

Greening cities for improving urban livelihoods:

**Legal, policy and institutional aspects of urban and peri-urban forestry in West and Central Asia
(with a case study of Armenia)**



Lidija Knuth

2006



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Livelihood Support Programme (LSP)

An inter-departmental programme for improving support for enhancing livelihoods of the rural poor.

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The Livelihood Support Programme

The Livelihood Support Programme (LSP) evolved from the belief that FAO could have a greater impact on reducing poverty and food insecurity, if its wealth of talent and experience were integrated into a more flexible and demand-responsive team approach.

The LSP works through teams of FAO staff members, who are attracted to specific themes being worked on in a sustainable livelihoods context. These cross-departmental and cross-disciplinary teams act to integrate sustainable livelihoods principles in FAO's work, at headquarters and in the field. These approaches build on experiences within FAO and other development agencies.

The programme is functioning as a testing ground for both team approaches and sustainable livelihoods principles.

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Access to natural resources sub-programme

Access by the poor to natural resources (land, forests, water, fisheries, pastures, etc.), is essential for sustainable poverty reduction. The livelihoods of rural people without access, or with very limited access to natural resources are vulnerable because they have difficulty in obtaining food, accumulating other assets, and recuperating after natural or market shocks or misfortunes.

The main goal of this sub-programme is to build stakeholder capacity to improve poor people's access to natural resources through the application of sustainable livelihood approaches. The sub-programme is working in the following thematic areas:

1. *Sustainable livelihood approaches in the context of access to different natural resources*
2. *Access to natural resources and making rights real*
3. *Livelihoods and access to natural resources in a rapidly changing world*

This paper is one of a series which addresses the linkages of poverty and forests in West and Central Asia within the context of sustainable livelihood approaches. It presents a livelihoods analysis of the contribution of forests and trees to urban poor livelihoods.

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List of acronyms and abbreviations

ACC	Afghan Conservation Corps
ATP	Armenia Tree Project
CBD	Convention on Biological Diversity of the United Nations
CIS	Commonwealth of Independent States
COP	Country Outlook Paper ¹
FAO	Food and Agriculture Organization of the United Nations
FOWECA	Forestry Outlook of West and Central Asia
FRWO	Forest, Range and Watershed Management Organization
GDP	Gross National Product
GPA	Global Partnership for Afghanistan
GIS	Geographical Information System
HDI	Human Development Index, tool developed by UN Habitat
FOWECA	Forestry Outlook Study in West and Central Asia
FRWO	Forest, Range and Watershed Management Organization of Iran
IDP	Internally Displaced People
LFCC	Low Forest Cover Countries
MCW	Making Cities Work
TOF	Trees outside forests
UAE	United Arab Emirates
UPFG	Urban and Peri-Urban Forestry and Greening
UNCCD	United Nations Convention on Combating Desertification
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNOPS	United Nations Office for Project Services
WECA	West and Central Asia

¹ Draft national papers prepared and submitted to FAO by National FOWECA Focal Points.

1. INTRODUCTION

FAO has initiated a series of global and regional sector outlook studies to examine linkages between forests and societies and to indicate emerging opportunities and challenges. The Forestry Outlook Study for West and Central Asia (FOWECA) has considered these issues through an extended consultative process in 23 different national contexts in West and Central Asia. Using 2020 as a reference year, FOWECA aims to analyze the trends and driving forces that will shape the forestry sector during the next two decades and to identify policies, programs and investment options that can enhance the sector's contribution to sustainable development. Country Outlook papers outline the current situation, trends and future scenarios at the national level. In addition, FAO has commissioned a series of studies on thematic issues relevant to the forest sector including: (a) policy and institutional changes and land-use dynamics, (b) urban and peri-urban forestry, (c) watershed management, (d) environmental aspects of forests and trees, (e) wood energy, (f) forestry and poverty alleviation, (g) wildlife management and (h) wood consumption trends.

One of the important aspects of FOWECA is the long term prospects for urban and peri-urban forestry in West and Central Asia, especially in the context of urbanization. A thematic study on "Urban and peri-urban forestry" focuses on the potentials and constraints for urban forestry development at regional and sub-regional levels considering the current experience and future prospects of urbanization in the region that is expected to take place in the next 15 years.

