

7 PRIORITIES AND STRATEGIES

The Asia-Pacific region's forest situation will continue to change during the next decade and beyond, in response to the collective impacts of various drivers of change. Demand for forest products and services is expected to increase considerably, but many countries will be challenged to reconcile conflicting demands and to establish acceptable trade-offs among competing needs. While there will be a number of positive changes in some countries (for example, enhanced afforestation and reforestation efforts and expansion of farm tree-planting), other countries will have to deal with increased forest clearance and degradation. An understanding of the drivers of change and how different scenarios may unfold helps to identify how the sector may deal with the various challenges.

Forestry priorities and strategies will have to be country-based and will depend on national visions of how societies will change and how forests and forestry should respond at different stages of societal evolution. As discussed earlier, a range of development pathways are likely within Asia-Pacific countries, with key bounds determined by high or low growth rates of economies, and varying levels of social and economic sustainability. Achieving high growth rates remains the primary thrust in most countries and it is assumed that social and environmental dimensions will be taken care of through trickle-down processes. However, increasing social and ecological vulnerability are encouraging countries to shift towards green pathways encompassing greater sustainability. Efforts towards climate change adaptation and mitigation are encouraging such shifts; for example, by reducing dependence on fossil fuels and increasing the share of renewable energy. The pursuit of green paths has received increased national and international attention in the context of the recent economic crisis.

The discussion below – on priorities and strategies – assumes that most countries, irrespective of their divergent conditions, are interested in pursuing a 'green economy' scenario and would prefer to take measures aimed at enhancing social and ecological sustainability, though not necessarily at the expense of economic growth. While details will have to be worked out to account for specific conditions in each country, this chapter provides a broad outline of priorities and strategies that could enable countries to shift towards green paths by focusing on enhancing social and ecological sustainability.

OVERALL PRIORITIES

The focus of international discussions on forestry reflect only a small portion of overall forestry issues and activities but often consume a disproportionate amount of attention and energy, especially from government forestry officials. For example, the present enthusiasm for climate change and forest law enforcement and governance, although inspiring, often seemingly denies the importance of the vast majority of on-the-ground forestry-related activities – growing timber, collecting fuelwood and NWFPs, logging, manufacturing products, trade, etc. Of course, the international focus could turn towards some of these issues and have major implications for forestry but, in the meantime, the practical aspects of forestry should not give way completely to more distant goals.

In summary, the following broad priorities should garner considerable focus in the Asia-Pacific region.

Rebuilding natural resource bases and conservation of existing resources

Although the Asia-Pacific region is unlikely to face large-scale wood shortages in the near future, rebuilding the forest resource base and conservation of remaining resources will remain an utmost priority. Already, there is considerable dependence on wood and wood product imports and indications are that such dependence will increase in future years. However, factors such as increases in transport costs or increased emphasis on reducing carbon footprints in transport could significantly affect wood supplies to the region. At the same time, rebuilding natural capital bases offers significant opportunities for economic development, particularly through new job creation. Forestry's potential for employment generation stems from several factors, including the labour-intensive nature of many forestry sector activities and low capital requirements (with the exception of some forest industries such as pulp and paper and panel products).

In the meantime, escalating demands for food, fibre and fuel from natural resource-deficit countries are putting enormous pressure on resource-rich countries – within and outside the region. As demands increase, land conversion becomes increasingly attractive as a means of income generation. Consequently, more forests are likely to be cleared, as is already happening in several countries in Southeast Asia and Oceania (especially Melanesia) and outside the region. Concerted efforts will have to be made to sustainably manage resources and to ensure the removal of perverse incentives that encourage land conversion and 'exporting of forest degradation'.

Most importantly, many ecosystem services are non-tradable and will have to be provided *in situ*. As populations continue to increase and become more wealthy, demand for some ecosystem services – especially clean water, forest recreation, arresting land degradation and desertification, and carbon sequestration – will increase significantly. Without effort at mitigation, natural resource deficits – particularly severe in densely populated countries – will lead to further overexploitation and continued degradation. Major efforts are also required to slow the loss of irreplaceable biodiversity through species extinctions. Undoubtedly, the forest stewardship of current generations will be judged harshly by our successors, in terms of irresponsible and reckless loss of biodiversity.

Upstream forestry activities – afforestation, reforestation, improved management of natural forests, conservation, watershed protection, agroforestry, urban forestry, etc. – also directly contribute to climate change mitigation and adaptation. Better management of forests to reduce fuel loads will also reduce the intensity of forest fires and consequent carbon emissions.

