



Tree root improvement, Kazakhstan

M. UEMOTO

5. The future of the forest sector

The previous chapter examined several factors that collectively influence the forest situation in the West and Central Asia region. Considering the many possibilities, the uncertainties characteristic of dealing with long-time horizons and the limitations of data on key determinants of change, it is difficult to envisage all the possible developments. It is possible, however, to point out the broad paths of developments and to identify the general nature of interventions that are required to improve the situation. This chapter focuses on identifying the future direction of changes that arise from the collective impact of various driving forces and what can be done to address the emerging challenges and opportunities.

Traditionally, econometric models are used to forecast future production and consumption, largely relying on a limited number of easily measurable parameters. While this approach is quite important, in societies undergoing fundamental transition a broader approach is warranted. Uncertainties, characteristic of long time horizons, make econometric approaches less reliable. Taking a broader approach is especially useful in situations where the information base is extremely weak, as with the forestry sector.

Therefore, increasingly, long-term outlook studies adopt scenario-planning approaches, combining quantitative and qualitative methods (see Box 5.1). More importantly, scenario approaches encourage stakeholders and society at large to visualize the likely paths of development, and in the process help develop a collective vision of how the future should be and what may be done to improve it. Scenario planning is particularly useful in addressing uncertainties and for analysing the options available in the context of unanticipated developments.

Scenario approaches have been widely used at various levels – addressing issues at the sectoral, local, national, regional and global levels. One of the earliest efforts of scenario planning was used in the oil sector, and assessed the interaction

BOX 5.1
Scenarios – definition

Scenarios are plausible, challenging and relevant stories about how the future might unfold that can be told in both words and numbers. Scenarios are not forecasts, projections or predictions. They are about envisioning future pathways and accounting for critical uncertainties.

Source: Millennium Ecosystem Assessment, 2005.

between prices, demand, investments in finding new reserves, technological developments in exploration and processing, and political changes (see Shell International, 2001, for a more recent analysis). Most recently, the Millennium Ecosystem Assessment used the scenario approach to assess the implications of four alternative paths of development (global orchestration, order from strength, technogarden and adapting mosaic) on key ecosystem parameters, adopting a time frame to 2050. Recently the United Nations Development Programme adopted the scenario approach in the preparation of the Arab Human Development Report (see Box 5.2). The Forestry Outlook Study for Africa (FAO, 2003) and the European Forestry Sector Outlook Study (UNECE/FAO, 2005) used scenario approaches to outline priorities and strategies in the forest sector in their respective regions.

DEFINING FORESTRY SCENARIOS FOR THE WEST AND CENTRAL ASIA REGION

The first step in defining scenarios is identifying the driving forces that will have a critical influence on future developments and how they are likely to evolve over time. Of the two broad groups of factors – internal and external – that were discussed in Chapter 4, the internal factors appear to be more influential in the development of the forest sector. No doubt, the external factors such as competition for securing energy supplies and the attendant developments in geopolitics, global environmental issues and changing patterns of global trade have some bearing on the domestic political and economic situation in the countries and consequently on forests and forestry. Their overall impact,

BOX 5.2. Arab human development scenarios

The Arab Human Development Report 2004 identifies three scenarios: maintaining the status quo; the "Izdihar" alternative (the ideal scenario); and the "Half-Way House". According to the authors, maintaining the status quo would lead to intensified conflict, especially destructive upheavals, and if this were to happen the future of human development would be severely undermined. The Izdihar scenario involves a process of peaceful negotiation on the redistribution of power, safeguarding freedom for all, effective political participation, efficient institutions that are transparent and accountable, and an independent judiciary. The third alternative envisages gradual and moderate reforms, which is a pragmatic approach to make the best of regional and international initiatives, giving due consideration to Arab ownership and leadership, adherence to international human rights, inclusion of all societal forces and respect for outcomes freely chosen by the people.

Source: UNDP, 2005a.

however, largely depends on the internal conditions; therefore, for the purpose of this study scenarios will be identified based on the internal factors.

Among the various internal driving forces, some are more predictable than others. For example, because substantial information is available about demographic changes (especially the changes in the total population, rate of urbanization and age structure), predicting future demographic trends is relatively easy. Technological and environmental changes are more uncertain, and they impact society in the long term. Over horizons of 10 to 20 years, it is possible to provide some reasonable indication of the nature of technological and environmental changes and their implications. If major changes occur, the main concern would be to adapt policy and institutions accordingly.

Uncertainties are particularly serious in two areas: economic performance and policy and institutional changes. Changes in these two interlinked areas tend to have far-reaching impacts on the forest sector. Therefore, these two broad groups of drivers are used to define the scenarios to assess the future direction of developments in the forest sector.

Economic performance

Within the West and Central Asia region, there is considerable divergence in the economic situation as well as the dynamics of development. Important components of economic performance include:

- current level of gross domestic product and its growth rate;
- income distribution and extent of poverty;
- external debt, development assistance and foreign direct investment;
- development of internal and external markets and the growth of trade;
- structural shifts in the economies and changes in the relative importance of different sectors;
- technological changes and their influence on production efficiency.

