more seriously. Remarkable compared with other decentralization initiatives in India and abroad is that Kerala’s left-coalition government decided in August 1996 to allocate 35–40% of its annual budget for new development plans to projects designed by the local bodies themselves. Administrative decentralization was accompanied by financial devolution and the provision to ensure participation of citizens, panchayats and municipalities in the formulation and implementation of development plans.

In contrast to the World Bank formula for successful decentralization (World Bank, 1999), Kerala’s financial devolution did not follow prior institutional design for the division of functional responsibilities between the local governments and the state government. Rather, the actual practice of participatory planning and implementation in the context of a mass campaign is expected to evolve into an effective system of functional division that should eventually inform the institutional design and administrative structure (Isaac, 2000). Although Kerala has now reached the stage of institutionalization, agency was put before structure during 1996–99.

The new decentralized and democratic development planning gave people’s participation and NGOs a bigger role—at the expense of top-down planning by line departments (George, 1997). Government officers were, however, included in the planning process. Indeed, planning was particularly successful where committed local government officers played an active role (see below). Furthermore, the budgets of the line departments were not cut significantly. To a large extent, the steep

expansion of the state budget from 15.6 billion Rupees in 1995–96 to 22 billion Rupees in 1996–97 and to 28.6 billion Rupees in 1997–98 provided the means for financial devolution. This raises doubts about the fiscal sustainability of the model—an issue rarely discussed by the proponents of the new Kerala model.

The new model seems to rely on the same basics as the old Kerala model: development through public action by a responsible state and effective popular participation. But, unlike the old Kerala model, the emphasis of state policies has, to a certain extent, been shifting from welfare to participatory growth, and from top-down intervention to bottom-up planning. Furthermore, the reformists, who currently seem to have the upper hand in Kerala's present left-coalition government, are pursuing a different kind of popular participation than the previous class-based mobilization—which included the very successful land-reform movement of the 1960s and 1970s as well as the trade-union movement that has existed since the 1930s. Recognizing the economic contradictions of labor militancy, the left now seeks class compromises and corporatist arrangements (Heller, 1995). New participatory development programs, initiated by the reformist wing of the left, try to overcome class conflict and party politics at the local level by emphasizing joint productive interests, and so attempt to build up broad alliances and mediating bodies in which different interest groups are represented. Planning itself suggests a system that is based on deliberation and negotiation rather than agitation. Moreover, decentralized planning seeks to include all adults of a village panchayat as citizens and not on the basis of class or political affiliation.

At the onset in 1996, decentralized participatory planning explicitly aimed at increasing production and productivity in agriculture; alleviating ecological problems, including the depletion and pollution of resources; improving the quality of social infrastructure; tackling gender injustice and deprivation of tribal populations and fisherfolk. The challenge to accelerate industrialization and to develop the power sector remained in the realm of the state and central government (Isaac & Harilal, 1997).

In sum, the new Kerala model has pursued objectives of productive development, social improvement and environmental sustainability, thus representing a serious attempt to make development sustainable. Recent studies suggest that class compromises between entre-

preneurs and workers have been achieved through successful mediation by the state (Heller, 2000). The new Kerala model seems to have contributed to higher annual growth rates of 6–7% in the 1990s (Franke & Chasin, 2000). The following sections will discuss whether environmental goals could also be achieved through participatory strategies.

4. THE JOURNEY TOWARD SUSTAINABLE DEVELOPMENT

(a) *Previous community-based initiatives*

Prior to the start of decentralized planning in 1996, Kerala's state government had initiated participatory-development programs with an environmental component. These initiatives were carried together with Kerala's most influential NGO, the Kerala People's Science Movement (Kerala Sastra Sahitya Parishad, KSSP), which has promoted environmental protection for the past 25 years.⁷ The most significant programs were "group farming" and the "people's resource mapping program."

The group-farming program was initiated by the left-coalition state government in 1989 with the primary aim of improving agricultural growth and food self-sufficiency in Kerala. Group farming was expected to reduce production costs and raise productivity of paddy cultivation, thus preventing paddy conversions. The Department of Agriculture, providing financial and technical assistance through its newly decentralized local extension offices, motivated paddy farmers of the same micro-watershed to take up collective farm operations and to purchase jointly such farm inputs as chemical fertilizers and mechanical tillers. Furthermore, the farmers were asked to form committees, and local corporatist bodies comprising farmers, agricultural workers and bureaucrats were set up. But, group farming failed in most cases. Not only did interests between farmers and agricultural workers diverge, but also common interests among fellow farmers usually did not go beyond receiving subsidized farm inputs via the group. Moreover, when these subsidies were withdrawn under the succeeding center-right-coalition government in 1992, most groups became inoperative and fell apart (Törnquist, 1995).

