The Need for Forest Policy Research and Articulation

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Abstract

Policy research is an area that has suffered considerable neglect in the forestry sector. It is a specialized field of activity that leads to informed articulation of policies. Policy conflicts and repetition of past mistakes are avoided when policy research feeds into sectoral analysis and planning. Policies are principles that govern actions to achieve specified objectives. Good policies support long term sustainability, not short-term populism; they are the hallmark of good governance. Sectoral policies, such as of forestry, are hierarchically linked to the objectives and operational principles of the national constitution. National forest policies, for example, deal with the conservation, management and use of forest resources for achieving broader national objectives. Forest policies are expected to include imperatives, principles, realistic policy objectives, policy measures and implementation strategies, defining appropriate institutions and instruments. Development of sustainable policy involves a cyclical process of evaluation and analysis, formation, articulation, formulation, instrumentation, implementation and further evaluation. Forest policies in many cases have failed due to lack of priority to science and technology and inadequate policy research. This failure is often attributed to inappropriateness and vagueness of objectives and policy measures, inter-and intra-sectoral conflicts and lack of action. Weak strategies and instruments have led to the flouting of policies (as seen in the embargo on green felling in natural forests and promotion of NWFPs). Forest policy research can help ensure that all the policy components in terms of content and process, from goal-setting to design of strategic elements and activity planning, are fully balanced and adequately robust, consistent and mutually reinforcing. It promotes the use of multi-disciplinary approaches and principles in the development of forest policy. Forest policy research is involved, among others, in evaluation of policy objectives and measures, establishing organizations and methods, institutional mapping, identifying and addressing illegal practices, and stakeholder analysis. It helps to measure successes and failures, track the factors involved and incorporate developments in science and technology in the policy process for enabling continuous refinements and reforms. For improved effectiveness and objectivity, it is appropriate that forest policy research, including periodical reporting on policy performance, is undertaken by an independent agency with required capability.

INTRODUCTION

Forest, the main body of the terrestrial ecological system, is a complete resource base as well as a habitat. It is a complex biological system performing multiple roles and functions, vital for human welfare and sustainable socio-economic development. Clear policy on the management and use of forest is, therefore, crucial to ensure sustainability of the resource and maximum contribution to society.

While research on all aspects of forestry as a scientific discipline are relevant to forest policy, particularly for defining technological packages for improving productivity and efficiency, forest policy research addresses those issues related to the setting of goals to meet the needs and aspirations of the stakeholders and establishing strategies for

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implementation, including institutions and instruments. Policy research is an area that has suffered considerable neglect in the forestry sector.

This paper briefly looks into the important policy components and process of forest policy formulation, identifies the problems and constraints being faced in implementing policies, and discusses the current status and inadequacies of forest policy research. It concludes that there is increasing need to focus on policy research in the forestry sector to ensure appropriate policy reforms and their timely implementation.

**DEFINITION AND SCOPE OF POLICIES**

The term ‘policy’ generally refers to the principles that govern and guide actions directed towards given ends (Boulding, 1958). These ends reflect national aspirations, and policies contain unambiguous statements about specific measures and implementation strategies with a view to avoid arbitrariness in decisions and actions. The policies, accordingly, define agreed-upon or settled course(s) of action adopted and followed by governments and institutions. These courses of action are normally selected from among alternatives, and in the light of given or assumed conditions.

National policies are promulgated by governments and are influenced by the country’s political system and philosophy. They embrace general goals and acceptable procedures, and actions to achieve the goals. Policies are meant to support long-term sustainable development and socio-economic well-being; they are the hallmark of good governance. Policies influence and guide governance through appropriate laws and related institutions and instruments (rules and regulations) for enforcing the laws.

Policies provide an important means to achieve goals that are considered essential and desirable by the society. The effectiveness of a policy can, therefore, be judged only in terms of achievement of the goals. While the policies reflect long-term objectives, they are subject to modifications based on the dynamics of the policy environment. Formal policy enunciation is to be undertaken as a political process, to ensure its acceptability by those who will be affected by the implementation of the policy. Thus, policy formation and formulation involves several actors – government bodies, professionals, financing institutions, people’s representatives, interest groups, mass media, etc.

While national policies are to be specifically tailored to the conditions existing in the country, there are several goals and aspects which have universal relevance and applicability – e.g. environmental conservation, sustainable production and utilisation of resources, satisfaction of basic needs, equitable distribution of income, acceleration of socio-economic growth and people’s participation. However, the scope and interpretation of these goals and the means of achieving them may vary from country to country.

**Different Categories of Policies**

There are different categories of policies depending on coverage, scope and purpose. At the national level the constitution represents the highest in the policy hierarchy, and there are other general (high level) policies such as economic policy, land-use policy, development policy, education policy and environmental conservation policy. There are also specific sectoral policies such as forest policy, agricultural policy and industrial policy. These policies are not mutually exclusive, and the general policies considerably influence the specific sectoral policies. For example, sectoral policies are developed to conform to national economic policy and other general policies. Within an overall policy, it would often be necessary to develop regional, operational and/or sub-sectoral policies. The various policy levels are to be closely, and hierarchically, linked and free from conflicts.

