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**SUSTAINABLE DEVELOPMENT, POVERTY  
REDUCTION, AND AGRICULTURAL SECTOR  
PRIVATIZATION IN THE DEVELOPING  
WORLD: WHETHER THE COMPLEMENTARITY?**

By

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## ABSTRACT

### SUSTAINABLE DEVELOPMENT, POVERTY REDUCTION, AND AGRICULTURAL SECTOR PRIVATIZATION IN THE DEVELOPING WORLD: WHETHER THE COMPLEMENTARITY?

Carlton G. Davis

The conceptual and operational dimensions of sustainable development, poverty reduction, and privatization strategies have recently emerged on the world scene as central issues in the debate on lesser developed countries' (LDCs) development prospects for the twenty first century and beyond. The paper seeks to clarify conceptually, the nature of the economic relationships between and among the three strategies, relative to explicit or implicit development objectives. Attention is focused on three economic elements of the strategies-economic growth, equity improvement, and environmental assets - particularly as these elements might converge or diverge with respect to development objectives.

The paper concludes that economic growth, equity improvement, and environmental quality parameters do not *necessarily* move in lock-step with each other. By extension, neither do sustainable development, poverty reduction, and privatization strategies. Privatization can be a powerful vehicle for generating high economic growth rates. High and sustained economic growth rates are the *conduits* for attaining complementarity among economic growth, equity improvement, and an environmental quality objectives. However, the sources and patterns of economic growth factors resulting from privatization activities can cause non-complementary effects among the welfare enhancing elements of the three strategies. The major determinants of non-complementary forces associated with growth are market and or policy failures and the orientation of the technological practices.

**Key words:** Sustainable agricultural development, poverty, environmental assets, privatization, economic growth, market and policy failures.

# **SUSTAINABLE DEVELOPMENT, POVERTY REDUCTION, AND AGRICULTURAL SECTOR PRIVATIZATION IN THE DEVELOPING WORLD: WHETHER THE COMPLEMENTARITY?**

Carlton G. Davis\*

The conceptual and operational dimensions of sustainable development, poverty eradication, and privatization strategies have recently emerged on the world scene as central issues in the debate on lesser developed countries' (LDCs) development prospects for the twenty first century and beyond. The sustainable development and privatization issues are of a somewhat more recent vintage than the perennial debate regarding rural poverty trends in LDCs. The publication of the so-called Brundtland Report in 1987 (World Commission on Environment and Development) is generally credited with the first globally articulated arguments relating to sustainable development issues. The 1992 United Nations Conference on Environment and Development (Earth Summit) was the most recent culmination of global dialogue on the issues. The bases of these arguments are deeply embedded in the increasingly popular contemporary "Biospheric World View" of man-nature interactions. Such a view recognizes two basic laws of thermodynamics (the Law of Conservation of Energy and the Entrophy Law) as dictating the nature of the global relationship between the socioeconomic system and the ecological system. Such a relationship, it is argued, stands in stark contract to the neoclassical economic paradigm, which places the ecosystem within the context of the economy, as contrasted with the biospheric paradigm, which places the economy within the context of the ecosystem (Daly). The essence

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of the diverging paradigms with respect to the economic *cum* ecosystem relationship is captured in the statement, "the ecosystem contains the economy to which it supplies a throughput of matter-energy taken from *in natura* uses according to some rule of sustainable yield rather than according to individual willingness to pay" (Daly, p.187).

The current and seemingly pervasive interest in, and the mandating by development assistance agencies of privatization as a development strategy in LDCs, are primarily phenomena of the late 1970s and early 1980s (Cowan). Privatization as a development strategy is one involving the transfer of function, activity or organization from the public sector to the private sector of developing economies. Such a strategy emerged in large part, from a near-consensus conclusion among development agencies and donor organizations that growth and development inertness are intrinsic to public sector-based activities. As such, it is argued that in their quest for growth and development, LDCs must work proactively to place the so-called "commanding heights" of the economy into the hands of the private sector, with the public sector relegated to the setting of the policy framework and the environment, such that market forces can function.