As a complement to this thematic Urban and peri-urban forestry study, a livelihoods analysis of the contribution of forests and trees to urban poor livelihoods has been carried out the Sub-programme on access to natural resources of the Livelihood Support Programme (GCP/INT/803/UK). This paper presents the analysis.

It represents part of an area of work on linkages between access to forest resources and poverty in West and Central Asia. Information on the work is provided through a series of LSP Working Papers.

- 13: Poverty and forestry: A case study of Kyrgyzstan with reference to other countries in West and Central Asia by R.J. Fisher et al.
- 33: Assessing the access to forest resources for improving livelihood in West and Central Asia countries by Tadashi Shimizu.
- 34: Forest - poverty linkages in West and Central Asia: The outlook from a sustainable livelihoods perspective by Pari Baumann.
- 35: Methodology and case studies on linkages between poverty and forestry: Afghanistan, Iran, Kyrgyzstan and Turkey by Tadashi Shimizu and Monique Trudel, with case studies by Ainur Asanbaeva, Mona Kananian, Gh.Naseri and Melekber Sülüşoğlu.

- 36: Urban and peri-urban forestry and greening in west and Central Asia: experiences, constraints and prospects by Ulrika Åkerlund in collaboration with Lidija Knuth, Thomas B. Randrup and Jasper Schipperijn.
- 37: Greening cities for improving urban livelihoods: Legal, policy and institutional aspects of Urban and Peri-urban Forestry and Greening in the WECA Region (with a case study of Armenia) by Lidija Knuth.

This is a regional report but it should be kept in mind that the lessons learnt are relevant worldwide, considering the urban problems and the potential of urban green resources as a source of income for the urban poor and the improvement of their livelihoods (including provision of food and creation of employment).

Chapter 2 gives background information on poverty in the WECA region and provides an analysis of the driving forces for urbanization. Chapter 3 gives an overview of the UPFG-related international, national and sub-national policy and legal frameworks. Chapter 4 analyzes the institutional framework of UPFG in the WECA region and deals with UPFG-related national and sub-national legal frameworks, including legislation on forestry, the environment, and land use planning. Chapter 5 analyzes the actual status and constraints of policy, legal and institutional frameworks. Chapter 6 provides recommendations.

The capacity of governments to manage urban growth is threatened in many developing countries, or already on the decline. Identifying ways to provide food, shelter and basic services to the city residents and create “sustainable cities” are challenges for many city authorities around the world. The protection and sustainable management of urban green resources is one means of meeting this challenge. This paper argues that the development of multifunctional urban green structures can be an important contributor to sustainable urban development in terms of improving the quality of life and environment for current urban populations. In the developing world, green structures have an important role to play in poverty alleviation and provision of livelihoods.

Concepts of *urban area* and *UPFG* are often interpreted in different ways in national and disciplinary contexts. For further understanding of the concepts and what they comprise, an explanation of the meaning of the terms is necessary. There is no global definition for an urban area. Because of national differences in the characteristics that distinguish urban from rural areas, the distinction between the urban and the rural population is not yet amenable to a single definition that would be applicable to all countries or, for the most part, even to the countries within a region (UN Population Division, 2004). In the WECA region the definition of *urban* varies. In post-soviet countries the definition still follows the two Soviet definitions of urban settlement, i.e. *cities* and *urban-type localities*. The latter is “officially designated as such, usually according to the criteria of number of inhabitants and predominance of agricultural, or number of non-agricultural workers and their families”. In other countries the definition of *urban* is related to a specific number of inhabitants. In Bahrain for example, urban areas are “*communes and villages of 2500 or more inhabitants*”, while in Syria, the definition is “*cities or communities with 20.000 or more inhabitants*”. Urban areas could also be defined by local town plans, like

in Cyprus and Turkey, or like in Iran where *urban* is “every district which has a municipality” (UN Statistics Division, 2002).

