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DECENTRALIZED ENVIRONMENTAL DECISION MAKING

Abstract

This paper discusses the importance and means of incorporating environmental issues into decentralized decision making processes. Accepting the concept of sustainable development as an underlying framework, it is logical to debate and care for the environment, including the economic role of the environment in life support on local level. Main objective of this paper is to discuss key issues concerning the environment and its relevance to policy decisions on decentralized decision making processes. It argues upon the economic, ecological, and social dimensions of environmental and natural resources, and the need to balance development objectives of different uses and claimants. In the focus of this discussion are two sets of environmental issues: those relating to natural resource use and management; and problems arising from environmental pollution, depletion and degradation. This paper argues that there is need to integrate economic, social and ecological dimensions in development strategies and plans.

The paper reviews various types of linkages and relationships within the environment-economy system. These include the interactions between natural resources and their use for production and consumption, and as waste assimilator; cause and effect relationships linking environmental pressures and societal responses; stakeholder interests and linkages over the micro-macro continuum; and potential conflicts and trade-offs. Implications for decentralized decision making are also discussed.

A key message conveyed is that there is need to integrate economic, social and ecological dimensions in development strategies and plans and to mainstream environment in decentralized decision making within the overall context of local development, rather than treating it merely as an activity of specialized environmental protection agencies.

Key words: environment, natural resources, decentralization, sustainable development

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Introduction

Problems of environment and natural resource degradation are not new, but nowadays they are viewed with increasing concern by policy makers in many parts of the world. By the 1970s main environmental problems were pollution and depletion of natural resources caused with human activities. Afterwards, intense national and international concerns revolved around their integration with the aims of rapid economic growth and development. That resulted in treating environmental issues as a part of the development equation, together with achievements of social and economic goals. Thus, the struggle to resolve environment degradation questions as we know it today, fits perfectly in the concept of sustainable development. This equation is valid for development at any level: international, national, sub-national, but especially so for planning at the local level. An important conclusion of this is that development must be conservation based, and must protect the structure, functions and diversity of the world's natural systems upon which the human species depends. Since the sustainable development motives are particularly relevant to the decentralization context, it is logical to expect that ecological problems will be best solved at local level, with decentralized decision making. In order to clearly point out why and how one should care for the environment, two sets of issues that require policy attention at different administrative and geographic level, needs to be discussed and distinguished. First issue is related to natural resource use and management, and second to the problems arising from environmental pollution, depletion and degradation. Both issues are of great interest to many stakeholders, so it is important to understand their relationships and linkages, and the need for right institutional choice for management and policy response.

TAXONOMY AND SOCIO-ECONOMIC DIMENSION OF ENVIRONMENTAL ISSUES

When we discuss the role and contribution of environment in sustainable development, it is necessary to first understand the nature of environmental issues. As stated previously, there are two categories of issues¹⁾: those relating to natural and environmental resources, and environmental problems associated with pollution, depletion and degradation of these resources, each one with its own specific characteristics as well as management and policy implications. Namely, critical issue relating to the natural and environmental resources is how to manage them in ecologically sound manner, which in a same time meets the criteria of economic efficiency and social acceptability.

¹⁾ FAO: EASYPol: Economic Rationale in Caring for the Environment, on-line resource materials for policy making, FAO, Rome, Italy, 2008, p. 7.

Natural and environmental resources are all physical (soil, water, animals, minerals), gaseous (oxygen, helium, hydrogen) and abstract (solar and wind energy, landscape) elements available in the nature that are or can be used in the economic system. There are renewable and non-renewable natural and environmental resources. Renewable resources are reproducible and with management practice for their optimal rate of extraction, they could be maintained perpetually. An important aspect of renewable resources is their conditional or non-conditional renewability. The former could be renewed only subject to certain biological (plants animals, entire ecosystems) or non-biological (e.g. water, oxygen, soil nutrients) processes taking place, and could be depleted through poor management. Non-conditional renewable resources are generally non-living flow resources like solar, wave or wind energy that in principle are inexhaustible. Non-renewable resources cannot be regenerated, or their regeneration is very slow and without a significant increase of the resources stock in foreseeable time. Non-renewable resources can further be split into recyclable and non-recyclable. Recyclable ones do not lose their properties when they are used in economic processes and can be reused, while non-recyclable resources once used, are no more available for future use. Management challenge to be met in exploiting non-renewable natural resources is their substitution with renewable resources and determination of the efficient amount of recycling.

Environmental problems are in fact the negative impacts of human activities on environmental resources. In order to adopt most appropriate policy measures and management practices, as well as the most suitable institutional arrangements, it is very important to clearly identify and classify them. Most frequent forms of environmental problems are pollution, depletion and/or degradation of water, air and soil, demonstrated in global, as well as national and local dimensions. When source of the negative impact can be identified, and accordingly the area of damages is limited, we have point pollution. Non-point pollution happens when the sources of emission cannot be identified and affected area is extended. Emitted pollutants can be absorbed (stock pollution) or accumulated (fund pollution) by the environment.