This paper examines some of the conceptual dimensions of the sustainability, poverty reduction, and privatization issues relating to developing countries' agricultural sector. The examination seeks to clarify conceptually the nature of the economic relationships between and among the three strategies, relative to explicit or implicit development objectives. The paper is organized into three parts. The first section discusses definitional aspects of the concepts of sustainable agricultural development, poverty status, and privatization. The second section looks at three economic elements of the strategies-economic growth, distribution or equity, and

environmental assets or natural capital stocks - particularly as these elements might converge or diverge with respect to development objectives. Section three presents some concluding statements and explores some of the implications for developing countries that flow from the nature of the interactions among the three strategies.

## **DEFINING SUSTAINABLE DEVELOPMENT, POVERTY STATUS, AND PRIVATIZATION**

### **Sustainable Agricultural Development**

Sustainable agricultural development is one dimension of the general concept of sustainable development. The Brundtland Report spells out the conceptual interdependence between the socioeconomic system on one hand, and the ecosystem on the other hand, which forms the basis of the contemporary Biospheric View of sustainable development. Such a view holds that the socioeconomic system is linked to the global ecosystem via a series of interdependent biospheric subsystems, including land, water, atmosphere, flora and fauna. Specifically, the report defines sustainable development as, "development that meets the need of the present without compromising the ability of future generations to meet their own needs." The report further develops the argument that sustainable development involves a process of change rather than a fixed state of harmony. Within this change process, human activities and organizations governing the exploitation of resources, direction of investment, orientation of technological development and institutional changes, are made consistent with future as well as present needs. The Food and Agriculture Organization (p. 3). defines sustainable development as, "the management and conservation of the natural resource base, and the orientation of

technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations."

In recent years, significant elaboration and extension have been made to the concept of sustainable development. The contemporary definitions of the concept differentiates between qualitative development and quantitative growth or "scale" dimensions. Furthermore, it is explicitly argued that the growth process can be constrained by the capacity of the ecosystem to regenerate and absorb throughputs (Daly and Cobb; Goodland and Ledec). The conventional economic concepts of growth and development are subsumed in the concept of sustainable development, but they do not define the boundary of the concept. Economists define economic growth as change over time in real GNP per capita, real productivity per capita, or real consumption per capita. Development is conventionally defined as, "a vector (D) of desirable social objectives, that is a list of attributes which society seeks to achieve or maximize" (Pearce, Barbier and Markandya, p. 2).

Economic growth would be one element of the vector (D), but other components would include factors such as improved health and nutritional status, educational achievement, and equitable income distribution, to name a few. The reason why the conventional economic growth and development concepts do not define the boundary of the sustainable development concept is because the concept explicitly requires that any expansion in the vector (D) of desirable social objectives take place within the context of constancy of the natural resource or environmental capital stock. Given these considerations, Davis (1992a, p.8) defines sustainable agricultural development as a process in which the agricultural sector, "is on a trajectory of



receiving increases in desirable social objectives, without consuming such large proportions of the energy of the ecosystem, whereby the ecosystem is unable to regenerate itself."

### **Poverty Status**

The concept of poverty is one which conveys a sense of the degree of individual's or group's command over financial resources. The degree of individual's or group's command over financial resources is viewed primarily as a function of factors including: (1) ownership or access to assets (2) prices for the use or sale of these assets (3) levels of net transfers (money or in-kind) received by individuals or groups and (4) prices that individuals or groups must pay for goods and services consumed (Behrman). The Food and Agriculture Organization (1988, p.7) argues that the socio-psychological concept of "marginality" should be viewed as being congruent to the concept of poverty. The basis of this argument rests on the notion that marginality conveys a sense of poverty status as being cut off from the mainstream of modern life. One tenet that is common to the concept of poverty regardless of geographical orientation, is that of an income level insufficient to meet minimal basic needs. The Food and Agriculture Organization's (1988, p.7) definition of poverty is as good an encapsulation of the sense of the concept as any. That definition is, "the incapacity to become inserted in the socioeconomic environment in a way that continually allows for the satisfaction of basic necessities of life."

Given the intuitive concept of poverty as a lack of sufficient income, a number of operational or statistical indicators have been developed. In many instances there are statistical inconsistencies in these indicators. The problems stemming from the lack of adequate poverty data are well recognized as a major impediment to research-based policy decisions and programs in developing and developed countries. That issue, although important, is not the focus of this



paper. This paper is written, based on the assumption, that the problems of poverty statistics notwithstanding, there is utility in the existing poverty statistics for advancing the development objectives of countries.