In 1991, the KSSP launched the resource-mapping program in collaboration with the Centre for Earth Science Studies (CESS) and

with support of the state government. The program aimed at initiating more efficient and sustainable management of local resources. With the help of a checklist designed by the CESS, local volunteers, including teachers, retired and educated unemployed persons, began to map local resources in cooperation with farmers. In doing so, it was intended that ordinary people would learn about their local resource potential and environmental problems, thus developing "land literacy" and environmental awareness. In many panchayats, the KSSP built up organizations of local leaders and volunteers. These organizations were expected to draft an "action plan" map that would identify environmental problems and potential sustainable-development projects. At completion of the program in 1992, when a center-right coalition came back to power in Kerala, mapping was done in 20 of the 25 pilot villages, but only two villages drafted an action plan (Isaac, Franke, & Parameswaran, 1997).

Both group farming and resource mapping were "participatory" programs initiated "from above." Local people were not invited to define their own problems or determine the area of action; instead the programs reflected the perceptions of policy-makers, social activists and scientists. As a consequence, these programs failed to gain the participation of farmers and agricultural workers; at best, they were able to mobilize volunteers from the middle class. This was because low efficiency of paddy cultivation, for example, was not an immediate or pressing problem for farmers as they can shift to other, more profitable, crops. Furthermore, most people did not share the concern of policy-makers and activists about the environment, and so prioritized environmental problems differently. Their views of "rational" land use also differed from the ones of natural scientists. In addition, group farming overlooked differentiation by class, caste, gender, political affiliation and micro-locality within villages and micro-watersheds. People in these spatial units do not form a homogenous group, and may have only a few interests in common. Moreover, many farmers perceived group farming and resource mapping as programs of leftist political parties, and therefore refrained from participating (Véron, 2000).

In sum, the experience of previous participatory programs shows the difficulty of identifying user groups with common productive interests and with complementary assets. Collective action was not regarded suitable for

producing paddy—a private good—nor for drafting a plan, the value of which was not clear to the ordinary people. Furthermore, Kerala's strong civil society in which half of the population is actively involved in civic organizations (Isaac, 2000) appears to be structured along deep-rooted political and class boundaries that are obstacles to all-inclusive participation. For environmentally sustainable development, moreover, increased environmental awareness among the population is necessary.

(b) *Environmental ethics and grassroots action*

Environmental awareness may not be very widespread in Kerala because the region does not generally face a severe ecological crisis. As a consequence, most Keralites do not seem to pass ethical judgement on inefficient or unsustainable resource use. In other words, the normative concept of sustainable development has not yet become a general cultural value in Kerala. This may be contrasted with the ideas of social development, justice and equity, which, prompted by particularly extreme cast rigidities, became strong values in the first half of this century in Kerala and facilitated the spread of education. Social and political awareness led to widespread popular participation that has supported and even pressured the state government to implement welfare policies and radical reforms. If the new Kerala model is to become a model of sustainable development, the strong sense for social justice and the political consciousness among Kerala's people must be complemented with more environmental awareness and an enhanced "development culture." In order to achieve this before a severe ecological crisis unfolds, initiatives by the KSSP and other environmental NGOs to spread people's environmental education and to provide ecological training of local planners will be crucial.

Although no general environmental awareness has yet evolved, people seem most concerned about specific environmental changes when these affect their livelihoods directly. "Grassroots environmental action" (Ghai & Vivian, 1992) that links environmental protection with livelihood issues is already common in Kerala. It often emerges as a consequence of conflicts over local resources. For example, neighborhood groups have acted against excessive sandmining, which has enhanced river-bank erosion affecting human habitats

and agriculture. Other groups have struggled against deep soil mining, which has caused serious accidents (i.e., people falling into the deep ditches at night on their way home). In a few places, paddy farmers took action against wetland conversions upstream, which has affected water availability on their fields (Véron, 2000). Grassroots environmental action tends to meet favorable conditions in Kerala because of its richness in social capital; people are politically aware and experienced with collective action.