Several countries in the region have relatively high per capita income, income growth exceeds that of the population, economies are diversified and efforts are under way to reduce disparities in income. However, some countries are at the other end of the scale, and income distribution remains highly skewed even in countries that have relatively high per capita income. The dependence on income from the oil sector makes a number of countries highly vulnerable to changes in fossil fuel prices. However a number of countries are striving to diversify their economies through investing in agriculture, industries and the services sector, including tourism.

Regional economic cooperation is expected to have a significant impact on a number of economies in the region. Cyprus became a member of the European Union in 2004, and negotiations for Turkey's accession were launched in October 2005, although uncertainties remain. Membership in the European Union will have significant impacts, especially the access to European Union markets, increased flow of investments, labour mobility, access to technologies, and above all European Union support for a number of activities. Membership

also implies adherence to common policies, strategies and rules and regulations. There are also a number of other regional economic cooperation agreements with differing potentials, and the benefits from these agreements will largely depend on the overall economic and institutional strengths of the regional grouping.

While the overall situation in each country tends to be very specific with varying levels of economic performance, for the purpose of analysis the following economic scenarios have been identified:

- Countries such as Cyprus, the Islamic Republic of Iran, Kazakhstan and Turkey are making substantial progress in developing stable, diversified economies and thus they will be able to take advantage of emerging opportunities and challenges. Many have also implemented wider policy reforms that help to reduce inequality and poverty.
- A number of countries (for example, Kuwait, Oman, Saudi Arabia and Turkmenistan) are highly dependent on the oil and natural gas sector for their economic growth, although diversification efforts are under way for many of them. Although the world is still a long time away from reducing its dependence on oil, these economies are vulnerable to changes in global energy markets. Dominance of one sector has to some extent undermined the viability of some of the traditional sectors, which are sometimes largely dependent on a high level of subsidies. Unbalanced development has also brought about inequitable distribution of income, mostly due to policy and institutional limitations.
- The third cluster includes those countries facing serious economic difficulties, characterized by low incomes and poor growth rates. Many of them, for example Afghanistan and Yemen, have very limited natural resources. Human capital remains poorly developed owing to low investments in education and health care. The high level of poverty makes domestic resource mobilization extremely difficult, and increases dependence on external support. Unless some unanticipated developments take place – discovery of a large oil or natural gas reserve, for example – low income and poverty are likely to persist.

Instability arising from conflicts is a major factor that affects the economic performance of a number of countries in the region. While the fossil fuel resources are a major driver of economic growth, conflicts stemming from competition to control these resources undermine social and economic development. Conflicts arising from ethnic differences and competition over other natural resources, especially water, have also led to considerable instability in the region.

Policy and institutional environment

The policy and institutional environment is another critical dimension that will influence future forestry scenarios. Even how the future economic situation unfolds will be largely determined by the institutional environment. Some key components of the policy and institutional dimension include:

- nature of government (how government is formed and changed) and government policies;
- governance and transparency;
- ability/competence of government institutions;
- development of private sector and civil society organizations;
- state of community organizations;
- development of market institutions;
- relationship between different institutions and their ability to resolve conflicts.

The policy and institutional situation in the countries differ considerably. In a number of countries, governments are formed through democratic processes, while in others people's participation in governments remains limited. However, the situation is changing and, slowly, elected representatives are having a say in the local administrations of a number of countries. Recently, women have been granted voting rights in some of the countries and this is seen as a step forward to larger changes. In many Central Asian and Caucasus countries, governments still function largely under the pre-independence framework, although popular uprisings have triggered some changes.

The policy and institutional scenario in the region for the next two decades will be extremely varied. While some countries have effectively established democratic institutions, others are still far from accomplishing such a transition.

Public sector. The public sector remains the most dominant institution in all aspects of economic life in most countries. However, public sector effectiveness varies significantly:

- In some countries, the public sector controls the key sectors and often prevents the development of alternative institutional arrangements. This occurs primarily when authoritarian governments are in power. In this case, almost all other institutions become highly dependent on government agencies and somewhat prevents them from providing alternative views on, or approaches to, addressing developmental issues.
- There are situations where *de jure* power is vested with public sector institutions, but in view of the limited human, financial and organizational resources they are often unable to carry out their functions. Such situations have often led to the emergence of informal institutional arrangements.
- A more appropriate development would be where the public sector plays a facilitating role, laying down the policy and legal framework and ensuring a level playing field to enable other actors – private sector, civil society organizations, community groups – to perform effectively.