Based on the level of capability for policy development and implementation, and availability of research information, the nature of policies may range from a manifesto type, which indicates intentions or hopes without any
quantification, to a portfolio type with quantified objectives and targets, articulating the strategies and nature and intensity of actions needed.

**Factors Influencing Effectiveness of Policies**

An effective policy is what is acted upon and not what is spoken about. The ultimate test of a policy is the realization of beneficial impacts as envisaged in its objectives. Policies that fail to deliver, adhere to the fads of powerful groups, and lack objectivity and scientific content will not be respected by the people.

There are several inter-related factors which influence the effectiveness of policies: appropriateness and clarity of objectives, clear strategies and measures, institutions to enforce policy measures and instruments, competency and commitment of the available human resource, inter-sectoral co-ordination and a conflict-free policy environment. Inappropriateness of the principles, objectives, policy measures, institutions and instruments will result in policy failures, leading to further conflicts and breakdown of the systems.

As statements of intent, most national policies, probably, cannot be challenged. But differences are seen in the force of authority that the policy bears, and the manner in which the policy was derived (e.g. as statements of the executive agency or as legislative enactments).

**DEVELOPMENT OF FOREST POLICY**

The need for carefully and sustainably managing natural resources, particularly forests, influenced the thinkers (and rulers) of the hoary past. *Agni purana*, a Hindu scripture dating back to 500 B.C., exhorts people by suggesting that “he who plants trees obtains absolute bliss”. Conservation was a live issue in the 4th century B.C. when Greek rulers of Egypt imposed “felling quotas” on native woodlands (Richardson, 2000). The Asian farmers’ wisdom understood the need for conservation and stewardship long ago, as can be understood from their saying: “we did not inherit the land from our parents; we only borrowed it from our children, on trust”.

With the development of administrative structures of nation states, formal statements of policies became a necessity. One of the early formal forest policy statements, in the Asia-Pacific region, was the Charter of Indian Forests of 1855. The sole objective of administering State forests was public benefit, recognizing that the constitution and management of a forest involve regulation of user rights and restrictions on the privileges in the forest for the neighbouring population.

Since then, there have been considerable improvements in the art and science of forest policy development. A national forest policy is now seen as a formal and comprehensive statement which provides a conceptual framework, and clear objectives, for forestry development as well as orientation for the choice and execution of forestry programmes and related activities. It sets standards for decision-making and discourages acts of expediency.

Early forest policies tended to consider timber production as the primary function of the forest. In today’s context, a multiplicity of interests compete for forest outputs, and correspondingly forest policies have become increasingly complex. To realize the complex nature of forest policy, one need only consider the range of aspects (regulating, accounting, product tracking, monitoring, certifying etc) to be addressed, to ensure a single, though vital, principle of sustainable forest management – *i.e.* the rate of harvest of forest resources should not exceed the rate of regeneration or replenishment.
Critical Situation in Forestry

Globally, and particularly in the developing countries, the situation of forest resources is critical due to spiraling deforestation. Over the past 8,000 years, nearly one half of the forests that once covered the earth have been converted into farms, pastures and other uses. Of the tropical forests that existed around 1960, about 25% have been cleared since. During the 1970s, tropical countries were deforested at an annual rate of 11 million ha. This rate increased to about 16.3 million ha in the 1980s and has somewhat fallen to 14.6 million ha in the 1990s. After accounting for new plantations, the net annual deforestation amounted to 13.1 million ha in the 1980s and 9.4 million ha in the 1990s (FAO 1995, FAO 2001). According to the FAO (1999a), deforestation was concentrated in the developing world, which lost around 200 million ha between 1980 and 1995.

Another worrying aspect is the qualitative degradation of the remaining forests. The change of closed forests into open forests and reduction in the volume of growing stock are indicative of forest degradation (FAO, 1997). Forest degradation is manifested in: loss of soil fertility and capability of nutrient recycling; lowering of productivity and growth; erosion of genetic wealth and bio-diversity; loss of wildlife habitat; and reduced value of residual resource.

Fall in forest resource endowment causes scarcity of forest goods and services, particularly affecting the local communities, and also the larger civil society. While goods like timber can be substituted, the ecological services of the forests for a functioning world cannot. The situation is more critical in countries where forest-related policies are weak or non-existent.

Specifics of Forest Policy

As indicated, sectoral policies are subordinate to the operational principles enshrined in the national constitution and the other high level policies. National forest policies specify principles, along with the objectives, practical measures and strategies to be followed in the conservation, management and use of the nation’s forest resources, which it is felt, will contribute to the achievement of some of the broader national development objectives (Worrell, 1970). Forest policy provides the basis for legislation, regulations, plans and programmes in the sector. It defines the contributions of the sector to national development and welfare. It profoundly influences the way in which organizations and individuals manage and utilize their forest/tree resources.