UPFG has also a wide variety of definitions. Therefore it is important to be aware of the interpretation of the terminology by the respective user. This paper uses the broad definition of UPFG provided in the regional FOWECA report². It refers to all activities related to the *urban green resources* as a whole. Urban green resources comprise all green elements under urban influence such as:

- Street trees and road plantations
- Public green areas such as parks, gardens, cemeteries
- Semi-private space such as green space in residential areas and in industrial or specially designated parks
- Public and private tree plantations on vacant lots, in green belts, woodlands, rangeland, and forests close to urban areas
- Natural forest under urban influence, such as nature reserves, national parks, forests for eco-tourism
- Urban agricultural land, such as orchards, allotments (dachas) etc. (Ackerlund, 2005)

UPFG acts in the interface between urban and rural, dealing with multiple functions of urban green resources, in which several disciplines and professions are involved. UPFG could be described as the activities whose overall objective is not merely timber production or pure beautification, but a sustained production of environmental, social and economic benefits (Nilsson et al, 2001). In developed countries UPFG has gained attention during the last 20 years mainly for its social, cultural and ecological benefits. In developing countries the issues of livelihood, related to forest products such as timber, fuel wood and non-wood forest products (fruits, nuts etc), and environmental issues, like watershed management and protection from erosion, have gained more attention (Kuchelmeister 2000).

Urban green resources in and around densely populated places can provide a variety of local values and can play an important role in improving city living conditions. By providing a range of goods and services, urban green resources can help provide livelihoods, moderate harsh urban climates, conserve biodiversity and contribute to better public health. Environmental and social benefits relate to public health, recreation, and well-being of the urban population. These benefits include reduction of air and noise pollution, micro-climate improvement, and landscape enhancement. Green areas can also provide habitat corridors for wildlife, erosion control, and protection of watersheds for urban water supply. Tangible benefits include fuelwood, food, fodder, and building materials. Timber and other wood products are important in urban areas; parts of the urban population of Yerevan, for example, are still dependent on fuelwood. Urban and peri-urban forests also provide non-wood forest products such as mushrooms, berries,

² Akerlund, U. 2005. “Urban and Peri-urban Forestry and Greening in West and Central Asia - Experiences, constraints and prospects”. Consultancy Report in the framework of the Thematic Study of the Forestry Outlook Study in the West and Central Asia (FOWECA). FAO, Rome. (*unpublished*).

medicinal herbs, rattan, seeds, leaves, and so forth. (RUAF 2004). Therefore establishing wooded lots near urban centres benefits the urban poor.

Food security and poverty alleviation are high on the agenda of many international institutions and development aid programmes. UPFG, unlike UA, is not considered in this context, although the promotion of UPFG would contribute to poverty alleviation. Even though the urban green resource sector is not large enough to have a broad impact on growth and poverty reduction, it can be a public policy that stimulates more pro-poor growth. Urban green resources may be a source of income, a means to decrease air pollution and thus to improve health, and a means to maintain a healthy environment and to support a sustainable livelihood.

This paper analyzes the policy, institutional and legal framework of UPFG in order to understand the gaps, overlaps and insufficiencies in the WECA region and to give recommendations, focusing particularly on livelihoods of urban poor. The WECA region consists also of oil-rich countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates) where the poverty alleviation aspect of UPFG does not play an important role. These countries form part of the present study as they could be actors for capacity building and future partnerships in the region and provide examples for good lessons learnt.

2. POVERTY AND FORESTRY IN URBAN AREAS

2.1 Poverty in the WECA region

The following overview on poverty numbers is to illustrate the urgency of poverty alleviation in the urban areas of the countries of the WECA region. In most countries of the percentage of people living under the poverty line³ in rural areas is greater than the percentage of people living in urban areas. The two exceptions according to World Bank's poverty estimates are Armenia and Georgia. Because of rural-to-urban migration, the percentage of poor people living in rural areas is also relevant for the urbanization process. For example, because of migration the population of Izmir/Turkey grows annually by 100.000 people.

According to the available data the highest percentage of people living below the international poverty line with less than two dollars a day in the region live in Uzbekistan (71,2 percent), Turkmenistan (44 percent) and Tajikistan (42,8 percent).

Central Asia

In the Central Asian Republics⁴, more than half of all urban dwellers live in slum conditions (56 percent in Tajikistan, 51,8 percent in Kyrgyzstan and 50,7 percent in Uzbekistan) (UN-Habitat). The urban populations of the Central Asia Republics are slowly increasing as urbanization patterns change. The region has few large cities. Tashkent is the largest city in the region with over two million registered residents. In Uzbekistan and Kazakhstan the urban population growth rate exceeds that of the national growth rate. Urban poverty levels are highest in small, concentrated areas. Given the vast array of environmental issues, it is not surprising that urban health concerns are equally as extensive (Making Cities Work, 2005).