Rural development, employment generation and poverty alleviation

While urbanization is a major demographic trend in Asia and the Pacific, the majority of the region's population will remain rurally-based. With the low incomes attendant to semi-subsistence agriculture, poverty will remain a major issue for several countries in the region, especially in South Asia. At the same time, rapid economic growth is enhancing rural-urban divides.

Absence of opportunities for productive employment is one of the major problems facing communities living in forested regions. With significant reductions in forestry activities, especially harvesting and silvicultural operations, employment opportunities for many forest-dwelling communities have declined. Increased focus on afforestation and reforestation, management of natural forests and plantations, silviculture, fire protection, and so forth, could significantly enhance employment opportunities, increase rural incomes and, at the same time, help to rebuild natural resource bases. A number of countries have already initiated rural employment generation

programmes that include afforestation and reforestation as important components.

Increased reliance on industrial and services sectors for income and employment has to some extent reduced investments in primary production including forestry. However, conditions of low economic growth may provide opportunities for forest rehabilitation and afforestation as part of government fiscal stimulus and employment generation packages (Nair and Rutt 2009). Private forest owners (individuals, families, enterprises and communities) are likely to have scaled down their investments in forestry and forest management in response to the economic downturn and associated declining wood demand. This suggests that governments should consider including forestry in stimulus packages to ensure that future supplies of products and services are sustained.

Targeted public investments could generate a significant number of new jobs in the forestry sector. Most of this employment would be in rural areas, where it would positively impact on rural poverty. Unemployment and subsistence needs have been major factors contributing to deforestation and especially forest degradation in most countries. Employment in sustainable forest management thus has a double benefit: while it builds the natural asset base, it also reduces the deforestation and degradation that often occur when other income-earning opportunities are absent (Nair and Rutt 2009). Such employment could also strengthen the management of protected areas, improve watersheds, create new urban and peri-urban green zones and reduce the incidence of fire.

Sources of revenue to fund job creation could be derived from climate change-related mechanisms, or supported by national budgets where constraints are less severe. Failure to invest in the natural resource base will, for some countries, herald an end to the 'development subsidy' provided by natural resource abundance. The implications, not only for future employment, but also for national economic growth and environmental security are likely to be highly negative and investments made now will avert spiraling costs in the future.

In all cases, forestry agencies should make maximum use of newly available funding for environmental protection and rehabilitation, especially in relation to climate change adaptation and mitigation. There is unlikely to be another period when investors are so receptive to financing forestry for many years to come.

Enhancing efficiency of raw material/energy use

With the burgeoning demand for various products, it is imperative that the Asia-Pacific region pays greater attention to enhancing efficiency of raw material and energy use. One area that particularly requires attention is improvement in the efficiency of wood energy use. A wide array of technologies is already available and, with greater attention to policies and other incentives, it is possible to significantly improve the output of products and energy. Increased use of wood residues for local processing and energy generation is another area that warrants attention. With increasing markets for wood chips and wood pellets and with small-scale energy generation equipment becoming increasingly affordable, wood energy could not only improve rural livelihoods but, where wood is sustainably produced, reduce carbon emissions.

Further increases in recycling would contribute to meeting growing demand for paper and paper products while reducing the need for expansion of monocultural plantations and harvesting of fibre from natural forests. Some gains in carbon efficiency could also be expected where non-fossil fuel energy supplies are used in paper production.

Governance

There is an overarching need to strengthen governance – in general terms as well as specifically within the forestry sector. Poor governance increases the risks attached to investments; with the term ‘investments’ being used in a very broad sense to encompass the plethora of contributions to forestry development – financial or otherwise. These cover such diverse spheres as overseas development assistance, plantation development, education programmes, carbon sequestration, research facilities, wood processing, forest management, etc. Although transitions in Asia-Pacific economies have taken place with astonishing speed in the past, they have largely been driven by economic imperatives that have sometimes run ahead of capacities for effective governance. Attention to reducing or eradicating corruption including endemic bribery and extortion will be important in improving investor confidence and creating efficient industries.

Increased global attention to governance and moves to block illegally harvested products from entering high paying markets should provide an incentive for greater attention to sustainable and legal production of timber and forest products. If forestry export opportunities are to be maximized, Asia-Pacific governments will need to implement administrative mechanisms that facilitate provision of proof to importers that timber exports comply with national laws and statutes. Governance will also be a critical prerequisite to attracting REDD- and other carbon-financing. Countries with poor governance will be severely disadvantaged in competing for funds, with money gravitating to where investors have confidence.