The specifics of a sectoral policy are decided by the distinguishing sectoral features. In respect of forestry, the special features are: long gestation period and investment horizon (often not matching the social time preference); blurred demarcation between forest capital stock and incremental growth (often leading to over-exploitation and capital consumption) and high-level of externality of forestry activities (often not captured in the market mechanism).

Forestry has evolved into a web of inter-related activities that goes far beyond the limits of forestland, and affects the welfare of every one, economically and ecologically. Rational practice of forestry requires decisions on what (and how much) goods and services we wish to obtain and how to obtain them. Multiple roles (production, protection, conservation) of forests have come to be accepted as a basic objective of forest management. A serious concern is how forest can be managed to retain their essential environmental roles, while maintaining their capacity for supporting people’s welfare.

Policy Components

The sector policies are generally defined by the following main components: policy imperatives, principles influencing the policy, policy objectives, policy measures and implementation strategies.
Policy Imperatives

Policy imperatives are absolute requirements to which the objectives of the policy should contribute. For example, *sustainability*, *efficiency* and *people’s participation* can be considered as normal imperatives. *Sustainable development* aims to achieve a reasonable and equitably distributed level of economic well-being that can be perpetuated. It implies using renewable resources in a manner that does not degrade them, and does not deprive the future generation’s access to the resources. As a renewable resource essential for meeting human needs, an important criterion for forest production and management is improved *efficiency*, which implies improving productivity, reducing wastes and indirect costs, and thus registering a higher economic rate of return in comparison with other alternatives. It should be noted that the environmental services resulting from, or enhanced by, conservation of resources also represent production, as do the material products resulting from resource management. The productivity theme is critical to forestry science and profession (Duerr, 1981). The philosophy of a people-based development assumes that *participation* is not only a fundamental precondition for, and a tool of, any successful development strategy, but is also an end in itself.

Principles of Forest Policy

Forestry issues and opportunities should be examined in a holistic and balanced manner within the overall context of environment and development, taking into consideration the multiple functions and development potentials of forests. In view of the above, and based on the fundamental principles enshrined in the Constitution, as well as those enunciated in the major national policies, the principles and considerations guiding the forest policy are based, among others, on the need for an integrated approach to land use; supporting national food security; increased welfare and socio-economic equity; facilitating participation of women in development; promoting collective self-reliance of rural communities; decentralization of decision powers and targeted funding.

Policy Objectives

The long-term development goal(s) of the national forest policy is to be clearly stated: for example, to enhance the contribution of the forestry sector to the country’s ecology and economy. This long-term goal(s) is explicitly defined through specific objectives related to contributing factors/aspects – such as forest land use and management, ownership and functional classification, forest resource expansion, forest protection and rehabilitation, forest products utilisation, institutional arrangements, human resource development, and coordination with other sectors. Depending on the situation, some important aspects such as forest fire management, forest plantations, forest-based processing industries, bio-diversity conservation, non-wood forest products and forestry research may merit separate sub-policies, organically linked to the parent policy.

Policy Measures

For each of the specific objectives, appropriate policy measures are to be specified. Achievement of policy objectives depends on how effectively policy measures (for example: inventory of resources and bio-prospecting; functional and land capability classification of forests; land-use planning; protection of adequate extent of natural forests; management and utilization of forest resources; creation of new or expansion and enhancement of existing forest resources; promotion of sustained investment; efforts for producing forest goods and services outside forest land; waste reduction and enhanced recycling programmes; feasible mechanisms for encouraging participation of people and private sector) and implementation strategies are adopted and used. It is necessary here to emphasize the need for harmonizing forest policies with other related policies, for example, of agriculture, trade and industry.

Implementation Strategies

Strategies are logistical measures to achieve policy objectives. Strategies are decided based on detailed studies, among others, on: combination of technology (labour intensive and capital intensive); scale of operations (small, medium, large); type of incentives (material, policy-oriented); nature and level of decentralization and people’s participation; forest land use alternatives (production, protection, conservation); planning and programming; level of functional
collaboration (e.g. with private sector, NGOs); production alternatives (forest plantations, management of natural forests); patenting and protection of intellectual property rights; and monitoring and evaluation. While policy formulation involves a political process of consultation and discussion, strategy development is often an information-based management process, to ensure effective realization of policy objectives.

The Process

Even though policy development and implementation are the responsibility of governments, the variety of interests involved must be recognized, the involvement of all major actors must be legitimized and their commitments solicited. Forest policy development is a process which, to be effective, should follow a cycle of: evaluation and analysis, formation, articulation, formulation, instrumentation, implementation and further evaluation/analysis.

Evaluation of the existing policy (or of the trend and current situation of the sector, where there are no policies), analysis of factors leading to failures or weaknesses in policy implementation, and assessment of the characteristics and changes of the policy environment (e.g. demographic situation, social and economic factors, infrastructural development, developments in other sectors) provide a basis for forming a new policy or revising/reforming an existing policy.