As the concept of sustainable development, grassroots environmental action links development issues with environmental sustainability. But, grassroots action usually reflects a conflict between different local groups over resources rather than a united community-based struggle against environmental degradation, or for joint management of particular resources. Moreover, it does not consider the “needs” of future generations, which have no voice in current conflicts over local resources. In many cases, there is also a tradeoff between ensuring a livelihood and protecting the environment. Like anywhere else, people in Kerala tend to prioritize their own immediate economic, social and political interests. Unless they see a close link between environmental protection and their own well being, they do not care about environmentally sound practices. For example, the local population in a granite-mining area of south Kerala has even accepted negative environmental and health effects of neighboring quarries because such quarries give employment to their families.

Because it ignores intergenerational justice and environmental sustainability as such, grassroots environmental action has only limited scope to form the basis of sustainable development. On the other hand, it brings to light the fact that mainstream sustainable-development concepts tend to underestimate conflicts between different resource users and the possible tradeoff that exists between livelihood security and environmental protection, as well as between present and future needs.

(c) *The people’s planning campaign*

The new Kerala model goes beyond spontaneous grassroots action to include citizens, popular movements, nongovernmental organizations and state agents in a systematic process of decentralized planning that pursues broader productive, social and environmental goals.

Before the significant financial devolution in 1997–98, the small untied funds to the panchayats were simply distributed evenly between the territorial sub-units and used without prior planning. In contrast, the significant financial devolution of 35–40% to the panchayats occurred at the same time as decentralized participatory planning, project implementation and monitoring. Furthermore, the local bodies and the communities were expected to match 25% of the grant via additional fund raising, beneficiary and voluntary contributions in the form of labor, material and/or money.

In August 1996, the newly constituted Kerala State Planning Board launched the “people’s planning campaign” for initiating decentralized planning, and it trained nearly 100,000 voluntary resource persons to assist the local bodies. The campaign was expected to last for one year until the completion of the 1997–98 local plans (Franke & Chasin, 2000). Four years and three sets of local plans later, however, the State Planning Board, committed government officers, elected people’s representatives, and thousands of volunteers and social activists were still in the campaigning mode.

This “planning from below” started in September 1996 with 14,147 meetings at the ward level (the lowest panchayat constituency) in Kerala’s 991 village panchayats. In these meetings, more than two million people expressed their felt needs and discussed their local development problems. To complement these discussions, development volunteers carried out participatory rapid appraisals and organized village-development seminars. On the basis of this information, selected voluntary experts and ward representatives identified the main problems and drafted panchayat development reports. These reports contained a socioeconomic and environmental assessment as well as 12 sectoral chapters, many of which were related to environmental issues (e.g., the chapters on sanitation, energy, agriculture and irrigation). Based on these general reports, sectoral task forces—comprising local officials from relevant line departments, voluntary experts and resource persons—drafted project proposals (Isaac, 2000).

While community volunteers were the driving force behind the first stages, the panchayat act requires that the elected representatives of the local bodies prioritize the project proposals and draft the local plan document. The elected representatives, often people with little education and heavy time constraints, were trained

and assisted by the resource persons. Although the funds to the panchayats were untied, the State Planning Board asked the panchayats to follow broad guidelines for sectoral allotments in the plan outlay in order to redirect development investments in productive sectors. Forty to fifty percent of the grant-in-aid should be spent for productive projects in agriculture, animal husbandry, fisheries, small-scale industry; 30–40% for social services (education, health, sanitation, drinking water supply, housing); and only 10–30% for infrastructure (Isaac, 2000).

Then, the local plans of 991 village panchayats were integrated in 152 block panchayat plans and 14 district panchayat plans. Block- and district-level government officers went through the panchayat reports and plans in order to identify areas that require coordination and that are suitable for complementary projects. In addition, the development schemes of the central government had to be integrated. Block- and district-level panchayat representatives approved the plans in development seminars. Finally, district- and block-level expert committees gave the required technical sanction for the projects in the panchayat plans. In order to accomplish this huge task in a reasonable time, the committees relied on the newly established voluntary technical corps of more than 2,000 retired civil servants, professionals and other technical experts that assisted the government officers-in-charge (Franke & Chasin, 2000).