Table 7.1 lists priorities for the various country clusters in the Asia-Pacific region. Considering the divergence of situations among countries in the same clusters, it is important that these priorities are refined to take into account specific country situations.

Table 7.1. Forestry priorities

Cluster	Priorities
Developed economies	<ul style="list-style-type: none"> • Provision of ecosystem services, especially recreation and carbon sequestration in the context of emission reduction commitments. • Improved processing technologies to produce a wide array of new products (e.g. through biorefineries) and to enhance efficiency in the use of raw materials and energy. • Maintaining competitiveness: (1) of forest industries in the face of high labour costs and reduced natural advantages; and (2) of forestry as an attractive employment option.
Emerging economies	<ul style="list-style-type: none"> • Large-scale afforestation and reforestation to meet growing demands for wood and wood products and ecosystem services. • Increase investments in wood and wood product industries to enhance production and improve efficiency in the use of raw materials and energy. • Improving governance and strengthening investor confidence. • Attracting carbon financing. • Bridge widening rural-urban divides by promoting small and medium forestry enterprises.
Low-income, forest-rich countries	<ul style="list-style-type: none"> • Improve conservation and management of existing forests. • Streamline land-use planning to minimize adverse environmental impacts from unavoidable forest clearance. • Increase investments in value addition. • Policy and institutional reform, especially to ensure that resources are sustainably managed. • Strengthening forest law enforcement and governance. • Attracting carbon financing to the forestry sector.

Low-income, forest-poor countries	<ul style="list-style-type: none"> • Strengthen afforestation and reforestation efforts to enhance natural asset bases. • Integrate tree growing and forest conservation into larger land-use contexts. • Emphasis on forestry to support rural development, including employment generation. • Policy, institutional and governance reform to enhance the involvement of local communities and farmers in improved land management. • Attracting carbon financing.
Small island economies	<ul style="list-style-type: none"> • Improve forest management for the provision of ecosystem services (especially in support of tourism and fisheries). • Integrate forests and trees with other land uses to enhance landscape values. • Identify and develop niche markets for forest products. • Enhance the protection of coastal areas.

STRATEGIES

Most countries have a range of approaches and strategies to accomplish the priorities indicated above. Broadly the key areas that require greatest attention are:

- (a) improvements in policy, legal and institutional frameworks;
- (b) building capacities for grassroots forestry;
- (c) strengthening science and technology capacities;
- (d) improving education and awareness;
- (e) developing societal consensus; and
- (f) strengthening leadership and communication.

Policies and institutional improvements

Policies, legislation and institutional arrangements should empower people to undertake individual and collective actions, helping to resolve conflicts and establish acceptable trade-offs between competing and conflicting objectives. Many sector-focused approaches to policy formulation and institutional development will need to be replaced by more integrated approaches. Issues that will require immediate attention include:

- **Tenure reform.** Tenure will remain one of the core issues in empowerment of local communities and in enabling them to undertake activities that could help address poverty. Many existing policies and pieces of legislation still adopt narrow sectoral approaches that make clear distinctions between forestry and agriculture, and how these are administered and regulated. With the increasing role of land outside forests in producing wood, as well as ecosystem services, traditional approaches and related policies and legislation become less tenable. It is important to visualize situations where most land is owned and managed by smallholders producing most goods and services efficiently. This also entails recognition of the role of informal sectors and creation of enabling conditions within tenure arrangements to shift much of the informal sector into the formal domain.
- **Reform of public sector agencies** with emphasis on facilitation and regulation while shifting managerial functions to the private sector, including farmers and communities. To be successful and remain relevant, institutions need to ensure flexibility, strategic management capabilities, strong 'sensory' capacities and an institutional culture that responds to change (FAO 2008b). Significant effort needs to be focused on strengthening local level institutions (including cooperatives, farmers' associations and community organizations) to manage resources sustainably.