The purpose of articulation is to involve those who are affected by the policy in discussions, and to obtain their views on the one hand and to provide them with clarifications and elaborations on the other. A distinction is drawn between policy formation and its formulation. Policy formation is based on inputs from a relatively large number of people – not only foresters. Its formulation, on the other hand, is generally the responsibility of the Government or the highest national legislative body. Historically, however, forest policies have been formulated by foresters and promulgated by Forest Departments without necessarily being underwritten by the Government. The strongest argument in favour of a formal forest policy is that it does represent a commitment.

A forest policy should be dynamic; it should not, and cannot, stay the same over any long period of time. Accordingly, it is important that a forest policy is periodically evaluated to determine whether it should be maintained, modified or changed altogether. Forest laws, rules and regulations should be reviewed and revised in tune with the new forest policy such that they serve as instruments facilitating forestry development, to be achieved through appropriate plans and programmes.

The whole system of policy development and review calls for a strong and continued political will and commitment. Equally essential is the professional leadership to facilitate and guide the process. The separation of authority and enterprise functions in the forestry sector will, by avoiding conflicts, be able to foster such leadership.

In spite of developments in the concepts and methodologies of policy development, forest policies in most developing countries are generally of manifesto type, and vague in their content. Policy reviews carried out as part of the National Forest Programme exercises in many countries have indicated that in most cases policies are ineffective or weak, do not receive priority or budgetary support, and lack implementation. On a long term and sustained basis forestry has not been doing well in the developing countries of the Asia-Pacific region. Several explanations are advanced for this persisting situation, such as: “there is no lack of technology but policies are weak or non-existent” or “the policy per se is good, but (there is) no appropriate strategy or mechanism for implementation”.

CONSTRAINTS AFFECTING FOREST POLICIES

Forest policies are affected by several constrains – i.e. intrinsic weaknesses of the policy, conflicts with other policies, inadequacies of instruments and institutions resulting in weak enforcement, and lack of awareness resulting from insufficient knowledge and information. These cause widening gaps between policies and reality, resulting in failure
to address the real and underlying causes adversely affecting sustainable forest management, and lack of progress on
the ground leading to continued forest loss and degradation. Forest policies of almost all the countries in the Asia-
Pacific region suffer from these constraints, in varying degrees.

Deficiencies Intrinsic to Forest Policies
The weaknesses intrinsic to forest policies include, among others: unclear, conflicting and/or inappropriate
objectives and strategies leading to multiple interpretations and policy distortions; lack of balance and prioritization
among objectives and policy measures; imposition of fads of elites and bureaucracy without stakeholder
consultations; and lack of flexibility to adjust to changing circumstances. Forest policies in a number of countries
suffer from a major weakness that they have been developed in isolation, solely within the forestry sector, without
being linked to other sectors which impact on them. As a result, forest policies are routinely ignored by other sectors,
which fail to see the benefits from forestry to their own objectives. Also, forest policies have tended to be tree-
oriented, at the expense of the environmental and social benefits of forestry. This fact further weakens the standing
of the forestry sector for government attention.

Forestry and forest policy have several dimensions – ecological, technological, socio-economic and institutional; and
it is important that these dimensions are appropriately balanced and developed in a conflict-free environment. A
tragedy in the forestry sector of several countries has been that at any given time, only one or two dimensions were
emphasized. Often policies are devised for situations (e.g. of resource base, or technology) that no longer exist,
making them unrealistic and irrelevant, leading to failure to achieve the objectives and other undesirable
repercussions. Assigning a production function to degraded forests, declaring forests as protected areas or prescribing
bans on felling without alternative measures to meet people’s needs for forest goods, promoting harvest of NWFPs
without assessing available technology and/or markets, supporting large scale intensive forest plantation programmes
without land capability studies are, among others, commonly-found examples of policy distortions.

While forestry, at the farm, small estate and homestead levels, is being practiced by people on a significant scale (e.g.
Bangladesh, Sri Lanka and India), the “forestry sector” for all practical purposes is identified as a government
activity, neglecting “people’s forestry”. Also, since forest policies are formulated by government agencies without
adequate consultations, they mainly address the concerns of the government sector. Governments often deal with
the private sector in forestry through regulatory controls rather than with policy support. In many countries forest
policies lack transparency and participation of the people. Policies imposed from above tend to be flouted by those
who are likely to be adversely affected. Also the inadequacies of forest policies result in low priority for the sector in
the national scheme. Some of the undesirable results of the situation include: unplanned forest land-use changes,
illegal and excessive collection of fuel-wood and timber, wasteful and unscientific harvesting of forest products,
forest fires, grazing and inadequate investment in protecting forests. This leads to continuing deforestation and forest
degradation.