The local plans in 1997–98 produced nearly 68,000 projects, from repairing irrigation ponds to developing cooperative vegetable gardens, to introducing water-sealed latrines, establishing women's enterprises, building houses for squatter families and reviving ritual traditions (cf. Franke & Chasin, 1997). But, plan formulation and the subsequent allotment of the panchayat funds were delayed by more than six months. Project implementation and spending were sluggish. Delays continued for the subsequent annual plan in 1998–99 (Isaac, 2000). People are becoming accustomed to the new planning process, however; informal rules between the various stakeholders have developed; and additional provisions have been included in an amended panchayat act in 1999.

In regard to the adoption of productive goals and sustainable-development principles, the local plans show a mixed record. Most money was allocated to the construction of roads (18% in 1999–2000) and to housing (23% in 1999–

2000), signifying the general nature of the plans to reflect popular consumption needs. The recommended grant-in-aid allocation of 40% to productive sectors was achieved only in the second plan (40%) but neither in the first (34%), nor the third (28%) (Harilal & George, 2000). Moreover, the majority of projects classified under the productive sector were consumption-oriented, such as the subsidized provision of milch animals, seedlings and fertilizers. Individual-beneficiary schemes were more common than group-based activities, and subsidy rates were significantly higher than those of line-department schemes were. The bulk of the beneficiary contributions, which topped up the state grant-in-aid funds by more than 50%, were mandatory contributions of individuals for receiving the subsidized goods. Furthermore, the projects were partial interventions such as single-crop schemes that neglected ecology and the marketing side (Isaac, 2000). In sum, most projects showed little qualitative difference to the earlier projects implemented by line departments. The local plans reflected a lack of innovation and gave little indication of an emerging "development culture."

There were important exceptions, however, that may lead the way and become models for other panchayats. For example, the agricultural officer of a south Kerala village panchayat suggested the establishment of a "labor bank" of trained agricultural workers that ensures adequate, institutionalized supply of labor at short notice (which is crucial for paddy cultivation). A new body, the "Farmers' Helping Group," including the elected panchayat representatives, representatives of farmers and laborers, the voluntary resource persons of the planning campaign and government officers, was designed to bargain fixed wage rates. In view of more and guaranteed days of employment that was made possible through additional work from the panchayat plan, the fixed wage rate for the 120 members of the labor bank could be below the market rate. The institutional corporatist arrangement was supplemented with labor training and subsidized provision of farm inputs from panchayat funds (Mohanakumar & Girishkumar, 2000).

This project has been able to break the deadlock between decreasing land-use intensity, declining labor productivity and increasing wage rates. Two years after its implementation in 1998, the project has led to agricultural intensification and employment creation, and

to reversal of the environmentally unsound conversion of wetland. The economic effects of this institutional innovation have been positive for both the participating laborers and farmers (Mohanakumar & Girishkumar, 2000). Moreover, this new institution has been able to overcome entrenched mistrust between farmers and laborers. The labor bank points to a general problem of institutional constructs, such as user groups, to have a tendency to exclude people. Only 120 of 600 applicants could be absorbed by the labor bank because of the limited (though increasing) employment opportunities in agriculture and from panchayat work. The chance of excluded workers to receive panchayat work has been diminished. At the very least, the private contractors were replaced by an institution over which the laborers themselves have control.

Decentralized planning produced only a very few "pure" environmental projects, although the campaigners propagated environmental protection. There was no separate "environmental component plan" as for women, scheduled castes and scheduled tribes. The state plan allocated more to environmental protection than the panchayat plans (cf. Harilal & George, 2000). But environmental concerns were integrated in many sectoral projects. For housing projects, for example, an NGO developed and produced environment friendly building materials. Agricultural projects promoted organic farming and the use of bio-pesticides. The delivery of sealed latrines contributed to better environmental health (Isaac, 2000). But, only few projects combined the (subsidized) provision of environment friendly technologies with awareness-building. Moreover, few projects were able to utilize collective action for improving environmental sustainability. Soil and water conservation projects generally failed, as they were not part of an overall watershed-management plan.