Private sector. As with the public sector, the development of the private sector could also take different paths. There are instances where the private sector has a very limited role, particularly when all key economic activities are under government control. It is also easy to imagine, however, a situation where the

private sector dominates all spheres of economic activity without the proper mechanisms in place to regulate their functioning, especially to ensure that market mechanisms contribute to accomplishing broader social objectives. Privatization has been a thrust area of economic policy reforms in some countries, especially those that had been under centralized planning. However, the lack of transparency in the privatization process has led to powerful vested interests appropriating public assets.

Civil society organizations. The development of civil society organizations also faces similar problems. For the most part, civil society organizations are not well developed or almost non-existent in many countries of the region. The organizations that do exist are often highly dependent on governments or international organizations for funding. Their responsibilities involve such tasks as environmental education or creation of public awareness, always with the support of the government and other organizations. While civil society organizations have the potential to provide an alternative perception of social and economic development, their ability to do so is constrained in many countries.

Community organizations. There could be situations where traditional institutional arrangements – community groups, tribal protectorates, committees of village elders, shuras – play important political, social and economic functions at the local level. Mostly these situations arise when governments and private-sector institutions are less developed and ineffective. As other formal institutional arrangements emerge and local economies become increasingly integrated into national and global economies, traditional institutions become weaker and often fade into irrelevance. However, they do remain important under certain situations.

A desirable situation. An ideal situation would be where a mix of institutions play different but complementary roles. Largely this depends on the overall political and social environment. In more open democratic societies, the private sector and community organizations play an important role in various economic and social spheres. In general, economic activities are typically in the realm of the private sector, while the public sector provides the necessary policy and legal frameworks. NGOs are particularly active in the social and environmental spheres, ensuring that these aspects are not sidelined by the government and the private sector. They also play an important role in improving efficiency and transparency in the functioning of private and government institutions.

The policy and institutional scenario in the West and Central Asia region will, therefore, be extremely varied in the next two decades. Some countries will experience a more balanced development with a mix of well-developed and efficient institutions while others may be far away from that goal. In a few countries, the public sector will remain the most important institutional entity, even though it may not be able to function efficiently. Traditional community-

level organizations, though declining, may still remain important in local resource management, especially when formal institutional mechanisms are ineffective. It is also important to understand the potential for conflicts between different institutional arrangements, especially between tribal community arrangements and the more centralized government institutions.

The internal institutional environment, to some extent, will also be influenced by the values, objectives and strategies of external agencies, including international organizations operating in the countries. The extent of this influence largely depends on the overall internal economic and institutional environment. Strong national institutions will be in a better position to channel external assistance effectively. In the absence of effective internal institutional arrangements, external support could be dominated by donor agenda and priorities, with all their attendant problems.

ECONOMIC AND INSTITUTIONAL SCENARIOS

A number of possible scenarios have been developed to show the current and anticipated changes in the economic situation and the probable direction of institutional development. They are presented in Table 5.1, and then examined more closely with regard to their influence on forests and forestry.

Balanced development

The “balanced development” scenario is largely an outcome of a combination of effective pluralistic institutions and favourable economic conditions (see Box 5.3). Countries are implementing various measures to develop highly diversified economies in order to reduce their vulnerability to other factors. Economic reforms that promote savings and investments and that bring rapid growth are in place. The benefits from such growth reach all levels, helping to significantly reduce poverty. Policies and programmes specifically aimed to bridge the rural-urban divide and rich-poor gap are extremely effective. Realizing that globalization is rapidly altering competitiveness, countries are investing in education at all levels to improve human capital and are positioning themselves to take advantage of emerging opportunities and facing the challenges. Research and development efforts also receive substantial support, enabling countries to develop and adopt appropriate technologies.

Stable and rapid economic growth under the “balanced development” scenario is largely based on the existence of a highly pluralistic institutional environment.

TABLE 5.1.
Economic and institutional scenarios in the region

| Scenario | Economic situation | Institutional development |
|-----------------------------------|---|--|
| Balanced development | Sustained, stable and equitable growth | Well-developed institutional framework |
| Unbalanced development | Rapid growth, but inequitable and not diversified | Inadequately developed institutions |
| Struggling to achieve development | Low income and low growth rates | Limited institutional capacity |

BOX 5.3

Key characteristics of the “balanced development” scenario

- rapid growth of the economy and improvement in the distribution of income, resulting in dramatically reduced poverty
- high level of investments in human and physical capital, increasing the competitiveness of the countries
- diversification of the economies with increased efforts to develop the industrial and services sectors, helping to reduce the direct and indirect pressure on land and other natural resources
- a highly pluralistic institutional environment
- active civil society organizations with the necessary ability to take up issues of public concern
- effective public and private institutions that function impartially and transparently, ensuring a level playing field
- ability to adapt and to influence the globalization process

Political and institutional systems are democratic and ensure equity and justice. Transparent and just rules and regulations implemented effectively provide a favourable environment for rapid economic growth. High investment in education and health care improves the quality of human resources. Poverty declines rapidly and, to that extent, the dependence on unsustainable natural resource uses diminishes dramatically. Willingness of the society to meet the costs of maintaining environmental quality is high.