The Food and Agriculture Organization (1988) uses the related concepts of destitution and absolute poverty to convey the marginalization effects of poverty. *Destitution* is defined as that income level below which not even a minimum food diet can be purchased. *Absolute poverty* is that income level below which a set of basic necessities cannot be afforded. The World Bank's (1990) *absolute poverty* status indicator appears to define the Food and Agriculture Organization (1988) condition called *destitution*. Absolute poverty status is a condition of those persons with \$U.S. 275 or less per year (1985 prices). It was estimated that in 1985 about 663 million persons worldwide fell into this category. The Bank's *poverty* status indicator seems to define the Food and Agriculture Organization's *absolute poverty* status. This category is defined as a condition of those persons with \$U.S. 375 or less per year (1985 prices). The number of persons estimated to be in this category worldwide in 1985 was about 380 million. The Bank also uses an indicator called *relative poverty* status, which is defined as a condition of those persons earning less than one-third of the national average income of a country. It should be noted that the existing statistical definition of poverty status in the United States was developed in the 1960s and is similarly based on the intuitive concept of poverty as lack of income. The standards vary by family size and are adjusted annually for inflation, as measured by the Consumer Price Index (Sawhill). In 1991, poverty income standards in the United States were \$13,924 or less for a family of four and \$6,932 or less for single individuals.

Poverty status have dynamic and time-dependent components which are important for development policy formulation, and implementation purposes. The various statistical definitions of poverty status can be defined within a time-dependent dimension such as: (1) *chronic poverty* status-inclusive of persons experiencing poverty for most, if not all of their lives and (2) *transient poverty* status-inclusive of persons experiencing poverty during specific periods. *Cyclical poverty* status and *seasonal poverty* status are subcategories of the transient poverty status category. The cyclical category would include persons experiencing poverty status during stages of the life cycle or stages of household development (elderly or children). The seasonal category would include persons experiencing poverty during certain months of the year or during natural disasters (Food and Agriculture Organization, 1988).

### **Privatization**

Privatization as a pervasive development strategy for LDCs, is antithetical to the equally pervasive state owned enterprise (SOE) strategy of the early 1960s to the late 1970s. Privatization as a development strategy is also followed to varying degrees in industrialized countries. State owned enterprises, commonly referred to as public enterprises, are generally defined as revenue-generating entities owned or controlled by the state, inclusive of productive assets as well as assets providing services (Van de Walle). As a development strategy, the process involves the elements described earlier. Specifically, it involves the sale or leasing of assets in which the state has a major interest (Bienen and Waterburg). Privatization activities can involve either or both individual producers or corporate bodies taking over an activity for government that the government engaged in in the past. Some of the specific strategy instruments involved in such a shift would include, among other things: (1) the cessation of

public programs and disengagement of government from specific kinds of responsibilities (2) sales of public assets, including public lands, public infrastructure and public enterprises (3) financing private provision of services through contracting, etc., and (4) deregulating entry into activities that were previously treated as a public monopoly (McDonald). Privatization in the agricultural sector of LDCs is actively being promoted in Asia, Africa, Latin America and the Caribbean. The facts are, however, that privatization plans exceed actual programs in many of the countries embarking on such a path. Nonetheless, the process is underway, and the effects are being felt or will soon be felt.

#### **SOME ECONOMIC DIMENSIONS OF CONVERGENCE AND DIVERGENCE AMONG STRATEGY GOALS**

Issues of agricultural sustainability, rural poverty reduction, and agriculture sector privatization are being debated in the agricultural economics profession (Longworth, Vyas, Davis (a,b), McDonald). Longworth argues that there has been a permanent shift in people's attitudes with respect to sustainability issues. He points out further that while no reasonable person is opposed to the idea in principle, the paradox is that, "in practice, much of modern agricultural output arises from production systems which appear to be unsustainable in the longer run" (p.10). He calls for clarification of the definitional and conceptual issues, as well as of the inter-relationships between economic development and sustainable development issues. Similarly, Vyas (p.2) argues that, "there is a discernable lack of clarity on the nature of inter-relationship between rural poverty and environmental constraints which inhibit sustainable agriculture, and a good deal of confusion on how to tackle them simultaneously". Given the added issues surrounding the privatization debate, the remaining sections of the paper is a modest effort to

conceptually link the economic growth, equity, and environmental assets dimensions of the three strategies, particularly as these dimensions exhibit potential for convergence or divergence.