In those panchayats where committed government officers, nongovernmental organizations and scientists/activists were closely involved, sectoral projects seem to have integrated the use of environment-friendly technology very effectively. This indicates that decentralized planning has expanded the scope for environmentally concerned organizations to implement sustainable-development projects. People's participation did not, however, automatically lead to environmental projects. Therefore, the chances of the new Kerala model

in achieving sustainable development rely to a great extent on popular movements and environmental NGOs. For example, the KSSP, which has played a leading role in the planning campaign, has been able to combine productive, social and environmental objectives in most of its political campaigns and development programs. Although the plan preparation included participatory appraisal of environmental resources, environmental degradation has remained a "problem" of natural scientists and social activists rather than the wider population.

At the macrolevel, the state government, prioritizing economic goals, tends to approve industrial or energy projects without proper environmental impact assessment. In addition, Kerala's state institutions have not improved their performance in monitoring environmental standards (cf. Ramachandran, 1998). Environmental NGOs, such as the KSSP, influenced environmental policies at the state level in the past (e.g., through a successful campaign against a large hydroelectric project in the pristine rainforest in Silent Valley, Western Ghats, in the 1980s), but they seem to be preoccupied with local-level planning at present.

Despite the new importance of decentralized planning and significant financial devolution to the panchayats, the state government failed to restructure allocation to the various line departments. State government departments were also not directed to concentrate on projects that are unsuitable for implementation by local bodies. The lack of coordination caused both duplications of projects and gaps in investment in sectors such as power and industry. This points to the drawback of the *ad-hoc* planning campaign, and more generally to the lack of political might of the State Planning Board, the primary engine behind the campaign, to push forward an appropriate functional division, even at the expense of one or the other line department.

5. LESSONS FOR COMMUNITY-BASED SUSTAINABLE DEVELOPMENT

(a) *Problems of community participation*

The new Kerala model has addressed some of the general failures of community-based sustainable development, apparent in the earlier participatory initiatives discussed above.

For example, many community-based programs elsewhere in developing countries do not invite sufficient local participation in defining problems, areas of action and project goals. Too often, "participation" refers only to the implementation of schemes that were designed at higher levels. "Co-management" may involve more responsibility for local communities without offering more rights and funds. Faced with fiscal constraints, many states welcome decentralization and participatory programs, including local voluntary contributions of labor, material and money. By contrast, the new Kerala model has already included increased allocation of funds for village development plans, and has implemented a decentralized planning process that aims to involve the civil society at every stage. Ordinary citizens get a fair chance to express local development problems.

Still, decentralized planning does not ensure empowerment. Village development plans may not fairly reflect the concerns of marginalized voices at local meetings. Key decisions are taken by volunteering experts, social activists and elected representatives. Local development reports and plans may make the prioritization process more transparent, but are no guarantee against favoritism and nepotism. It has been reported that in the majority of local bodies, new project proposals were arbitrarily included just before finalization of the plan (Isaac, 2000). On the other hand, when the people's expressed "felt needs" were acknowledged, they were translated into simple individual-beneficiary asset distribution as opposed to productive public investment. It seems, though, that ordinary citizens may be able to participate more effectively in implementing and monitoring local projects rather than planning, and that this process has greater potential to spur empowerment and a new "development culture." Kerala's planning campaign has given a bigger role to "beneficiary committees" in project implementation and monitoring, and project expenses are made public in the village meetings. Most beneficiary committees, however, are still dominated by private contractors with vested interests.

Moreover, conflicting interests within the village can impede compromises and solutions. Local development plans are thus likely to reflect the political power structure in the village rather than a "common will." The initiators of decentralized planning have explicitly attempted to overcome deep-rooted

political and class boundaries by stressing joint productive interests and by seeking the active involvement of opposition parties. But, only 10–11% of the electorate could be mobilized to attend the village-level meetings in the first three years of the campaign, and the attendance of supporters of opposition parties was generally lower (Jagajeevan & Ramakanthan, 2000). This is probably because of "self-exclusion" on part of political opponents who regard the campaign as a vehicle of the leftist parties.

The village-level meetings for decentralized planning seem not appropriate institutions for bridging political and class boundaries for other reasons too. These meetings are not targeted to the solution of a particular problem but for expressing all sorts of felt needs. Furthermore, the meetings are designed for the residents of the same political-administrative unit, regardless of whether they could possibly share common productive or environmental interests. The same is true for the recently formed smaller neighborhood groups whose only joint interest may be to bring more infrastructure into their vicinity. This is reflected in the adoption of many road, housing, sanitation and drinking water projects.