Conflicts with Other Policies
Policies of several other sectors such as agriculture, land-use, livestock, fishing, irrigation, mining, industry,
investment, finance, energy, trade, tourism, taxes and fiscal regulations, environment and nature conservation, often,
conflict in different degrees, with forest policy. An important reason for this situation is that the sectoral policies
tend to be interpreted without considering the higher level national policies and goals, working within the narrow
confines of the respective sector. Frequently, both forest and non-forest policy decisions create conditions that foster
and mobilize the forces of deforestation. Also, deficient public policies that create an unstable macro-economic
environment, often, adversely affect forests. If the core sector policies emphasize that peoples welfare is the common
denominator of all policies, and that is accepted by all supporting sectors, resolution of conflicts and harmonization
at policy interfaces will become easier. Even where policy differences have been reconciled, conflicts may still arise, in
the process of implementation, because the sectoral agencies involved have their own narrow missions, vested
interests and, often, bureaucratic orientation.
Inadequate Institutions and Instruments

Inadequacies of institutions and instruments (e.g. lack of appropriate mission and capability) for implementing policy measures have caused policy failures. An example where institutional inadequacies have particularly affected policy implementation in some countries is related to decentralization in forestry. Proliferation of policy related institutions and instruments within the forestry sector, without any mechanisms for co-ordination, have led to conflicts and confusion. Conflicting roles of government forest services (e.g. as authority to enforce laws and facilitator of forestry development) and the narrow vision of interest groups and lobbies (e.g. forest to be preserved and not to be used; forests to be treated as commons) often exacerbate the problem. Institutional inadequacies further lead to corrupt practices, and create hurdles to people’s participation, in the form of cumbersome regulations, tenure problems, bureaucratic indifference and market distortion, resulting in increased inefficiency in the use of resources. In some other situations, forestry professionals are made to play a defensive second fiddle, and power brokers tend to gain an upper hand. The mismatch between policy and performance is thus a major institutional failure, where, inspite of institutions being in place, nothing happens.

Inadequate Knowledge and Information

This weakness covers a wide spectrum – lack of knowledge about the situation and outlook of forestry to facilitate informed participation of stakeholders; lack of knowledge about the multiple stakeholders and their priority needs; lack of analytical approach for establishing policy measures; accounting distortions; lack of awareness about the important roles of forestry; and weaknesses in forestry research.

In several countries, in the absence of detailed analysis of the forestry situation and outlook, policies are formed on a conjectural basis. As a result, there has been little real change in the policies over time, including in the institutions and instruments involved. A case in point is the strategic recommendation contained in the 1988 National Forest Policy of India to have a minimum of one-third of total land area under forest. This is a repetition of what was contained in the 1952 National Forest Policy. Why that objective could not be achieved during the period 1952-1988, and how it can realistically be achieved now, have not been made clear.

Inadequate Awareness

Awareness is understanding supported by the urge to act. Low awareness on the part of the public and policy makers about the multiple contributions of forestry leads to skewed visions; uncompensated forest land transfers; indifference, lack of priority and budget allocation for forestry; weak policy and planning systems and commensurately low investment in forestry development. As a result of low awareness, policy reforms in the forestry sector have been slow, often lagging behind reforms of national macro-policies. It is important that the public and politicians be made constantly aware of the multiple roles of trees and forests in alleviating problems like environmental degradation, rural energy crisis and unemployment, erosion of bio-diversity; and increasing demand for forest goods and services.

Accounting Distortions

A leading cause of inadequate attention to forestry is the distortion in accounting, as this has implications for priority assigned, funds allocated and efforts devoted to control deforestation and forest degradation. In the System of National Accounts in most developing countries, only the value of wood products is included, ignoring all other benefits such as non-wood forest products and forest-provided services. There is also considerable unrecorded use of wood in the form of poles and fuelwood. Edible products and medicinal plants from forests are accounted for under other sectors. The officially accounted contribution of forestry to national income of India in 1993 was only US $ 2.9 billion (representing about 1.2% of GNP) against an estimated contribution of benefits valued at US$ 43.8 billion (UN-CSD 1996). There have been no consistent efforts to capture the values of the ecosystem services and externalities of forests such as tourism potential, watershed values, bio-diversity conservation and other use and non-use values. A number of valuation techniques are being tried, but they continue to be research problems.

Lack of Priority for Research

Forest policies in many cases have suffered due to inadequate support for research, science and technology. Not much has been done on socio-economic and policy research in forestry and most of this is
based on speculation and advocacy rather than on scientific evidence. The same is true of the efforts to enforce criteria and indicators for sustainable forest management. Emphasis on sustainable forest management requires enormous research efforts to fine-tune criteria and indicators, establish benchmarks, assess changes and modify systems. Hardly any research is done on institutional arrangements, especially concerning how people’s participation in forestry can be enhanced. Research on problems of forestry at the interfaces with other sectors is mostly neglected. Moreover, some scientists tend to consider policy research as a ‘soft’ science and administrators tend to view policy as a function of bureaucratic interpretation.