Countries under the “balanced development” scenario are able to build effective bridges across national borders. Many of them actively participate in the global and regional economic cooperation agreements and are better able to address external shocks. Regional cooperation agreements and the institutions supporting them are effective and are able to boost cooperation, minimizing conflicts. Trade is liberalized, but there are adequate international and national arrangements to ensure a win-win situation.

Forests and forestry under “balanced development” scenario. Evidently the “balanced development” scenario is highly favourable for the development of the forestry sector, though it may remain a minor sector in the economy. Some of the key features of forests and forestry under this scenario are:

- wider recognition of the multiple value of forests resulting in a balanced emphasis on their production, protection, and social and cultural benefits;
- substantial emphasis on the environmental value of forests, with particular attention on amenity and recreational uses;
- wider application of integrated management of natural resources helping to minimize resource-use conflicts;

- as a broad-based economy emerges and agriculture production is intensified, the pressure on forests declines substantially, stabilizing and improving the forest situation;
- improved efficiency in the production and processing of wood and other forest products (especially through the application of productivity enhancing and resource-saving technologies);
- public forestry institutions are able to play an effective facilitating role, supporting other actors, especially the private sector, community groups and civil society organizations;
- well-developed private sector that operates according to broader policies and legislation;
- civil society organizations play a lead role in mobilizing support for rational and sustainable use of resources ensuring efficiency and equity;
- all these together improve the forestry situation significantly, enhancing the flow of goods and services.

Unbalanced development

The “unbalanced development” scenario is characterized by rapid but unbalanced economic growth and, more importantly, persistent weaknesses in the institutional framework. Important features of this scenario are:

- Overall economic performance is highly dependent on the growth of one or a few sectors, which directly and indirectly accounts for a major share of the national income. For example, in the West and Central Asia region extraction of oil and natural gas remains the main engine of economic growth.
- As substantial surpluses are generated from the export of oil and natural gas, the development of other sectors are neglected. Viability of traditional sectors such as agriculture and animal husbandry are undermined because of cheaper imports.
- High dependence on natural capital disregards the development of human capital. In general, there is a tendency to neglect investments in education and building up appropriate skills. As a consequence, there is high dependency on imported labour (skilled and unskilled), with high levels of local-level unemployment.
- Very few countries in the “unbalanced development” are investing in research and development and enhancing domestic innovation. There is a high level of dependency with imported technologies (as this is easier in the short term) and this in a way undermines development of indigenous science and technology capabilities, which is critical for long-term economic progress.
- Many countries are striving to diversify the economic base through subsidizing the development of other sectors. But such subsidies promote inefficiencies and will be unsustainable in the long term.
- High surpluses generated by the dominant sectors also results in high-income disparities. Those who control or have access to resources receive most of the income, while those dependent on traditional low-income sectors tend to remain poor.

Many of the problems under the “unbalanced development” scenario come from serious institutional weaknesses. While economic growth has been rapid, policy and institutional development has lagged behind, and frequently the dominance of one sector and the institutions associated with it undermines broader institutional evolution.

Forestry situation under the “unbalanced development” scenario. The key characteristics of the forestry sector under this scenario are:

- Forests and forestry are not seen as an important sector deserving attention, generally because policy-makers and planners are more focused on the other high income-generating sectors. Even when there is emphasis on enhancing self-reliance, attention is focused on agriculture and animal husbandry rather than forests and forestry.
- High income enables countries to import most wood and wood products. The long-term nature of forestry investments make domestic wood production less attractive compared with alternatives that have short pay-back periods.
- Some segments of society, especially in rural areas, are excluded from benefiting from the rapid growth of the economy and continue to depend on forests for wood and other forest products. Their ability to invest in improved management is limited, resulting in resource degradation. Formal institutions also remain weak and are unable to adopt sustainable management practices.
- Rapid development of infrastructure (especially roads) and urban expansion often adversely affects forests, including through outright clearance or degradation. In addition, insufficient attention is given to assess the environmental impacts of large-scale investments and to adopt preventive or mitigation measures.
- A similar situation often develops in the context of large-scale agricultural and related infrastructure development, which results in desertification, soil erosion and deposition of toxic salts. Preventive and mitigation measures receive inadequate attention.
- As income increases, there is increased pressure for recreational use of forests and woodlands; however, in the absence of significant improvements in management, intensive use could result in site degradation and consequent decline in recreational benefits.
- In view of the importance of enhancing the amenity value of urban areas (especially since a significant share of economic activity is concentrated in urban areas), urban and peri-urban forestry are receiving some attention.
- Formal forestry institutions – forestry agencies, education, training and research institutions – are not well developed. Because forestry is not a core sector, it seldom attracts the required human and financial resources.