Environmental and natural resources interacts with socio-economic system through tree main functions²⁾: supply of raw materials; sink for waste and provide direct utility to people, and thus create a base for life support and welfare. As already seen, both renewable and non-renewable natural resources are limited and they cannot perform their functions, unless managed properly. This relationship perhaps is best illustrated by the following “The bank (environment) is filled with limited amounts of renewable and non-renewable natural assets or capital. Through bank operations, the capital generates interest. An environmentally sustainable society protects the renew-

²⁾ Daly, H. E.: Sustainable Development: From Conceptual Theory Towards Operational Principles, Population and Development Review, 1991, p 25.

able capital, lives-off the interest, and uses the non-renewable capital wisely. In this way massive debt is avoided and the ecosystems are kept running³⁾.

There are various conceptual standpoints used to better understand these cause-effect linkages between human socio-economic activities and environment. First institution to address these issues is OECD that promoted the **pressure-state-response (P-S-R)** framework⁴⁾. In this framework human activities are the **pressure** on the environment, which induce changes to the **state** of the environment, accompanied with certain bio-physical or socio-economic impacts. The **response** in form of policies, programmes or other actions comes from the society (government or communities themselves) and the main objective is to mitigate pressures and/or environmental damage. Being that in response stage many different stakeholders are taking part, it is very important to determine the actual response, the appropriate level of decision making and acting, as well as individual roles and responsibilities.

The P-S-R framework actually reveals the multiplicity of socio-economic interactions with environment and need to address them at various levels of the system. Namely, pressure part of this framework is not a unitary process, and it can take place amongst many individuals and groups, in different locations, and at various time frames. Respectively, the state part can happen on-site of a particular pressure or in areas further away. The appropriate response to it, in form of decisions of local, regional and central governments and authorities will affect how individuals use natural resources in relation to production and consumption requirements. The P-S-R pattern demonstrates that micro level decision and actions have significance in wider society (meso and macro level), and vice-versa. Thus, the P-S-R framework will demonstrate its full capacity only if perceived as an integral part of the micro-macro continuum.

Multiplicity and inter-linkages between human socio-economic activities and environment involve many stakeholders, with various interests, and thus can produce many conflicts. Real or perceived opportunity to win or lose, pose potential disputes between different stakeholders over the use of a resource. At the same time, decisions on the use of a resource, whilst giving benefits of one kind, may result in a sacrifice or trade-off in other objectives. In the already mentioned micro-macro continuum both gains and losses have to be addressed at various levels of the economic and administrative system. Only win-win solutions for all parties involved will contribute to sustainable development⁵⁾.

³⁾ Markandya, A., Harou, P., Bellu, L.G., Cistulli, V.: *Environmental Economics for Sustainable Growth: A Handbook for Practitioners*. The World Bank, Edward Elgar, Cheltenham, UK, 2002.

⁴⁾ OECD: *Project and Policy Appraisal: Integrating Economics and Environment*, Paris, France, 1994, p. 41.

⁵⁾ IUCN/UNEP/WWF: *Caring for the Earth: A Strategy for Sustainable Living*, Gland, Switzerland, 1991 p.25-31.

DECENTRALIZATION AND ENVIRONMENTAL ISSUES

As for many other questions of public interest, first official responses to environmental issues were formulated at central level, mostly in form of controls and regulations. The experiences of limited success, followed by increased environmental problems, impose the need to broaden up the front, to mobilize participatory and locally based methods of environmental protection. This approach proved to be more effective basically for two major reasons: in a national context, it is supportive and complementary to the decentralization process, and at local levels it encourages participation and thus enhances democratization of the society. Additionally, there are many positive aspects from decentralized environmental decision making, among which the most obvious include⁶⁾:

- Local institutions and people have a better knowledge of environmental and socio-economic problems and potentials of the area, and are best placed to protect and enhance the environment if they are given clear rights (and obligations) with regard to natural resources.
- Assigning greater degree of responsibility in decision making will be accompanied by better motivation for a more efficient use of natural resources.
- It is more likely to involve less favored groups and populations in decision-making.
- It facilitates local participation due to greater homogeneity of common needs with lower sizes of population, and more transparency in decision-making processes.
- It allows building of local capacities for the provision of services that are more consistent with local requirements.

However, we must underline that not all environmental related decisions can be decentralized. As already elaborated, natural resources and environmental issues are complex and above all context specific, so careful analysis of all physical and institutional factors is required before deciding where and by whom they are best addressed.