- **Improved land-use planning** and careful management of land conversion programmes. Without political agreement over the position of forestry in national economies and firm plans for designation of areas according to needs and land capabilities, a foundation for investment in a sustainable future will remain underdeveloped. This will have significant repercussions on long-term economic growth. At the same time, enforcement of decisions will need to accompany improved planning. Institutional frameworks will need to correspond to ground-level jurisdictions without leakage and associated inefficiencies becoming endemic. Clear demarcation of permanent forest areas will be an important step for some countries. However, there will be situations where some forest clearance is inevitable. In these cases, it is important that forest land-use changes are carefully planned to minimize adverse environmental impacts and to ensure that land conversion has a net positive welfare impact in the long term. With improved GIS technologies, more systematic planning is feasible, which should lead to reduced adverse consequences.
- **Creating enabling environments.** Forestry in many countries is still too prescriptive and paternal; failing to give people sufficient encouragement to succeed. Policies and legislation need to be structured to ensure they create enabling environments in which incentives reward 'good' behaviours and penalize the 'bad'. Policies that empower people to make decisions to help themselves, through innovation and entrepreneurship, are necessary; while government emphasis should be on regulation to ensure activities are not exploitative or destructive.

Grassroots forestry

The enthusiasm for various topical issues in forestry – poverty alleviation, devolution, climate change, FLEG – can overwhelm the importance of on-the-ground forestry activities. Often the reality in the field is that forest management cannot keep pace with developments in national and international dialogues; at times this may be ignored or go seemingly unnoticed. While theory, science and policy may advance; at the grassroots local levels – where the trees are and where demand for livelihoods, wood and ecosystem services are increasing – lack of capacity and knowledge are often highly constraining.

Consequently, international agreements and policy development need to be accompanied by practical steps towards improvements in forest management. Guidelines and codes of practice are often insufficiently disseminated or adhered to and science and technologies, although developed, often do not make it to the field level. For example, local level fire management is rarely supported despite education and rapid response being the only efficient way to control forest fires. Similarly, lack of forest rangers and guards means that biodiversity losses will continue to occur and carbon stocks will be at greater risk. Reduced impact logging is rarely practiced despite its ecological, economic and social benefits. As such forestry extension and major attention to training, capacity development and enforcement of regulations are sorely needed if hopes are to become realities.

Investments to improve science and technology

Enhancing social and ecological sustainability requires major improvements in science and technology capacities. Resource misuse often stems from absence of knowledge and deficiencies in science and technology capability. To change the current pattern of resource use, stronger inputs from science are necessary. The focus is, however, not so much towards research, but in translating existing knowledge into technologies that use energy and materials more efficiently. Capacity development in the past has largely been focused on economic profitability, while social

and ecological dimensions have largely been ignored. In the context of mounting social and ecological problems, science and technology developments should focus on enhancing resource and energy efficiency, including increased use of renewables. Some of the specific areas that require attention are:

- Improved and affordable techniques for soil and water conservation.
- Improved techniques for afforestation and reforestation and to enhance productivity of existing plantations.
- Greater uptake of reduced impact logging and remote sensing technologies.
- Efficiency in the use of raw materials and energy, especially enhancing efficiency in the use of wood as a source of energy.
- Alternative energy sources (for example solar, wind and fossil fuels) for pockets with acute wood scarcity, where wood energy options are economically and ecologically unviable.
- Reduced disincentives that inhibit (or provision of incentives that stimulate) the development and adaptation of more environmentally- and socially-acceptable technologies.
- Improvements in access to information and linking of farmers and communities with markets.

Investment in human resources

The time scales over which changes in forestry occur and the current lack of skilled human resources in many countries in the region point to a clear need to improve education in a general sense and also to increase awareness in relation to forests and natural resources. The region's growing population and the skew towards younger generations in many countries place greater emphasis on the need for improved education and awareness. Without an 'environmentally smarter' next generation of consumers and decision-makers, it is likely that resources will be irretrievably eroded through population pressure and environmentally sustainable practices will fail.

More immediately, the current lack of human resource capacity in forestry and increasing complexity of forest management, imply that high quality education and training need to be made available to those working in forestry and related disciplines at local, provincial and national levels.

Societal consensus

Continuation and acceleration of efforts towards achieving societal consensus in how forests should be managed, and for which purposes, will be a key element in effective forest management in the coming decade. The core elements of these strategies are well understood including attention to livelihoods, participation, consultation, democratic decision-making and principles of equity. These sit at the core of effective forest management (**Box 7.1**).