Struggling to achieve development

This scenario represents a highly unfavourable economic and institutional situation. Several countries in the West and Central Asia region are making efforts

to tackle slow development. Political upheavals of the past have led to precipitous economic decline and collapse of institutions. Some of the Central Asian and Caucasus countries have been more successful in rebuilding their economies, but some others have economies that are yet to grow out of the post-Soviet period decline.

Poorly developed human and natural resources are the fundamental reason for persistent lags in development. Unfavourable climatic conditions limit the development of agriculture or animal husbandry. Low income has also undermined the development of human skills and technological improvements. Resource constraints are becoming critical, especially in the context of high population growth rates. Remittance from employment in other countries has become an important source of income for some of the countries and this has led to substantial migration.

As with the economic situation, policy and institutional development also remains stagnant. Many countries under this scenario have vestiges of old organizations, but with substantially reduced ability to discharge their responsibilities. The overall economic decline has reduced the human and financial resources available to them. In many cases, there is frequent organizational reshuffling without any adequate efforts to understand the more fundamental problems. Public-sector organizations dominate, and often an alternative system that would be able to deliver public services efficiently is not in place. Market-based institutions are poorly developed and often economic liberalization in the absence of adequate public oversight and transparency have led to the emergence of powerful vested interests which have been able to appropriate public resources, taking advantage of the reform processes.

The unfavourable economic situation undermines the development of viable formal institutions. In the meantime, some traditional institutions will continue to exert their authority, although often with limited impact. At the local level, traditional community-based organizations (e.g. tribal committees, shuras) remain more important. They are often in a better position to provide the services required by the public, and more importantly some social stability. While these traditional organizations play a vital role in resource management, in certain situations they face a number of constraints when dealing with larger issues, especially in the context of increased interaction with the outside world.

Forests and forestry under the “struggling to achieve development” scenario. Obviously, this represents the worst-case scenario for forests and forestry, resulting in the following situation.

- In view of the weak economic situation and high population pressure, forests are subjected to intense pressures, such as the conversion of forests to agriculture, intense grazing and the widespread collection of timber, woodfuel and non-wood forest products.
- In regions where valuable forests exist, unsustainable logging takes place, although forests in this regard could often be an important source of income

to the government. Institutional weaknesses results in illegal logging and the consequent loss of potential income.

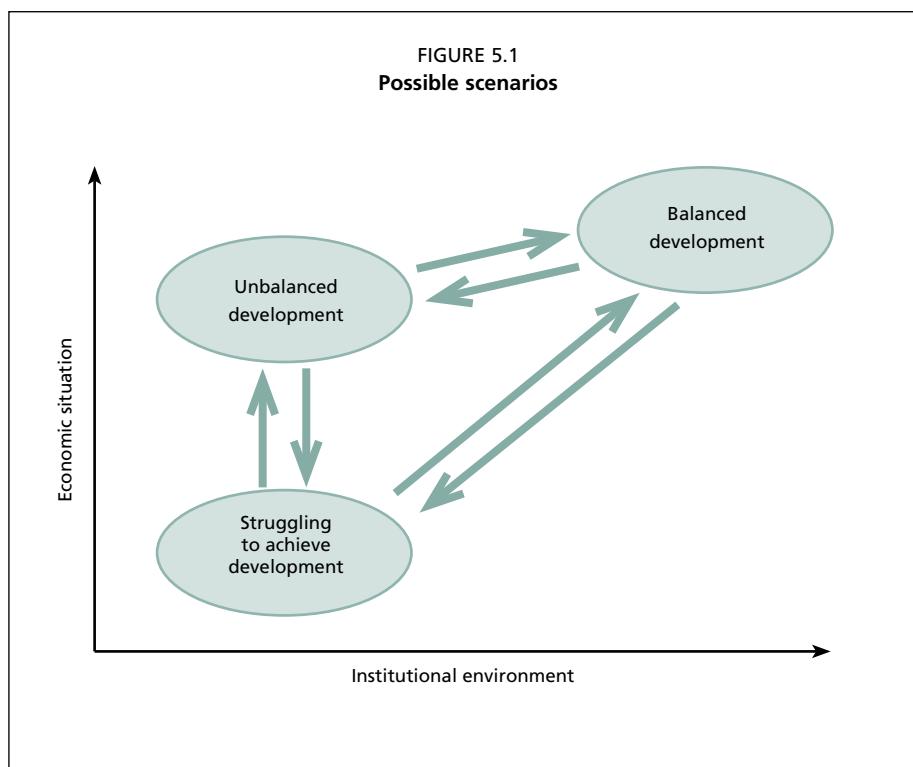
- Degradation and desertification of land continues to be a serious problem.
- Loss of biodiversity persists.
- Forestry agencies are poorly developed and have very limited capacity in terms of human and financial resources. Often formal institutions built on the basis of external support remain unsustainable.
- The ability of governments to mobilize resources (through taxes and other means) remains constrained and consequently they are unable to allocate resources to forestry because of other priorities such as agriculture, education, health care and infrastructure.
- Forestry development is often largely dependent on external support, but even well-intentioned interventions are often unsustainable, especially in the context of limited national capacity.
- Vestiges of local community organizations exist, and in some cases they are in a better position to exercise control over local resource management.