ENVIRONMENT IN DECENTRALIZED DECISION MAKING

Efforts made to mainstream environment into decentralized decision making can be supported by taking into consideration several important aspects. First of all, current institutional and administrative setting for environmental questions needs to be revised and actual weaknesses must be recognised. It is true that many countries have

⁶⁾ FAO: EASYPol: Environment in Decentralized Decision Making, on-line resource materials for policy making, FAO, Rome, Italy, 2009, p. 10.

national strategies, action plans, administrative procedures and legislations, governmental ministers or departments for environment protection and managements, but it is also true that many times they failed to deal with environmental problems. Major reason is because they are generally focused on point-source pollution and large investments, while non-point source pollution, caused by large numbers of small-scale enterprises and/or individuals, are less well articulated. For developing countries, additional burden is lack of financial and technical resources.

For a successful decentralized environmental decision making, substantive participation of key stakeholders needs to be ensured. The idea is to enhance partnership between political entities and community organizations and businesses and to give them power to influence things. This is actually a practical expression of decentralization and will help to organize many environmental issues with respect to a range of policy formulation, fiscal, planning, administrative control and regulatory functions.

As indicated before, not all environmental issues can be addressed at the community or local levels, especially where problems of externalities, conflicts and trade-offs are involved. Thus, choosing the appropriate level and institutional form to deal with various kinds of issues is of crucial importance. Considering the nature of ecological factors, differences and specifics of geographical areas are guiding principle for institutional arrangements and policy measures and/or instruments. Although there isn't a single type of institutional arrangement that will suit all situations, yet some general rules that may be used as a guide for deciding which type of stakeholders i.e. private and civil society organizations or institutions at central government or sub-national/local government levels are most suitable for environmental decisions⁷⁾:

Private or civil society organizations such as farmers associations, private entrepreneurs and NGOs are better suited when:

- Only a few parties are involved;
- Negotiation costs are low;
- The “producer” of the externality is aware of and informed about the effects;
- The cause and the effects of the externality take place in the same geographical area (local government, community) or very near the source; and
- Property rights are defined or can be easily defined.

Government institutions at central or sub-national levels can be considered if:

- Number of parties involved and conflicting interests are high;
- Geographical distance between the parties is large;
- Transaction costs are high;

⁷⁾ FAO: EASYPol: Environment in Decentralized Decision Making, on-line resource materials for policy making, FAO, Rome, Italy, 2009, p. 16.

- Negotiations between the parties cannot achieve important social, political, and moral goals;
- Property rights are not defined clearly;
- The scale and timeline of environmental problems cannot be addressed by individuals or private organizations;

Already mentioned micro-macro continuum opens many possibilities to incorporate environmental issues into decentralized decision making, at various points. When, by whom and how it will be done primarily depends on the level to which planning and management functions have been decentralized and the type of adopted participatory processes.

Last, but not least, in decentralized environmental decision making, much needs to be done in capacities building, especially in developing world. This refers not only to institutional capacities for designing and implementing environmental plans and procedures, but also to learning and adopting appropriate technical skills and knowledge in environmental economics and natural resources management, and above all, attitudes on environmental issues overall.

CONCLUSIONS

An important challenge for policy makers, managers and individuals in general is to first understand economic, social and ecological implications of environmental issue, and to find practical ways of balancing these. Given the nature of natural and environmental resources i.e. location specific, with multiple stakeholders at various levels, it is obvious that environmental initiatives are consistent with, and complementary to decentralization processes and both areal as well as functional delegation of power and responsibility may be implicate. But whilst local initiatives could make useful contributions to environmental management or protection, they do not on their own signify a wider process of decentralization. For greater success, a more substantive institutionalized process of decentralization in various political, administrative and fiscal aspects is required.

Ideal decision making framework for environmental issues should be dynamic, inclusive of major stakeholders at various stages of the process, integrative of other social and economic criteria, and characterized by effective communication and capacity building elements. If such a framework is absent, even its development and adoption is itself an important goal of environmental decision making, and of the decentralization process itself.

There is generally limited capacity to support and foster decentralized development processes across much of the developing world, although notable progress has been made in recent years. Additionally, there is evident lack of awareness and appreciation of the economic and social significance of caring for the environment, and the potential contribution of decentralized approaches to sustainable natural environment

management. Also, greater effort is needed in the areas of skill training, institutional strengthening, and mutual learning. This includes the assembling of scientific information, building upon local knowledge systems on the environment, and communication of such information to development professionals, agricultural technicians and the public at large.

Another crucial factor for fostering decentralized environmental decision making and sustainable development in general is awareness and positive attitude on environmental issues. To adopt the ethic for living environmentally friendly and sustainably, people must re-examine their values and alter their mindset of “it’s alright as long as it is not in my own backyard”. In a same time, society and local communities must promote care for the environment and encourage sustainable way of life.

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