Box 7.1	Towards a model of good forest management
<p>An APFC initiative In search of excellence: exemplary forest management in Asia and the Pacific concluded that social and community consensus on how forests should be managed, and for which purposes, underlied and overlay the core components of good forest management:</p> <p>“...various elements of excellence in forest management can be drawn together in a simple model (that)... stresses the importance of inter-relationships between and among a range of components – commitment, resource security, attention to improving livelihoods for local people and/or profitability, sound institutional and management frameworks, attention to silviculture and ecosystem management, and application of sensible management philosophies. The core of the model is anchored on reaching societal consensus with regard to how forests should be managed and what we want from forestry. Overarching the model is a holistic approach to management that recognizes the roles of the forest within broader ecological, economic and socio-cultural systems.”</p> <p>Source: Durst <i>et al.</i> (2005).</p>	

The challenges that confront forestry – with respect to climate change and otherwise – and difficulties in implementing more complex forest policy through centralized mechanisms suggest that much greater inclusion of forestry stakeholders at various levels is necessary.

Traditional forms of forest governance that focus on hierarchical, top-down policy formulation and implementation by the nation state and the use of regulatory policy instruments are insufficiently flexible to meet the challenges posed by climate change (Seppälä et al. 2009).

In support of this goal, greater efforts are required to integrate public opinion into decision-making and build levels of awareness in relation to forests and forestry such that policies are appropriate, widely supported and can be easily implemented with broad community support. Increased attention to national forest programmes can contribute to these aspects.

Leadership and communication

An unfortunate fact in many countries is that forestry, regardless of its economic importance, is accorded relatively low priority within government. The forestry portfolio is often held by relatively junior ministers or as a minor portfolio and forestry departments are usually subsumed within broader ministries for natural resources, environment or rural industries. The forestry environment is also being fragmented by increasing diversity of specialist agendas, which further dilutes the prospects for forestry agencies to provide leadership. In such circumstances, the development of strong advocates and champions for forestry within government is hindered, and the impetus for change is constrained. While strong forestry advocates may arise outside the government, often they are perceived to be pursuing their own interests or narrow agendas. In the Asia-Pacific region, where many cultures promote humility and maintaining consensus, this lack of advocacy and leadership to drive change often appears particularly acute. Even in some of the most ‘successful’ forestry countries, for example China, a lack of sectoral authority is perceived as a significant constraint to forestry programmes (**Box 7.2**).

Box 7.2	Forestry administration in China
<p>An APFC/FAO study on reinventing forestry agencies examined the impacts of institutional restructuring in forestry agencies in Asia and the Pacific. A key finding in China was that:</p> <p>“Powerful forestry administrative organizations are necessary for the revival and development of forestry in China. In the State Council reform of 1998, however, the Ministry of Forestry was downgraded and re-organized as the State Forestry Administration (SFA) and although the state has constantly increased input into forestry to accelerate the pace of development, the SFA seems to lack authority. In addition, the re-organization and lowering of the forestry authority negatively influenced local forestry organizations. Some local governments abolished or incorporated their forestry organizations into other institutions and this resulted in numerous difficulties in forestry development.”</p> <p>Source: Zhang (2008).</p>	

Communication is very much at the heart of this issue and it is ironic that foresters may often be more inclined to retreat from the hue and cry and make for the woods. Nonetheless, it is of great importance that foresters learn how to better communicate to politicians and the public the importance of forests and related goals. Globally, and within the region, governments and larger organizations have employed communication specialists to bring key messages to wider audiences. With the current high profile of forestry, greater investment in communications may be warranted.

In all, a major challenge for forestry is to strengthen its sectoral profile and to develop more powerful champions, advocates and leaders. While some of this development undoubtedly comes through intangible factors, it could be promoted through provision of specialized training opportunities, greater encouragement and empowerment of staff, and significant institutional culture changes. This is important at all levels of forestry, but the emergence of more eloquent and powerful leaders and advocates at national and international levels could be a major driving force to shift forestry onto ‘greener’, better and more sustainable pathways.

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In the twelve years since the first Asia-Pacific Forestry Sector Outlook Study was completed in 1998, the region has experienced tremendous changes in nearly every aspect. These changes have been particularly profound in the forestry sector, where society has dramatically increased its demands and expanded its expectations of forests and forestry. This publication summarizes the key findings and results of the second Asia-Pacific Forestry Sector Outlook Study – a comprehensive effort spanning nearly four years and involving all member countries of the Asia-Pacific Forestry Commission. The current report synthesizes observations and findings from almost 50 country and thematic reports in providing analyses of the status and trends of all aspects of Asia-Pacific forestry. The publication also analyzes key factors driving changes in forestry in the region and sets out three scenarios for 2020: "Boom", "Bust" and "Green Economy". The report concludes by outlining priorities and strategies to move the region's forestry sector onto a more sustainable footing and to provide continued benefits to future generations.