EVOLUTION OF SCENARIOS

The three scenarios represent a broad range of possibilities within the economic and institutional dimensions. A country's position among the many possible situations depends on the state of development of its economy and institutions (Figure 5.1). Depending on the economic and institutional changes a country may move in any direction.

As illustrated in the diagram, the “balanced development” scenario represents an idealistic vision under which economic and institutional development are balanced, offering substantial stability and capacity to address unanticipated changes. The vibrancy of institutions helps countries to overcome internal and external problems. Economic stability is ensured through balanced development of all key sectors. However, it is important to note that sustaining this scenario requires persistent efforts by all stakeholders. Especially in a highly globalized environment, competitive advantages may change rapidly and the system has to anticipate and respond to such changes; otherwise, there is a danger that it could decline to “unbalanced development” or even sharply revert to “struggling to achieve development”, as the diagram shows.

The “unbalanced development” scenario could in the long term move towards the scenario “balanced development” provided substantial efforts are made to improve the institutional environment. Creating an enabling environment to encourage the full involvement of all actors is crucial. On the economic front, the emphasis should be on diversifying the economy, improving the distribution of income and enhancing long-term stability. Failures in achieving these objectives could have consequences in the economic situation, pushing the countries towards the “struggling to achieve development” scenario. Such a decline could also result from external factors, such as external interventions or the rapid



reduction in the price of commodities and products that are critical to economic growth.

“Struggling to achieve development” is probably the most difficult scenario to address, especially in view of the mutually reinforcing weaknesses in the economic and institutional fronts. In many cases, the situation could remain unchanged for a long period of time, especially when broad-based long-term external support is lacking. Emphasis needs to be given to address poverty and deprivation through appropriate resource management practices and giving due attention to distributing the benefits in an equitable manner. Building up human capital and nurturing institutions that can be sustained by the economy are two other important measures that would improve the situation. Systematic efforts could help to build up the economy and institutions in a balanced way, enabling a gradual move towards the “balanced development” scenario, although this development could take years.

IMPLICATIONS OF THE SCENARIOS ON FORESTRY IN 2020

The overall forestry situation in West and Central Asia in 2020 will largely depend on the proportion of countries in the different scenarios; therefore, it is extremely difficult to provide a clear indication of what may happen in the region as a whole. The situation that could emerge in the next 15 years will be as diverse

as it is today, although the outcome will depend on overall efforts to bring about economic and institutional changes. The ideal situation would have the most countries in the “balanced development” scenario, fewer “struggling to achieve development”, and significant institutional improvements to move countries out of the “unbalanced development” scenario. Some broad patterns of change can be visualized with respect to key parameters, especially with regard to the state of forests (especially their condition) and the demand for wood and wood products, but also for the various environmental services.

Forest cover, afforestation and sustainable management

On the whole, the region’s forest cover is expected to increase in most countries because the importance of agriculture (including animal husbandry) as the main source of income and employment is declining. Increasing urbanization and the development of the manufacturing and services sectors could see a reversal of agriculture expansion. There will also be some increase in afforestation and reforestation that will help to compensate for the loss of forests, although not for the loss of biodiversity. The likely exceptions would be countries such as Afghanistan, Kyrgyzstan, Tajikistan and Yemen, where a sizeable population will still be rural and dependent on agriculture and animal husbandry. The problem will remain very serious in countries with high population growth rates, particularly Afghanistan and Yemen. The continuing political instability in some of the countries is likely to worsen the situation.

Degradation will be a major problem that several countries – including but not limited to those with low forest cover – have to confront. Countries with substantial forest cover (Georgia, for example) might see increases in timber exploitation – both legal and illegal. Poorly developed institutional capacity will remain an important constraint in the improvement of forest management for most countries (see Box 5.4). In several low forest cover countries some improvement in forest cover could be expected, especially in the context of increased urbanization and reduction in the dependence on land.

BOX 5.4

Saudi Arabia: declining state of forests

Poor institutional structure and lack of professional foresters are among the main reasons for deterioration of some of the forest regions... If the current forest status persists, many of the South Western regions of the Kingdom will particularly witness serious environmental problems due to loss in green cover which leads to lasting environmental, social and economic problems in the region.

Source: FOWECA country outlook paper, Saudi Arabia.

In most countries, the extent of natural forests is likely to remain stable and there will be some increase owing to continued reforestation and afforestation efforts. Most of the afforestation efforts will be focused on environmental improvement, especially with establishing shelterbelts and windbreaks and creating urban green spaces. Economically better-off countries, especially those seeking to diversify their economic base, are expected to pay greater attention to improving the urban environment. There could be some situations where agriculture is abandoned because of declining interest, especially as opportunities in other sectors increase.