### **The Growth, Equity, and Environmental Assets Nexus**

A basic premise of this paper is that it might be costly from both a socioeconomic and an ecological point of view to assume that economic growth, equity improvement, and environmental quality parameters move in lock-step with each other. By extension, a corollary argument is made for sustainable agricultural development, rural poverty reduction, and agricultural sector privatization strategies in developing countries; since these strategies are viewed as the process-vehicles for attaining the former. We argue that these elements can, and often do conflict and as such, it is essential to identify areas of potential conflicts.

Traditional theories of economic growth give heavy emphasis to capital accumulation, technological innovation, and human capital formation. The contemporary concept of sustainable agricultural development adds two other dimensions to the evaluation of social welfare gains, and these two dimensions are the basis of the potential for divergence among the three economic elements of concern in this paper. Specifically, the two new dimensions are: (1) assignment of greater weight to the stability characteristic of economic growth overtime, as well as the intergenerational implications of growth and (2) assignment of heavy weight to environmental assets in valuing long-term welfare gains (Longworth). With respect to the first new dimension, sustainable agricultural development dictates a process of economic growth and development, subject to maintenance of the quality of natural resource assets. Simply put, it requires that the next generation inherits a stock of environmental assets no less than the stock inherited by the previous generation. With respect to the second new dimension, it is argued that conventional

national (or economic) accounting indicators of welfare gains do not reflect diminished potential of future production caused by depletion of non-renewable natural resources (Miranda and Muzondo). As such, their indication of economic growth and development are, "illusory, and the prospect it engenders transitory, if the apparent gain in income means a permanent reduction in the stock of environmental assets" (Miranda and Muzondo, p.26). Taking this criticism as a lead, a number of industrialized countries are now establishing natural resource accounting frameworks to supplement economic accounting frameworks.

The two new dimensions of growth and development *cum* environmental sustainability, have direct relevance for the issues surrounding privatization and rural poverty reduction strategies in LDCs. Privatization of the agricultural sector has to do with questions of private ownership, control, organization, and allocation of resources within the prevailing market structure. Privatization subsumes that significant improvements will be forthcoming in the economic efficiency of private sector-driven activities in the agricultural sector. This improved economic efficiency is to be achieved via improved allocative (price) efficiency and productive (technical) efficiency. It should be noted, however, that there is no direct economic linkage between allocative efficiency and the ownership or control of resources. Allocative efficiency demands that factors be combined in the same ratios as their relative prices. However, rather than the ownership or control of resources, it is the *characteristics* of the market and the *public policy framework* which governs how firms go about making their pricing and production decisions (Ghatak and Ingersent).

Issues relating to the characteristics of markets, and the public policy framework are important to the question of the direction of the impacts of privatization strategies in LDCs.

Much of the issues involve market and or policy failures. The welfare implications of market and or policy failures under privatization are real, and could be horrendous for LDCs. Market failure exists when social costs or benefits diverge from private costs or benefits. Policy failure exists when: (1) the public sector fails to redress market failure through legal, regulatory, economic or other means when it is clearly feasible to do so or, (2) when public sector activity magnifies existing market failures (Miranda and Muzondo). The key determinants of potential market and or policy failures that are likely to compromise the convergence of economic growth, equity improvement (poverty reduction) and environmental sustainability under privatization are: (1) the nature of the economic growth path, (2) the level, source, and pattern of agricultural sector productivity and (3) the levels of economic efficiency (technical and allocative) and the avoidance of waste in agricultural resource use. It is imperative that private sector-driven sustainable agricultural development *cum* poverty reduction growth paths, passes through undistorted, competitive, and well-functioning factor and product markets.

The argument has been made that the prevailing configuration of markets and policy regimes under which LDCs operate, result in dissociation between resource scarcity and price, benefits and costs, rights and responsibilities, actions and consequences (Panayotou). LDCs are becoming increasingly cognizant of the signal being sent via the division of world markets into regional trading blocks (EEC, NAFTA) i.e. that their survival in the international market is going to be based largely on increased competitiveness. However, under the configuration of existing markets in many LDCs, many resources might actually be outside the domain of markets. Under these conditions, the market configuration acts as a subsidy by general taxpayers to the excessive use, waste, inefficient allocation, resource depletion and degradation

of these extra-market resources. As such, tax transfers prevent resource prices from rising in line with growing resource scarcity and rising social costs. As such, they dilute the cost of increasing resource scarcity and foster the types of "dissociations" referred above, which are the basis of market and or policy failures.