Furthermore, community-based projects can support sustainable development only if people at the grassroots opt for environmental protection and consider the needs of future generations, which have no say in the (decentralized) planning process. Although communities may depend directly on natural resources, environmental awareness cannot be assumed as there are often tradeoffs between immediate livelihood needs and long-term environmental protection. In order to spread environmental awareness, the new Kerala model has sought the collaboration of NGOs that are engaged in environmental education. The main contribution of the participating NGOs has been, however, to offer environment-friendly technology for moderately innovative projects.

(b) *Importance of synergies between local government and civil society*

The new Kerala model has shown the limitations of community participation in planning for sustainable development. Collective action has been facilitated and initiated, however, at other levels in the decentralized planning

process. In particular, decentralized planning created a new space for committed government officials and social activists. One government officer spoke enthusiastically to me recently of decentralized planning: "Earlier, my work of implementing single schemes was very dull. Now, I finally can use my education and technical knowledge to help designing useful projects for the good of the people." The panchayats gives local government officers and development volunteers the institutional frame to mediate between different interest groups and propose innovative new institutions. The quoted example of the labor bank in south Kerala shows that even deep-rooted political and class boundaries can be overcome on the basis of joint productive interests. This marks an important departure from previous participatory initiatives in Kerala.

Cases in which synergies between local government and civil society have resulted in innovative, community-based projects may still be exceptional. But the planning campaign has taken an active role in publicizing successful projects and provided opportunities for panchayats to exchange their experiences and learn from each other.

(c) *Units of collective action and character of managed resources*

The scope for environmental co-management is in many cases limited because of the nature of particular goods to be produced or managed. Most environmental resources are under private control, and agro-ecological systems such as watersheds have both public-good and private-good characteristics. In addition, the "well being of future generations," an important component of the sustainable-development concept, is not regarded as a "good" at all. It is difficult to imagine reciprocity between present and future generations. The mixed-good, club-good, or "no-good," character of environmental sustainability complicates the establishment of appropriate institutions for the co-management of particular resources.

In the first year of Kerala's planning campaign, scientists/activists were involved in resource-mapping exercises and participatory rapid appraisals that created village-level databases for planning. But, their influence on the planning process and on project proposals seems insignificant. Obviously, ordinary people did not share their idea of "ecologically efficient land use." Natural scientists tend to use phys-

ical concepts of space (e.g., "watershed") that fail to consider the social reality of differentiated access to natural resources and conflicting individual and group interests. "Environmental" problems are also largely social and political constructs (cf. Bryant & Bailey, 1997). Because no common "environmental interests" between people residing in the same ecological unit can be assumed, projects that use purely physical spatial concepts to identify potential participants, or user groups respectively, have limited scope in a community-based approach to sustainable development. Similarly, the units of decentralized planning—political-administrative space defined by residency—rarely create appropriate user groups for environmental management.

Kerala's decentralization campaign has recently paid more attention to environmental planning, and has launched a complementary program for participatory watershed planning. Local-level watershed committees that are institutionally linked to the panchayats are intended to prepare and implement action plans (Varma, George, Nair, Krishnakumar, & Aniyam, 2000). The success of this program will depend on identifying appropriate user groups based on people's practice and intention in relation to particular resources rather than based on bio-physical space alone. Community-based resource management can only occur between groups that have interests, whether common or conflicting, in the same resources.

(d) *Need for coordination*

Village development plans made by local bodies are likely to neglect spatial externalities as well as temporal externalities. Therefore, these plans require coordination at higher levels, and some sort of top-down planning. This points to inevitable conflict between popular participation and planning. For example, Kerala's State Planning Board gives guidelines on what village reports should contain, and how much money village plans should allocate to the various sectors. Thus, broad priorities are still set at the state level.

For community-based development to succeed, it is crucial to identify the potential areas of synergies between the state government, the local governments and the civil society. The new Kerala model has tried to integrate local civil servants into the process of decentralized planning, hoping to make them

more responsible and accountable for the implementation of the village plans. In addition, the allocation of development funds has been made transparent. But, the success of decentralized planning still depends too heavily on the commitment and dynamism of individuals, both local government officers and development volunteers. Institutionalization of rules to enhance the accountability of the state, the local officials, the local bodies, NGOs and community organizations are necessary. A first step in this direction is the recommended redeployment of line-department officers to the panchayats.