Reports on the status of forestry research in the Asia Pacific Region indicate other weaknesses: lack of conducive research environment within the institutions; poor staff motivation; lack of trained manpower; lack of leadership in various fields such as policy analysis and planning; lack of coordination at country level; lack of adequate and sustained funding; and lack of linkages and contacts between scientists and institutions at different levels. (FAO, 1992). There is lack of adequate incentives for researches – not only financial, but also in terms of facilities and recognition. Even where there are worthwhile research outputs, there is little evidence of R&D filtering down to users – either due to disinterest or lack of dissemination. Investment in forestry research has generally been low, reflecting the low level of attention given to forestry research. The measure of forestry research expenditure for developing countries, as an average percentage of the recorded value of forest products, ranges generally between 0.05 and 0.12%, compared to about 0.5% for agriculture. Most developing countries spend only less than 1% of their total forestry budget on research. Research efforts are far from sufficient, being too thinly spread over items, topics and organizations (UN-CSD, 1996). It was strongly indicated in early 1990’s that a number of countries in Asia and the Pacific were in the process of reforming their forest policies (FAO, 1993). But after about ten years nothing tangible seems to have happened.

RESEARCH SUPPORT FOR ENHANCING FOREST POLICY

Since forest policy is concerned with multiple aspects (ranging from enhanced forest landuse, sustainable forest management, product development and promotion of NWFPs to capacity building and restructuring of institutions), research relating to all these aspects is relevant. Forestry research covers not only biological and technological aspects, but also the wider spectrum of socio-economic and policy research. In a broad sense, forestry research helps basic understanding of the nature, functioning and role of forests and trees, and how their role can be made more beneficial and effective. The inter-acting components of forestry research can immensely contribute to a viable and development-oriented policy.

Research activities relating to silviculture, integrated forest management, domestication of species, forest genetics, nursery technology, NWFPs, yield and growth studies, harvesting methods, wildlife protection and bio-diversity conservation, forest economics and ergonomics are all concerned with improving efficiency and effectiveness of forest production, and enhancing direct and indirect benefits to society. Forestry research ultimately is concerned with benefits and costs of forestry and forest-based activities, in a socio-economic sense; and consequently, it can contribute to development of appropriate policies. Accordingly, all forestry research activities are of socio-economic and policy relevance (Chandrasekharan, 2000). However, there are some important aspects which specifically support policy formulation/implementation and subsequent policy reforms and enhancement, and those aspects can be categorized as policy research.

Forest Policy Research

Forest policy research covers scientific studies to support development (or revision) of forest policies. It provides relevant information for setting sound policy objectives, policy measures and strategies including institutions and instruments, to improve/optimize policy outcome and achieve policy objectives. It should take into consideration the level of technology available, the political system of the country, as well as other aspects of policy environment (e.g. location, terrain, climate, level of income, and other relevant macro-economic factors). It should also assess the
impacts of other policies such as of trade, pricing, investment, incentives, land tenure and landuse, on forestry activities. Forest policy research can help ensure that all the components in terms of content and process of a forest policy are fully balanced and adequately robust, consistent and mutually re-inforcing.

Policy and closely linked socio-economic aspects of forestry influence, and are influenced by, human behaviour. Forest policy research is, therefore, of strategic nature which assesses and evaluates the impact of social behaviour with regard to the implementation of forest policies, considering the special characteristics of the sector and how optimum results can be ensured through policy reforms and enhancement. The prime role of forest policy research is to ensure an objective approach to policy formulation and to develop and maintain the spirit and vigour of policy implementation, and its acceptance by the society. In this regard, policy research can help to establish minimum acceptable standards and to compare all potential alternatives, for deciding the best possible one. Policy alternatives are selected in the light of given or assumed conditions for guiding decisions relating to the present and the future. A comprehensive sector (situation and outlook) analysis (including identification of factors leading to policy distortions, conceptual flaws and conflicts in the principles and objectives adopted in the ongoing policy, as well as flaws in policy implementation) is an important component of forest policy research.

Forest policy research promotes multidisciplinary approaches and scientific principles in forest policy development. It covers such aspects as evaluation of policy objectives and measures; research on organization and methods; institutional mapping; identifying causes for, and measures to address, illegal practices; monitoring and evaluation of policy implementation and stakeholder analysis. It helps to measure successes and failures, to identify major problems and track the factors involved, and to incorporate developments in science and technology in the policy process. It can enable continuous refinements, reforms and improvement in efficiency, and establish priorities and phasing of policy measures and activities. However, these aspects are, by and large, taken for granted and neglected, and very little research goes into them. This is an issue deserving serious attention.

**Scope and Roles.** The immense scope and potential roles of forest policy research are evident from the following:

- **Policy research feeds into sectoral analysis and planning, and ensures that policy conflicts are avoided and past mistakes are not repeated.** It helps to identify the crippling constrains of policy implementation and the root causes for policy failures, presents a range of possibilities for improvement and indicates the reforms needed. A recent study in Indonesia clearly brought out the need for: curbing illegal logging, restructuring of forest industries, forest plantation development for resource creation, recalculation of timber value and rationally decentralizing the forestry sector as vital strategic elements of a reformed policy (ITTO, 2001).

