FINANCING ENVIRONMENTAL POLICIES IN DEVELOPING COUNTRIES

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ABSTRACT

Especially in developing countries, in order to implement internal environment policies new and additional financial resources and new financing mechanisms are needed. Among alternative mechanisms of financing of environmental projects, probably the most practical and convenient design would be to establish a sufficiently supplied earmarked "fund", administered by the central environmental authority. Instead of trying to increase the revenues allocated to the funds within the public budget, on the other hand, monitoring of the flow of extra budgetary revenues based on PPP and UPP principles appears to be more realistic attitude. In other words, an environmental protection fund should be suitable to lean upon fines, tariffs, and upon the shares procured from income and property taxes, in compliance with the "the polluter pays" "user pays" principles.

I) The Problem

The future course of environmental management is increasingly being viewed in the context of "sustainable systems." Such systems must exhibit sufficient institutional, technical, managerial and financial capacity to prosper and endure. The question of how to pay for -or how to sustainably finance- the continuing demands for pollution prevention and ecosystem protection, therefore, notably in developing countries, becoming increasingly important.

The economies and financing systems of developing countries are evolving and so too are the opportunities for them to finance environmental protection activities. Countries which have progressed better in economic development are beginning to make greater use of financing mechanisms commonly used in more developed countries for the support of environmental investments, such as loans, bonds, equity investments, public-private partnerships and user fees. While significant obstacles and reluctance still

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remain, the commercial banking sectors of some countries are becoming more active in the environmental sector by offering loans for commercially viable projects. Municipal bonds have been issued by some cities to finance environmental services. Early steps are being taken with the use of "green" equity to generate financing for environmentally beneficial investments at the enterprise and municipal level. Various types of public-private partnerships, including "build-operate-transfer" schemes are being explored to finance projects. Increasingly, polluter/user fees, in addition to environmental taxes and charges, are being levied to finance environmental protection activities and they underpin many of the public sector investments in this sector.

In majority of the cases, however, the "ability to pay" for environmental protection in developing countries is exceeded by the financing needs. Therefore, for some sorts of projects, and in some countries, subsidized financing from institutions such as the central governments, environmental funds, bilateral donors or international development banks will remain necessary. Relying significantly on international or external sources, on the other hand, is clearly not sustainable and there will need to be greater reliance on domestic sources.

In order to implement internal environmental policies and generate new and additional financial resources, there are many good reasons for increased application of economic instruments and more market-based environmental finance mechanisms in environmental policies. In majority of the situations, economic instruments can advance sustainable development by playing an important role to help in achieving policy goals in a more cost-effective way than traditional command and control instruments; implement the Polluter Pays Principle; improve the integration of environmental policies with other sectoral policies such as industry, energy, transport and agriculture; provide direct incentives to the originator of pollution to reduce polluting activities by investing in environmental projects while leaving the flexibility to the polluter on which abatement measures to take; generate important revenues to finance public environmental investment programs.

The so-called "assemblage of economic instruments" encompasses a wide range of policy measures including: pollution/emission/product charges, natural resource extraction charges, subsidies beneficial or detrimental to the environment, deposit refund schemes, user charges, tradable permits and ecotaxes. In best part of the countries economic instruments can play an important role in environmental policy by providing incentives for behavioral change that reduce environmental damage; generating revenues that can be used

to finance environmental spending and investments; supporting the sustainable development efforts by shifting supplementary resources more smoothly toward environmentally sound activities.

The policy makers of the developing countries will need to pay more attention to the policy framework for environmental funding and finance. The Polluter-Pays and User-Pays principles -where the polluting party or user pays for the damage done to or used natural environment- need to be more firmly established as the basis for an environmental finance strategy. This implies stricter enforcement of environmental measures, greater reliance on user fees as well as a more limited and strategic role for public budgets at national and local levels.

Availability of financial resources for environmental purposes, on the other hand, is not always or necessarily the main bottleneck. Mechanisms -like earmarked funding- to link supply and demand, and the costs and conditions associated with finance are at least as important as supply mechanisms per se. In other words, environmental investments are one of three key priorities, along with policy reform and institutional strengthening for improving environmental protection in developing countries.

II) Development and Environment Conflict?