The tendency of market configuration to generate "dissociations" and hence market and or policy failures, can be compromised by institutional reforms and policy intervention mechanisms (Panayotou). It is within this context that the argument was made that, "A market failure is nothing but a policy failure, one step removed" (Panayotou, p.357). We are in agreement with this argument. As such, the position is taken that whether there is convergence or divergence among the economic growth, equity improvement, and sustainability of environmental assets dimensions under agricultural sector privatization in LDCs, is going to depend to a large extent on: (1) early recognition on the part of LDCs that the state can play a critical role in shaping and directing developmental goals and outcomes via public policy and (2) that public policy as a facilitator of private sector driven welfare gains, is only effective to the extent that associated policy instruments are effective. It is increasingly being recognized that policy failure, like market failure, is essentially microeconomic in nature. As such, they can be effectively addressed via new microeconomic instruments and or recalibration of existing microeconomic instruments (Miranda and Muzondo).

The debate surrounding the convergence-divergence issue among elements of economic growth, equity improvement (poverty reduction), and agro-ecological sustainability in developing countries, was recently captured in the observation that, "Developing of countries that are struggling to escape poverty and meet the growing aspirations of their still-expanding populations



find that concern for sustainability an added burden on what is already a Herculean task" (Panayotou, p.355). In analyzing the growth, equity, sustainability issue, Panayotou comes to the conclusion that sustainable development as a concept implies benefits to both current and future generations. Two key questions regarding the meaning of sustainability served to inform that conclusion. One question is whether sustainability means Spartan living by the current generation of the poor so the next generation of the poor will have a better standard of living, and if that is the case, where is intergenerational justice. The other question is whether sustainability means that future generations should enjoy the same level of poverty as the current generation, and if that is the case, why sustain poverty. The intuitive answers leads Panayotou to conclude that, "It is not simply a matter of temporal tradeoffs and intergenerational transfers" (p.356). The argument is further advanced that poverty reduction (equity improvement) and sustainable development objectives have the potential for convergence as the system moves along a trajectory. It is suggested that sustained economic growth is a key conduit for poverty reduction, and the latter is critical for the attainment of sustainable agricultural development (Panayotou, Vyas). We are in agreement with this argument. As such, we explicitly reject the notion that economic growth as a phenomenon, is congenitally linked to *degradation* of environmental assets. The converse would also hold, that non-growth is congenitally linked to the *preservation* of the quality of environmental assets. Davis (1992 a, b) expanded on and applied similar arguments advanced by Panayotou and Vyas to the situation in the Caribbean. He concluded that it is the *source* and *patterns* of certain factors that accompany either economic growth or non-growth that is the major correlate of decline in environmental assets over time, and that these combined factors reflect either market and or policy failures.

Under agricultural sector privatization strategies, a major source of potential market and or policy failures that might be associated with economic growth is what was referred to earlier as "the level, source, and pattern of agricultural sector productivity." In aggressively pursuing privatization strategies LDCs should recognize that the *orientation* of agricultural technology practices is not *neutral* with respect to economic efficiency. Depending on the stage of modernization of the agricultural sector, the technological package could to varying degrees, affect the technical (productive) efficiency of the agricultural sector in ways that could profoundly impact environmental quality and income distribution. Current agricultural technology practices are heavily oriented toward increases in productivity (in terms of yields) via intensive energy such as chemical fertilizer, pesticides and fungicides. Little attention is given to research on, development of, and the adoption of resource management agricultural technology practices that would generate sustained increases in productivity, with decreasing dependency on chemical energy.

Pomarada Benel argues that commodity-oriented chemical intensive technology attempts to *indirectly* increase the marginal productivity of rural labor by displacement of labor from rural areas. This process is accomplished by the substitution of chemical energy for human energy. Such a technological orientation could increase the incidence of rural poverty, via increased levels of rural unemployment. The point being made, is that greater complementarity among growth, equity, and environmental assets integrity, could be accomplished by conscious public sector-directed policies and programs (with private sector support) which seeks to harmonize the use of human and non-human energy in the agricultural technology practices in LDCs.