Several countries are implementing afforestation and reforestation programmes to address specific environmental problems; one such programme has been implemented in the Aral Sea area. The future of such initiatives will to some extent depend on regional and subregional cooperation and, more importantly, to the availability of financial and technical resources. Currently, some of the region's major afforestation programmes – the Aral Sea Programme for instance – are dependent on external support. Sustaining this in the long term depends on internal resource mobilization; however, only a few countries (e.g. Kazakhstan) have the potential for raising resources domestically.

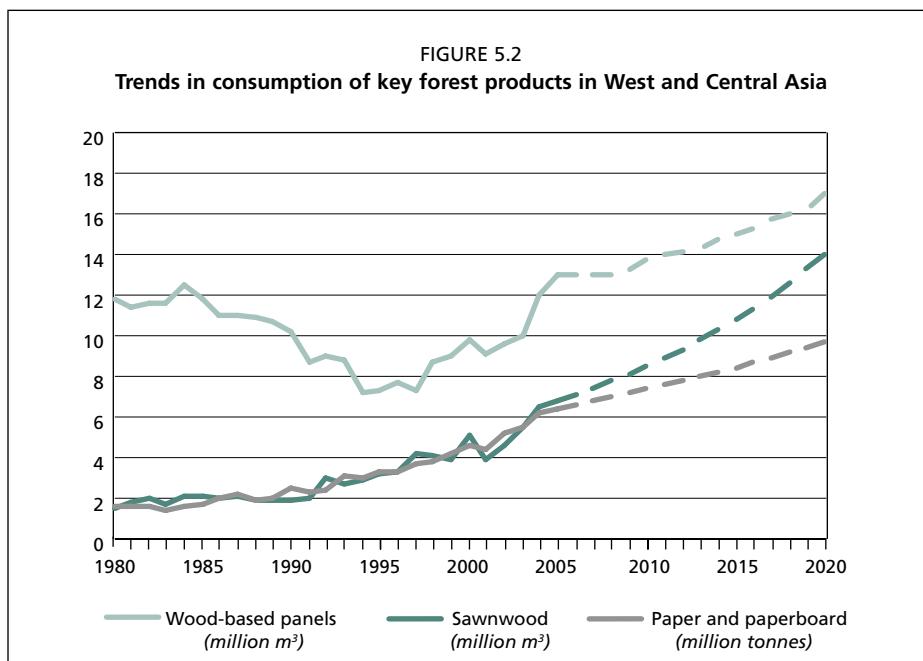
Although there may be some increase in forest cover, the ability of the countries to implement sustainable forest management will remain limited. This would require significant investments, especially to improve policy and institutional arrangements, including technical capacities. Without these investments, the area of forests and woodlands covered by sustainable management is likely to remain negligible, and problems such as forest fires are expected to worsen.

Wood and wood products consumption and supply

The consumption of wood and wood products is likely to increase in the entire region as lifestyles change and population, incomes and urbanization increase. Figure 5.2 illustrates the projected consumption of sawnwood, wood-based panels, and paper and paper products to the year 2020.

During the next 15 years, consumption is expected to grow at an average annual rate of 3 to 4 percent for sawnwood and 4 to 5 percent for wood-based panels and paper and paperboard. Faster growth (in relative terms) is expected in Central Asia, whose economies have recovered in recent years. Currently, the region is a net importer of forest products, exceeding about US\$12 billion in 2004, and this is likely to double in real terms over the next 15 years. West and Central Asia will remain one of the most important net global forest products importing region, mostly because of its extremely poor resource base.

The scope for enhancing raw material supply from within the region is extremely limited and most of the demand will be met by increased imports from outside the region (mainly Europe, including the Russian Federation, followed by Southeast Asia). In view of the low productivity, wood production will not be competitive in most countries (see Boxes 5.5 and 5.6). Some strategically located countries that have a large domestic market (Iran and Turkey, for example) will



BOX 5.5
Economic viability of wood production, Lebanon

Like all Mediterranean countries, the wood produced in Lebanon is generally of low quality. It is therefore unlikely to see investments in the field of wood production, unless intensive forest plantations are developed. Even in the case of intensive forest plantations, the wood production in Lebanon will not be able to compete with other wood sources.

Source: FOWECA country outlook paper, Lebanon.

BOX 5.6
Economic viability of wood production, Syrian Arab Republic

The natural forests in Syria have no appreciable economic importance in respect of timber production. Most of the wood production is consumed in the form of firewood or utilized in the production of charcoal.