Attempts to integrate the concept of sustainable development into functional decision making practice in developing countries raise the issue of the conflict between the claims of economic development and environmental preservation. In general, economic development is understood as achieving higher rates of economic growth, and, in this sense accepted as the social necessity and, continues to be the primary objective of the national policy making process.

Development is a value word, implying change that is desirable, and there is no consensus as to its meaning. Economic growth, on the other hand, is a well defined, measurable, and, -as increases in real per capita income- properly understood notion. Consequently, for policy makers- and, also for the most of the economic advisers- of the developing countries, economic growth defines development, and, development cannot be defined without growth. It should also be restated that, economic growth, for the policy makers and economists of the developing countries, and also for the economic development theory- is

synonymous to industrialization.

The main task of the economic institutions and/or policy makers of developing countries are to procure necessary resources in order to realize economic purposes cumulated on their priorities list, and, more importantly, to allocate restricted resources among alternative investment priorities. Resources assigned to development targets, on the other hand, should be allocated among alternative activities in accordance with the economic efficiency principle.

These observations clearly explain the reasons why environmental objectives and environmental spending -allocation of scarce resources to environmental projects instead of industrialization projects- could not climb upwards within the priorities list of the policy makers of developing countries.

Accelerated economic growth, has, increasingly, been conceived as being constrained by environmental reasons. The discussions of environmental issues were, constantly, concerned with the environment as a source of physical inputs into the productive system, and with the limits posed by natural resource scarcities and loses on the capacity of the system to grow fast enough. Continuing and intensifying trends, recently, expanded the development/ environment discussion to include other aspects of environment as well. Rapid population growth, urbanization, industrialization, tourism and the intensifying of agriculture have caused serious environmental degradation, as evidenced by increasing air pollution, water resource quality deterioration including pollution of rivers, lakes and seas, area contamination from municipal solid waste and hazardous waste, losses of wetlands, soil erosion and sedimentation.

It was the attempt to reconcile the conflicting claims of rapid economic growth and preservation of the environment that led the concept of sustainable development to originate. It is anticipated that sustainable development in the sense of harmonizing today's needs with those of tomorrow is possible, provided that fundamental changes are made in the way in which nations manage today's world economy. The emphasis on sustainability implies a greater concern for the future and for the inhabitants of the future than has characterized various models of economic development process. In other words, established theories of economic development seem to implicitly assume that the "future will look after itself". In reality the sustainable development approach acknowledges that the ability of the future to look after itself can be seriously impaired by actions taken now. In this sense, sustainable development does not give greater weight to the

future than other development approaches. It simply points out that the factual assumption that the future generations would be able to choose as freely as a past or current generation is not likely to be correct. The policy maker of the developing country, -even he might feel or believe otherwise- understandably, tries to find his path within these theoretical approaches of growth and industrialization, whose success is reliably demonstrated by the past experiences especially of the so-called developed countries.

The policy maker of the developing country, like Turkey or Turkish Republic of Northern Cyprus, -even he advocates the opposing view- thus, conceives environment as a long-term objective and does not feel himself in the position of incorporating environmental targets into macro policy making process. On the other hand, evidence, as mentioned before, is constantly growing, that developing countries are becoming increasingly attuned to the need for ecology restoration and for finding ways to redraft their policies so as to minimize environmental degradation.

Transactions of goods and factors among individuals, households and groups are not realized only, through channels of established and well defined markets. There are various and numerous resource allocation mechanisms beyond the markets. It should be accepted, on the other hand, that, "economic efficiency" defined in a narrow sense by the orthodox economic theory, is only another one of many decidedly established purposes defining the functioning of the modern economic and social system. Care should be taken to the emphasis that in these crucial points new assessments are needed in order to understand and solve the ecological problems. This necessity particularly appears in a striking manner in societies whose foremost social aims are development and growth.

In other words, although it does not seem quite probable to implant environmental variables into overall economic policy making or planning practice for the time being, some short to medium term targets and projects to achieve those targets should be introduced. Within the framework of our discussion on the issue of the conflict between the resource claims of economic growth and environmental preservation, to establish a new mechanism for financing high priority environmental investments appears as achievable and as a primary condition for the realization of such an approach.

Throughout the world, authorities responsible for enforcing environmental regulations and promoting compliance with environmental

requirements, on the other hand, are operating in the context of financial constraints. Such constraints can be a consequence of the general pressures on the state budgets or the changes in government policies, which may result in shifting the resources to address short-term priority problems away from environmental protection. Very often, environmental policy makers are required to maintain, or even achieve higher performance with fewer resources.