West Asia⁵

The majority of the West Asian population lives in urban areas, with the notable exception of Yemen, where the predominantly rural population is expected to grow by 2,7 percent between 2000 and 2015 (UNESCWA). Urbanization is inextricably related to the economic transition that is taking place in the region, from agrarian and nomadic societies to one that is based on manufacturing and services. In parts of the region, the pace and scale of change often strains the capabilities of national and local governments to provide adequate services to the urban poor. In such situations, human health and well being are at risk (UNDP, UNEP, World Bank and WRI 1998). Growth of urban populations is also synonymous with growth in urban poverty. (UNEP, 2005)

³ The World Bank's poverty estimates distinguish between the national and international poverty line.

⁴ Central Asia consists of the following countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan and the Caucasus region, which comprises Azerbaijan, Armenia and Georgia.

⁵ West Asia comprises the following countries: Afghanistan, Bahrain, Cyprus, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen

With a gross national product per capita of US \$460, Yemen's 18.5 million people remain among the poorest in the world. About 42 percent of households live below the poverty line, and approximately 25 percent are unemployed or underemployed (World Bank, 2003). Almost half of Yemen's population of 18.8 million live below the poverty line, with 73 percent living in rural areas (World Bank, 2005).

Cities in the Near East⁶ face a number of problems, such as deterioration of the urban environment, uncontrolled sprawl, discrepancies in access to services, and housing for the poor (Making Cities Work, 2005).

2.2 Major driving forces

Urbanization is a multi-layered process with a complex pattern of driving forces that pushes the development further. The main driving forces in the WECA region are:

Globalization

Starting in the 1970's with a deregulated labour market, liberalization of financial markets and privatisation of government functions (UNEP, 2002c), globalisation of the economy might be the strongest driving force in the urbanization process today. Globalization allows foreign investors to develop sectors in other countries. Foreign investors tend to invest more in urban than in rural areas. The impacts of globalisation on urban areas have turned cities into centres for services and manufacturing, rather than centres for production and industry. Globalized cities result in more employment and higher living standards, but also increase of slums and poverty in urban areas (UN Habitat, 2004).

Oil resources

Oil resources and fossil fuels are among the main driving forces for urbanization in the region. In 12 of 23 countries oil is produced, and in all Gulf countries finding oil was the starting point of urbanization. In many countries income from oil finances the public sector and has also lead to an increased service sector in urban areas (US Congress Library; UN Habitat, 2004).

Economies in transition

The changed global political situation with the collapse of the Soviet Union and development of the European Union has indeed affected the region, starting new economies and societies, especially the eight post-soviet countries. Cyprus being a member of EU and Turkey in a process of negotiation with EU are already affected by the European situation in their national economies and development status, and are expected to be more so in the future. The era of transition has increased globalization and hence urbanization in the region. Economic transition is sometimes coupled with poor national rural policies, causing poverty in rural areas, and triggering migration of people from villages to urban areas, and thus increasing urbanization (UN Habitat, 2004).

⁶ Near East Countries comprise: Afghanistan, Bahrain, Cyprus, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen.

Conflicts and war

Conflicts and war often lead to migration of rural population towards urban areas, where the situation is safer. This also results in internal displacement, and the establishment of refugee camps, etc. In the region, 16 of 23 countries have recently been involved in conflict or war (UN Habitat, 2004). Conflicts and war can have a negative effect on urban green resources, as for example in Yerevan, where the population cut down forests on the hills surrounding the city during the conflict of the nineties for fuelwood.

Decentralization

Decentralization could be described as the process of transfer of authority and responsibility for public functions from the central government to intermediate and local governments or quasi-independent government organizations and/or the private sector (World Bank, 2001). Decentralization is an important issue for the institutional framework of UPFG.

Migration

A rapid increase in rural to urban migration results in serious soil degradation, loss of biodiversity, deforestation and deteriorating health and safety conditions, which consequently lead to food insecurity and ultimately extreme poverty in poor cities. Migration is a result of the different socio-economical driving forces, two of which will be examined within the context of urbanization:

- National migration from rural to urban areas, where the rural population is attracted by higher living standards in urban areas or forced to migrate to cities by the poor conditions in rural areas.
- International migration. In-migration or the immigration of international guest workers, like in most Gulf countries, where non-locals sometimes comprise more than half of the urban population. Out-migration/emigration is the migration of people to other countries due to wars, ethnic conflicts or impoverished living standards in the own country.