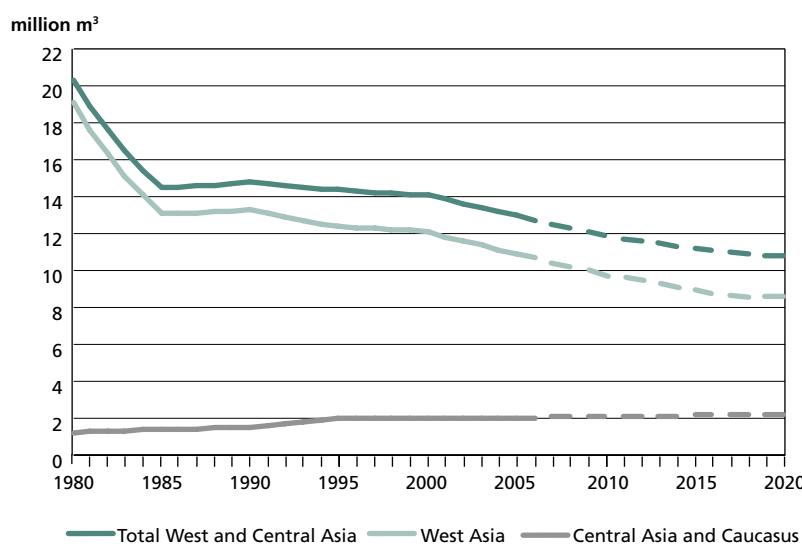
Source: FOWECA country outlook paper, Syrian Arab Republic.

be in a better position to develop forest industries based on imported industrial roundwood. A rapidly growing paper industry (mainly tissue paper and corrugated case material) has also arisen in the Gulf Cooperation Council (GCC) countries, largely based on imported wastepaper (Mubin, 2004). Iran and Turkey have also experienced a rapid growth in the panel and pulp and paper production sectors. The declining profitability of the wood industry in Europe could further speed up the relocation of industries, to the advantage of some of the countries in the West and Central Asia region – those of course that have low labour costs, a stable investment climate and access to wood supplies. Although most countries may not have any natural advantage in producing wood, they may still be in a position to develop wood industries through their competitive advantage.

Woodfuel consumption

Woodfuel consumption is expected to decline over the next 15 years, especially in view of the improved access to commercial fuels (from higher incomes and increases in the urban population). For the region as a whole, woodfuel consumption declined from about 17.4 million m³ in 1980 to about 13.1 million m³ in 2000 and is expected to keep declining, as shown in Figure 5.3 (Broadhead, Bahdon and Whiteman, 2001). There will of course be substantial intercountry variation because of the differences in the driving forces. For example, woodfuel consumption is expected to increase in Afghanistan and Yemen in West Asia, and Uzbekistan and Tajikistan in Central Asia. Considering the weaknesses in consumption data, these need to be treated as indicative.

FIGURE 5.3
Trends in woodfuel consumption, 1980–2020



Provision of environmental services

Considering the general upward trend in income in most countries, an increase in the demand for environmental services is inevitable. Development of urban green spaces and recreational facilities will receive considerable attention. Ecotourism, in which forests and woodlands form an important component, is also expected to grow rapidly but this, however, depends on the improvements made in the transport and communications sectors, political stability and improved security. Forests and woodlands close to urban areas will be subjected to intense recreational pressure. Unless concerted efforts are made to manage forest recreation, there will be a substantial decline in the resource base and a deterioration of recreational value. Especially in many of the West Asian countries, demand will increase to such an extent as to cause severe degradation if adequate efforts are not made to regulate recreational use.

The demand for protection of agricultural land and habitations from desertification and land degradation will also increase, resulting in higher investments in the establishment of shelterbelts and windbreaks. Much of this will, however, depend on the ability of the key players, namely governments and farmers, to make such investments. The prospects of an increase in the efforts would therefore vary between countries. In many low-income countries, expanding programmes to arrest desertification would be rather very slow and will depend very much on external funding. There will, however, be other countries that are economically well-off and hence will be able to meet the growing demand for environmental protection.

SUMMARY: OUTLOOK FOR THE FUTURE

Considering the current low forest cover situation and the ongoing afforestation and reforestation efforts, forest cover in the West and Central Asia region is likely to increase. The net increase in forest cover is largely due to increased investments in afforestation. However, degradation, together with the loss of biodiversity and desertification, is likely to persist in many countries. Urban forestry is expected to receive more attention, especially in the more economically better-off countries. Most of the demand for wood and wood products will be met through imports, which is expected to increase in response to the growth of population, higher incomes and urbanization. In view of the high proportion of population in the younger age group, housing needs will surge in the coming years resulting in continued growth of demand for construction material, furniture, etc. These will be met almost entirely through increased imports and will not have any backward linkages resulting in increased domestic wood production.

Provision of environmental services will however remain the most important functions of forests and woodlands. In addition to the demand for urban green spaces, the demand for recreation will increase substantially, especially as a result of the increase in tourism. Other environmental service that requires particular attention is the protection of agriculture and habitations from desertification and sand encroachment.

Priorities and strategies for the forestry sector will have to be carefully crafted taking into account the overall social and economic scenario. In the short term, given the economic and institutional constraints, the options available to a number of countries may be rather limited. Nevertheless, it is still possible to identify measures to improve the situation, accepting the current level of constraints; these are discussed in the next chapter.