A stronger focus on environmental policy implementation has increased pressures on environmental authorities for additional activities in order to maintain a better environment and to ensure higher compliance with environmental laws and regulations. However, these pressures, as mentioned above, have not always been accompanied by allocation of adequate resources. With the same, or sometimes fewer resources, authorities are required to sustain and even increase their performance, but if the budgetary cuts are severe they face the threat of compromising credibility, coherence, effectiveness, and fairness of government enforcement actions. As such concerns are now voiced more often, in particular in the developing countries, the need has arisen to identify and apply approaches in order to better allocate resources available and identify the optimal ways for their management, which includes reducing demand for additional funds (by carrying out tasks more efficiently, redistribution of burdens, outsourcing). As stressed before, seeking additional sources of funding that can offset budgetary cuts and better funding mechanisms may be necessary, especially in the short and medium term.

In order to achieve better results, the following key issues should primarily be analyzed:

- Existing funding needs and funding patterns of environmental authorities;
- Budget management, including general approaches to cost estimation, funds allocation, and funds management; and
- Addressing funding gaps that occur between the assigned responsibilities, needs, and resources available.

III) Allocated Financing for Environmental Spending

Among alternative mechanisms of financing of environmental projects, probably the most practical and convenient design would be to establish a sufficiently supplied earmarked “fund”, administered by the central environmental authority.

Environmental funds are quasi-independent or independent institutions, having been created on initiative of Ministries of Environment for the purposes of providing additional, ear-marked finance for the support of environmental protection activities. Such funds exist, or are in the process of being formed, in most countries. The funds typically receive revenues from pollution charges and fines, environmental taxes, product charges and other fees on the use of natural resources and the environment. The funds then use these resources to support environmentally beneficial activities, such as investments in pollution control and prevention technology, environmental education, and the establishment of environmental monitoring systems. The financial support provided by the funds is disbursed in various forms, most commonly as grants and soft loans.

As a rule, during the efforts of preserving natural resource stock and in the prohibition of environmental pollution demeanors, which are mostly local in character, and in the elimination of their effects, the major financial contribution should be obtained from those polluting the environment and those using the resources. In other words, the "polluter pays" and "user pays" rules must outline the basis for allocated environmental financing.

In this way, the individuals and organizations not related with environmental pollution and destruction would not be in the position of financing the environmental expenses with income and/or wealth taxes. On the other hand, although the regular resources of general or annexed budgets, again as a rule, should not be totally leaned upon to subsidize the environment fund, the environmental use of resources allocated from income and/or wealth taxes, kept at a reasonable level, should be considered acceptable. After all, every citizen, who is in favor of a decent and healthy environment, must be conscious that it can only be obtained through a price.

A fund, as accepted in the public finance literature, means resources allocated to the accomplishment of a definite task (or a composition of interrelated tasks).

Funds can undergo different classifications. The first method of classification rests on the intra/extra budgetary differentiation. Intra budgetary funds are sustained totally by budgetary means with the authorization of the administration to decide on the spending of the accumulated means among different causes. It is possible to define these not as funds but as some sort of special accounts. The difference between extra budgetary funds and intra

budgetary funds is the plausibility of the spending of the fund revenues of the former, according to its own regulations, disregarding the Budget Law and other general financial regulations. Extra budgetary funds can be financed through the allotments obtained from traditional and identified sources straight through the general budget, but those funds can, also, mobilize unique resources, converting them to public revenue.

The arguments generally advocated in reasoning the creation of extra budget venture funds can be listed as follows:
(i) The necessity to decide and act rapidly as is required by extraordinary public services.
(ii) Spending through easy and reduced formalities.
(iii) Realization of an effective planning for services with a longer than a year duration and/or with special implications.
(iv) To obtain resources beyond budgetary means in order to improve various operations and sectors and allocate these resources back to those same sectors.

Those observations clearly show that in order to be able to pursue a successful environment policy, within the limitations imposed by the general economic development policy, and especially in the short and medium term, an earmarked fund would prove to be a very convenient financing mechanism.