6. CONCLUSIONS

The old Kerala model was certainly not an example of sustainable development: The environmental record has been mixed, and economic stagnation threatened the sustainability of social progress. The new Kerala model has, however, included policies toward community-based sustainable development and addressed common "community failures." There are individual success stories where synergies between the local government and the civil society have been utilized to build new institutions that overcome conflicting interests and more deep-rooted rifts based on class and party politics. The success of the new Kerala model will depend on whether these showcases can be replicated in other panchayats. Ecological concerns have been integrated in sectoral projects on initiative of environmentally aware development volunteers. But decentralized planning has not offered a platform for comprehensive environmental planning because the units of planning based on residency are inappropriate for building resource-user groups.

Community-based sustainable development meets very conducive social conditions in Kerala. The population—in cities, towns and villages alike—is educated, informed, politically conscious and well organized to bring about necessary far-reaching social change. Apart from the availability geographically well distributed human and social capital, the ideological commitment of the state government has been crucial. The current left-coalition government has initiated and backed decentralized development planning. Although some state-level politicians of both the ruling and the opposition parties remain skeptical,

financial devolution and decentralized planning are not easily reversible because they have already raised the expectations at the grass-roots.

In order to achieve sustainable development with a participatory strategy, environmental awareness among the population is essential. As influential NGOs are engaged in environmental education, there is scope for sustainable development to become a general value in Kerala, as did social justice and equity in the first half of this century as a result of caste-based reform movements and class-based associations.

Though the state government is making a genuine effort to initiate community-based sustainable development, and to make use of synergies between civil society and the state at the local level, it fails to enforce environmental policies at the macrolevel. For example, monitoring of environmental standards and use of environmental impact assessment have remained insufficient, and the introduction of environmental taxes has not been considered. The failure to create private-public synergies at the macrolevel in regard to environmental protection counteracts the efforts of decentralized environmental planning, and may limit Kerala's prospects considerably in achieving sustainable development. Participatory initiatives at the local level have a limited reach because they take place in state and national political contexts, global markets and wider ecological systems. This implies that community-based sustainable development and co-management of resources are no substitute for environmental planning and regulation at state and international levels. It must be recognized that there is also "community failure" to protect the environment (as there is market failure and state failure). Yet community-based strategies may become an important addition to regulatory and price instruments if synergetic roles of the state, the market and civil society can be identified, defined and utilized.

It would be premature to draw conclusions about the success of the new Kerala model, but this participatory development experiment may well provide more lessons for environmental planners in developing countries. Kerala's attempt to foster environmental awareness through decentralized planning and its performance in developing accountability of local bodies, NGOs and state agencies deserves further research.

NOTES

1. The mainstream concept of sustainable development has been criticized for its preference for reformist technical-economic solutions over more radical, structural and sociopolitical changes (Adams, 1990).
2. Pretty has argued that natural capital and social capital are different than produced and financial capital in the sense that they can increase with use. For example, regenerative technologies in agricultural production strengthen the resource base. Repeated interaction between co-producers build up mutual trust (Pretty, 1998). Similarly, human skills and knowledge are improved through their application.
3. Figures of life expectancy (1992) and infant mortality (1994) according to Sample Registration System Data, Government of India, cited in Drèze and Sen (1995); literacy rate according to 1991 Census, cited in Kerala State Planning Board (1995).
4. Data on per capita SDP by Kerala State Planning Board (1995); growth rate of per capita SDP by Central Statistical Organisation, Government of India, cited in Drèze and Sen (1995).
5. Gulf remittances may be as much as 13–28% of the SDP (Nair & Pillai, 1994; Gulati and Mody, cited in Mohandas, 1994). The remittances during 1975–90 were about two to three times higher than the total plan outlay (government expenditures for new development schemes as formulated in Five-Year Plans) during 1950–90 (Oommen, 1993).
6. Labor militancy was a major problem in the 1970s. As a consequence, many industries shifted production to neighboring states. According to official statistics, incidences of labor disputes have declined considerably since then. In addition, the Communist Party called upon the workers to develop a new work culture, including labor discipline and higher productivity (Heller, 1995).
7. The KSSP has more than 2,100 local units and as many as 65,000 members (cf. Zachariah & Sooryamoorthy, 1994).

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