Economic concentration represents a substantial part of the potential for divergence in the growth, equity, environment assets quality, dimensions of welfare gains associated with privatization. Such concentration could come about through corporate mergers, acquisitions, and other forms of market consolidation. It is critical that developing countries in their quest for complementarity among economic growth, equity improvement, and sustainable environmental assets, bear in mind the basic rule that every policy goal must have a policy instrument (Tinbergen). Conscious efforts to reorient the agricultural technology practices in LDCs must have its own policy instruments and these instruments must be consistent with other macroeconomic and microeconomic policy instruments. One characteristic that appears to be critical for convergence of strategy goals is what has been referred to as "inclusionary" growth and development strategies. Inclusionary strategies, "requires combinations of intervention directed toward structural change, active social welfare programs, and simultaneous attraction to private incentives and macro-economic constraints" (Sheahan, p.40). Sheahan also argues that the inclusionary growth and development strategies require not only consistency in policy instruments, but that the non-poor actively participate in and enjoy security from the gains in growth.

## **CONCLUSIONS AND IMPLICATIONS**

Many of the world's developing countries are currently struggling to attain high levels of growth in real income, equity or income distribution (poverty reduction), and environmental quality. The contemporary concept of sustainable agricultural development is receiving considerable attention as a development strategy for improving the welfare of LDCs citizens.

Support for this strategy stems from the contention that: (1) it would foster sustained intergenerational welfare gains, by explicitly including intertemporal quality of environmental assets as a condition of welfare gains and (2) the boundary of welfare gains as defined by conventional economic accounting indicators of growth and development would be extended by the inclusion of ecological parameters. The environmental dimensions of developmental efforts are real and must be addressed by developing countries. Similarly, evidence of increasing poverty rates across a wide range of LDCs in different geographical areas, calls for a frontal attack on this problem. Rural poverty reduction strategies are being implemented in a large number of LDCs in response to this problem.

Privatization of the agricultural sector has taken on an almost evangelical flavor as a growth and development strategy for developing countries. It would appear that LDCs embarking on sustainable agriculture, poverty reduction, and privatization strategies, explicitly assume that there is automatic convergence of the economic growth, income distribution, and environmental assets quality dimensions of the three strategies. We argue that convergence is not automatic, and that it is important to identify and deal with factors contributing to the potential for non-convergence (divergence). Privatization can be a powerful vehicle for generating high growth rates in LDCs agricultural (and national) economies. This can be the case, if such a strategy results in significant improvement in the economic efficiency (technical and allocative) of the agricultural sector. However, the transfer of ownership or control of revenue-generating entities from public control to private control will not increase economic efficiency if market forces are distorted and if the public policy framework is inappropriate.

It is argued that the economic growth, improved income distribution (poverty reduction), and environmental quality dimensions of the three strategies are complementary to the welfare gains of LDCs citizens. Further, it is argued that high and sustained rates of economic growth are the *conduit* for attainment of convergence (complementarity) of the three welfare dimensions. The notion is rejected that *economic growth* (or non-growth) is congenitally linked to unsustainable ecological systems. Instead, it is argued that: (1) the *source* and *pattern* of market and or policy failures that accompany economic growth (or non-growth) and (2) the orientation of the agricultural technology practices that are potentially the major sources of non-complementarity effects among the welfare enhancing elements of the three strategies discussed.

A major policy implication flowing from the assessment of the overlapping sustainable agriculture, poverty reduction, and privatization strategies in LDCs, is that there is an altered role for the state in the development process. This altered role will be one of *qualitative* improvement in the *intervention capacity* of the state. Qualitative improvement in this capacity would cover areas such as: (1) the function of the public sector (2) the administrative structure (3) the procedures used and (4) the skills and management systems required. Within the context of this improved capacity, high priority must be given to setting in place policy instruments and institutional reforms that compromise market and or policy failures. Some of the important instruments and reforms would include: (1) elimination of direct and indirect subsidies, giveaways, and public projects that promote environmental degradation (2) ensure that the cost of environmental degradation is borne by those who generate the degradation and derive the benefits, rather than the general taxpayers (3) develop the institutional entities that would expedite efficient functioning of environmental and resource markets (4) create and ensure

market-based economic incentives and disincentive structures to internalize externalities (5)  
subject public and private projects to rigorous scrutiny and environmental assessment and (6)  
develop a natural resource accounting framework to be used in conjunction with an economic  
accounting framework to evaluate welfare gains.

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