IV) Targets of Financing by Earmarked Funding

Environmental problems as environmental pollution on one hand and loss of environmental resources on the other, are taking their places in the agendas of all existing societies with greater severity. Nevertheless, placing these problems into a system of modern economic thought is rather new and rudimentary. One of the main barriers precluding the development and application of suitable policies is the gap between the ever increasing importance of the problems and the sensitivity of the public in this subject as opposed to the lack of a systematical approach in economics.

In the development and application of policies “allocation of resources” may be the most important point and as long as the environmental terms do not become a part of our daily economic thought and approaches we shall never be able to observe environmental problems rationally. We must emphasize here that this deficiency is valid not only for developing countries but also for developed countries where the assignment still continues. In other words, every society must be under the challenge of eliminating the lack of theoretical and

systematical approach to the environmental issues to reach urgently to the solutions for the problems faced.

One of the main points of emphasis for both the national environmental policy in a general sense and the administration of the fund allocated to environmental issues must be upon research and education.

Approaching the necessity of research and education which we observe to be one of the inevitable targets of national environmental policy and earmarked environmental fund administration, as a single project with two sides may be feasible. The approach of the central environmental administration to the subject in the frame of a single project will facilitate in subjects like medium or long range planning, cooperation with related organizations, enlisting coordination, monitoring and evaluation. One component of this project will consist of efforts in education.

The intention here is a program aimed to wards the administrators of public bodies on one side and educators -especially at the university level- on the other, rather than a general social education. For this purpose, it will be worthwhile to cooperate more closely and systematically with the universities and establish firm relations with international organizations (such as OECD, UNCTAD, UNU/Wider, UNEP, etc.) which are rapidly increasing their efforts towards similar aims.

A series of authoritative research projects, especially upon "environmental economics" and national development-ecology relations have to be planned and carried out within a very short period. While planning these projects, in order to prevent loss of time and resources, priorities as brought forward by policy requirements, and feasibility, in relation to the existing conditions has to be taken into account. To avoid repetitions that will cause loss of time it will be worthwhile to bear in mind that some very rapid and fertile developments in the use of various tools (such as social cost-benefit analyses) have taken place in the international field and some organizations (such as The World Bank, UNU) have launched research programs on ecological problems. Subjects like, "ecological resource degradation accounting", "ecological resources management and decision making under conditions of uncertainty", "management of common property resources", "macro economic effects of ecological policies", "evaluation of technological externalities", "problems of urban pollution", "ecological effects of sectoral structural change, especially agricultural development", "microeconomic behavioral patterns" may be conceptualized as

important research subjects to contribute to the accumulation of knowledge in the development of an environmental policy.

Dynamic and rapidly changing nature of the environmental problems discourages the accumulation of a wide, detailed and active inventory of projects, even in the advanced countries. Nevertheless, central environmental administration of an advanced country can predict such an inventory as far as approximate number of projects and probable financial needs are concerned. In a country which is at the early stage of determining the critical environmental problems, backwardness at, both, feasibility and engineering levels, represses the efforts to determine the resource needs and establish quantitative targets. At this point, it may be convenient to refer to other countries experiences and to try to set targets by "analogy". It will be beneficial to determine a "rate of environmental expenditures" at initial stages. Such a rate will enable us to gain an understanding on the amount of required resources, and take measures to prevent selected projects to enter a financial bottleneck.

Within this framework a list of areas of environmental spending can be introduced as follows:

- Research and educational activities to prevent environmental pollution and natural resource loss.
- Environmental hygiene.
- Personnel education.
- Purchase of technology and projects.
- Crediting individuals and companies for plant and infrastructure construction and repair, sanitation and personnel education.
- Purchase, care, construction and repairing of tools and vehicles utilized in preventing environmental pollution.
- Foresting.
- Upgrade breeds of flora and fauna.
- Environmental design.

V) Internal Sources of Allocated Financing

As mentioned above, the efforts to divert funds from distinguished public revenues which initially accumulate in the public budget, to environmental purposes, are expected to be fruitless or at least unyielding in the near future due to the strains the budgets has to encounter. Therefore, instead of trying to increase the revenues allocated to funds within the public budget, persistent

monitoring of the flow of extra budgetary revenues to the funds and an efficient revenue collection appears to be a more realistic attitude.