- **Analysis of mutual impacts of different policies at the sectoral interfaces with forestry and how they influence achievement of basic national objectives (such as those enshrined in the Constitution) can help harmonise policies and ensure enhanced benefits.**

- **Forest policy research provides a reliable basis for assessing the changing relevance of policy objectives influenced by external factors and for undertaking strategies to balance risks and gains of policy implementation.**

- **Research involving institutional mapping and analysis will help to decide the nature and phasing of institutional restructuring — e.g. decentralisation.** An ITTO (2001) study indicated that in Indonesia, even though the 1967 Basic Forestry Law was revised in 1999, it did not adequately meet the requirement of the newly decentralized forestry sector.

- **Research on organization and methods will help to: rationalize the nature, level and phasing of the component aspects such as participation of people and the private sector; identify the need for capacity building, partnership arrangements, bureaucratic re-orientation etc; and rectify deficiencies in systems such as logging concessions.**
• Market studies (accessibility, demand elasticity, influence on resource conservation) are important in defining policies relating to production forestry. Investment in forestry (whether in tree planting or forest conservation) is influenced by direct benefits in terms of market gains.

• Survey of people’s attitude towards forest and study of stakeholder needs and preferences will help to balance the policy objectives, measures and strategies in an ordered and organized manner.

• Objective analyses will help to avoid confusion and provide a clear perspective regarding whether, and if so, to what extent and how, it is feasible to control poverty, hunger, unemployment and corruption through forestry, consistent with the principles of sustainable forest management.

• Analysis of impacts and implications of subsidies and other incentives under various situations will help to establish a rational system of incentives. The new responsibility system in China has produced spectacular results in terms of enhanced productivity through people’s participation.

• The bulk of social and environmental contributions of forests are in the form of unpriced values. Research on unpriced values and externalities of forests will facilitate their incorporation in the System of National Accounts.

• Studies into the nature and magnitude of illegal activities and corruption in the forestry sector are required to design a combination of penal and policy measures to address them.

• Policy research is essential to validate or modify assumptions (such as: people are interested in nature conservation or government ban on tree felling will protect the forests and biodiversity) behind the principles, policy objectives and strategies, and to set goals on how, how much, by whom, at what cost etc.

• Analysis of experiences from other countries and/or sectors can help to avoid similar mistakes and to adapt/adopt useful lessons on a cost effective manner.

• Considerable amount of policy research will be required for successfully undertaking “paradigm shifts” – e.g. from centralized authoritarian system to democratic decentralization of forest governance, which calls for reforms in terms of concepts, practices and institutions to guard against the factors that can ruin efforts. (Nepal, Indonesia and Mongolia are some of the countries which are learning new lessons in this process).

Thus, some of the important subject areas, among others, falling within the scope of forest policy research include:

• Nature of conflicts (and conflict resolution) among stakeholders; attitudes of local communities towards forestry as an economic resource and prime environment;

• Participation methodologies and systems; socio-economic and environmental parameters of criteria and indicators for sustainable forest management;

• Multiple effects and impact assessment of policy measures;

• Impacts and implications of emerging green consumerism;

• Evaluation of market mechanism and market information system;

• Impacts of subsidies on production efficiency;

• Socio-economic implications of technology development and transfer;

• Nature and level of institutional obstacles;

• Skill needs for policy implementation;

• Limits and limitations of poverty alleviation through forestry;

• Estimation of rent and designing of rent-capture measures;

• Social equity measures and proxies; and,

• Trend and outlook analysis.
Another new area calling for attention is the contribution of forests to alleviating the impacts of global warming, covering costs/benefits of carbon sinks and carbon trade.

Policy research is to be undertaken as an ongoing process for continuous enhancement of forest policy. While it can help self-strengthening and revival of forestry in developing countries, the sad truth is that forest policy research is badly neglected. As we have learned from experience, in the absence of meaningful policy research, pitfalls are likely to plague policy implementation, and it can turn out to be economically perverse, trade distorting and ecologically destructive – in some cases all at the same time (Chandrasekharan, 2000).

**Prioritization.** It is difficult to establish policy research priorities, since they are situation specific and there are considerable overlaps. For the Asia-Pacific Region, the FAO (1993) has tentatively identified seven broad areas, each having a number of component issues to be investigated:

- Linkages of population distribution and growth to deforestation and sustainability of land use;
- Trees in land-use outside main forest area;
- Transfer of responsibility of natural forest management to local communities and private sector;
- Shifting of emphasis from industrial forest products to multiple land-use;
- Forest concession policies and its influence on tropical forests;
- Impact of accelerated forest-based industrialization;
- Institutional problems and reorientation.