An environmental protection fund aims to finance the policies and projects to eliminate pollution, and to protect natural and cultural resources. Therefore, as stated before, it should be suitable to lean the fund upon fines, tariffs, and, upon the shares procured from income and property taxes, in compliance with the "the polluter pays" "user pays" principles.

Environmental protection and improvement efforts can be financed through three main sources:
(I) Charges and fines to be obtained in accordance with the rule of "the polluter pays". Pollution fines and pollution permit fees that usually are called as "shares" are examples of these revenues. We can (with a little bit of imagination) think of the fee obtained from the technical inspections of motor vehicles to be in this category and reason it as a permit to release pollutants to the air within specified limits.

(II) Amounts paid by the users of natural, historical and cultural resources in accordance with the "user pays" rule against the actual or potential loss of these resources. Yacht harboring fees and rents and revenues obtained operations in environmentally sensitive areas could be listed as examples.

(III) Income and wealth taxes. If a tradeoff is considered for the consumer between the protection of natural and/or historical wealth and the private wealth, the choice of a wealth tax schedule as a tool of financing may be considered appropriate. On the other hand, the difference between minimum unconditionally applicable environmental standards and anticipated environmental standards can be associated with income; it is proper to expect the households to demand an environment of a higher quality as their incomes rise. We can include taxes obtained from functions rising proportionally with income (such as motor vehicle purchase tax) to this category. In other words, it may be possible to defend the expectations of the anticipated environment fund upon added taxes loaded on property and income taxes from the viewpoint of economic theory. It may be plausible to pick a property tax share as a device of finance if, for the consumer, a trade between protecting natural and historical wealth and maintaining private wealth is preferred. Also the difference between the minimum ecological standards compulsory for social and individual health and welfare and the targeted ecological standards can be associated with income. It will not be too erroneous to presume that as their incomes increase the

households will demand an environment of a higher quality and will agree to depart from their incomes in order to "consume" more of this "public good."

VI) External Sources of Allocated Financing

The developing economies are expected to establish and continue to maintain a policy framework that would effectively support their development program. Since this cannot involve the curtailment of present consumption levels which are usually at an irreducible minimum, a substantial number of these countries are in need of foreign aid support or foreign capital transfers in order to support conventional domestic resources to continue their economic growth programs. Aid support and capital transfers are especially important for countries which are, also, in a position of continuing stabilization policies aimed at stopping hyperinflation.

Against this background, it will be quite reasonable to state that the developing countries are not in a state of expanding domestic savings sufficiently to meet the financial needs of expensive environmental programs. Therefore, international cooperation, especially support from developed countries and concerned international institutions, is a very important component of furthering developing countries environmental projects. In other words, availability of finance is a necessary condition.

Availability of financial support is a necessary but not a sufficient condition for promoting environmental preservation programs. There also exist critical bottlenecks in the areas of technology, management and organization, and, international cooperation is, also, critically needed in those domains.

For implementing the kind of global transformation entailed in environmental preservation, and, recycling of developed country surpluses it is argued that international developments, especially the a climate of detente and disarmament will result a substantial release in developed countries savings, which in turn will facilitate more convenient conditions for international cooperation, and, more specifically, recycling to developing countries.

Conclusion

Although the environmental movement has achieved many successes, the public still bears most of the cost of environmental degradation. Regulations and certain legal measures have been effective to a point, yet are not comprehensive

enough to deal with the overall threats to the environment and their impact on our health. Often specific corporate and other institutional interests, rather than environmental needs, prevail in environmental policies. Without sufficient countervailing forces, the increase in such influences on decision-makers and public policy can lead to the undermining of the environment. The Environment program's accountability approach will therefore seek to address the root causes of environmental degradation.

Specifically for countries like Turkey and Turkish Republic of Northern Cyprus, it should be acknowledged that a better environment (and also EU accession) will demand massive investments, far exceeding current levels of environmental expenditures. The main challenges here, therefore, will be to ensure the necessary project preparation capacities at all levels as well as to further develop the policy and institutional frameworks needed to raise and mobilize necessary funds, use these funds effectively and spend funds according to priorities.

Additional environmental financing, on the other hand, must come primarily from domestic sources. Economic instruments should play a more important role here in terms of motivating polluters to reduce pollution at their own cost (the polluter-pays principle), as well as promoting sustainable development, integrating environmental concerns into sectoral policies and raising revenue for public and private financing.

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