**Methodological Considerations.** Research for validation of assumptions relating to principles and objectives, and for defining steps, stages and prioritization for accomplishing policy measures often presents methodological problems because of its multidimensional and multidisciplinary nature. Forest policy research adopts an array (and combinations) of methodologies, as it embraces both quantitative and qualitative aspects. It involves data analysis, estimations, proxy measures, social/behavioral science methodologies (interviews, questionnaire surveys, opinion surveys, open discussion forums, group consultations, participatory assessments, stakeholder analysis, case studies), simulation exercises, scenario building and model testing.

Measurement of direct socio-economic benefits of forests (e.g. consumption of forest products and services) have often to follow social and behavioral science methodologies (distinct from biological and physical science methodologies), and assessment models. Perceptions about the value of indirect forest benefits (e.g. bio-diversity conservation) would vary considerably among the different categories of users, depending on their environmental awareness, socio-cultural values and economic situation. Indirect or surrogate measures like travel cost methods, hedonic pricing, contingent valuation, replacement cost, residual value, proxy value, and willingness to pay are some of the methods attempted, the first three being applied more often, with some success to value forest and wildlife related recreational experiences (Kengan, 1997).

**Autonomy for Forest Policy Research.** While professional bodies, both inside and outside the government sector, have a vital role to play in the conduct and use of policy research, an important need is to ensure that they enjoy full autonomy and wider participation. Since government agencies are involved in interpreting and implementing forest policies, it will be appropriate that policy research (as well as review and monitoring of policy implementation) is undertaken by independent agencies. Such agencies tend to be capable of pointing out the loopholes, defects and deficiencies of policies, without fear or favour. The researchers have an important responsibility to make the people aware of the research results, in a transparent manner. A prime requirement on the part of researchers is an objective and carefully balanced approach to problems. It is necessary to be careful not to make generalizations on the basis of a single or few stray cases (which could turn out to be exceptions); and value judgments should be avoided. It is
equally important to avoid exaggerations, sensationalism and vague statements. A system of periodical reporting of forest policy performance can serve as a check against factors distorting policy implementation.

**Forest Policy Research Facilitates Articulation.** Articulation of policy proposals will help to ensure that all the social and stakeholder concerns have been taken into consideration, and maximum opportunity is provided for involving people in the process. This presupposes that articulation is supported by dissemination of information. Since acceptability of policy measures and strategies is influenced by value systems, and since differences in values lead to conflicts, it is necessary, for enhancing the policy outcome, to consider the views and positions of the people of different socio-economic strata and categories on: conservation vs. utilisation; social vs. economic benefits; priced vs. unpriced values; equity vs. efficiency; direct and indirect subsides and so on.

Meaningful participation of the people in the policy articulation process requires that they are provided all the relevant information on: the nature of the institutions, instruments and strategic measures to enhance the environmental (e.g. soil, water and biodiversity conservation) and social (e.g. energy, forest goods) contributions; steps/stages, assignment of roles and responsibilities, priorities, potential risks and gains of policy implementation; implications (and interpretations) of principles, policies, strategic measures and supporting assumptions; factors which are likely to affect or nullify the beneficial outcome of the policy; and comparative merits and demerits of the range of possible alternatives. Availability of good information will help to enrich the depth and scope of articulation which in turn will enhance the quality and implementability of policies.

There was a time when policy (and socio-economic) research in forestry was considered unnecessary. Silvicultural research was all that mattered. In most cases, few general policy issues (such as thefts and encroachments, increasing demand for forest goods and services, loss of watershed values and soil erosion, and forest fire) were brought out and general suggestions to address the issues (such as resource survey, demarcation of forest boundary, setting apart protected areas and improved silvicultural practices) were made in a manifesto-type forest policy statement. Such policies were rarely followed up or monitored. Boundary demarcation to protect forest resources has been a never-ending programme in a number of countries in Asia and the Pacific. As has been often noticed, in several cases, that forest boundaries move or are moved, willfully or stealthily; local people do not respect the status of protected areas; forest encroachment and deforestation continue with criminal collusion of keepers of survey records, land revenue authorities, government pleaders, forest officials and politicians (ITTO, 2001; Contreras-Hermosilla 2001). There are wheels within wheels, making the complex social issues in forestry more complicated. The public at large is unaware of the situation, let alone the details.

Articulation of all aspects and details of forest policy in public forums along with dissemination of information has come to be accepted as a legitimate part of the policy process. And, this is a radical departure from the past. One of the most important functions of forest policy research is to support intense and thorough articulation of policies and policy reforms.

**CONCLUSION**

Research represents a weak link in the chain of forestry activities. And, forest policy research is one of the most neglected (often, non-existent) aspects of forestry research in many developing countries. This unacceptable situation has contributed to inadequate and distorted policies, faulty institutions, feeble instruments and lack of political commitment to sustainable forest management. Policy research in forestry is of major significance for addressing the weaknesses of the sector for promoting sustainable development and good governance in forestry. This, therefore, calls for a new and emerging culture of political and professional commitment.
REFERENCES