Urbanization is also a result of natural growth of the urban population, due to an enhanced socio-economical situation. The urban situation is of national importance as the urban economy affects the whole country and region. Even though urbanization might seem unsustainable, there is a strong, positive link between national urbanization and national human development. The human development index (HDI) is high in countries with an urbanization level above 70 percent. Countries that have urbanized early have higher incomes, more stable economies and stronger institutions, and are able to better withstand the volatility of the global economy (UN Habitat, 2001; Ackerlund, 2005).

2.3 Uses of urban and peri-urban forest and tree resources for the poor

Urban trees, forests, and associated vegetation have numerous uses and functions in the urban environment. Beyond their aesthetic and ecological value, trees can contribute to the satisfaction of energy requirements as well as the daily food requirements of urban dwellers, particularly in the case of the poorest elements of society. Box 1 is a brief

overview of the different uses important to the livelihood of the urban and peri-urban poor providing some practical examples.

Box 1: Uses of urban, peri-urban forests and green space from a livelihood perspective

Fuelwood supply. Although "high technology" sources of domestic and industrial energy are available in most cities (electricity and petroleum products such as diesel, kerosene, gas), their relatively high price puts them out of the reach of much of the urban population in the developing world. Therefore, people continue to depend on fuelwood and charcoal for their energy needs which are consequently satisfied by uncontrolled collection, often resulting in the extensive degradation of areas around many urban settlements in developing countries. Fuelwood markets develop when "free" wood energy supplies are exhausted, or are too difficult for people to tap. Even this energy source is relatively expensive. Wood-based building materials - poles, branches and leaves for thatching, for example - are also in high demand in many urban areas.

Various options for managing urban and peri-urban forest resources for the production of fuelwood and building wood should be developed. Many attempts to develop plantations in peri-urban areas exclusively for fuelwood have experienced limited success. Either sufficient land to fulfill the fuelwood demand was unavailable, or the costs of plantation establishment and management were too high. Small-scale production of fuelwood for the market has not been able to compete economically with alternative land-use options such as agriculture. Alternative options tried in various countries include management of existing forests and woodlands, enrichment planting in these forests and agroforestry systems promoted on smallholder plots to offset some of the energy needs. Much more work is needed to analyze the impact of urbanization on natural woodlands adjacent to and in widening circles away from the cities and along main roads feeding cities.

Food production. Urban agriculture is common in many cities in Asia, Latin America and Africa. Who and how many people practice urban food production, and the form it takes, differ greatly from place to place. It is most often practiced in the urban fringe area by low-income families but, in cities of developing countries such as Amman, urban agriculture is widespread within cities. Although in most places the emphasis is not on the production of staple foods, through the production of vegetables, fruits and condiments, urban agriculture can contribute to the improvement of the nutritional value and variety of city dwellers' diets.

Fruit-trees are often an important component of urban home gardens. In some places, trees are planted to help supplement fuelwood and fodder needs and even to provide raw materials for handicrafts. The role of agroforestry in improving productivity and diversifying production should be examined - it is a field that should become much more important in the future. (Kuchelmeister and Braatz, 1993)

3. FORESTS, LIVELIHOODS AND POVERTY

This part gives a brief overview of some policy aspects, of the international legal instruments and the most important laws at national level relevant to UPFG. The policy and legal aspects of UPFG are very broad due to the multi-sectoral nature of UPFG. The objective of this chapter is to disclose some crucial issues of the policy and legal framework of UPFG in the WECA region.

3.1 Greening policy

National level

In the WECA region, there are no specific programs on the development of urban green resources at the national level, except for Turkmenistan (see box No. 2 below). The national programs aiming at the establishment of urban green resources and/or the development of UPFG cover UPFG fragmentarily, primarily because their main objective is not UPFG, but UPFG related areas such as forestry or the environment.

Box 2: Tree planting initiative in Turkmenistan:

"On Complex Work for Planting Green Plantations in a Form of Closed Belt Around Ashgabat, Velayat and Etrap Centers" of 26.08.1998, under the motto "Gyok Gushak" (Green belt) have become powerful incentive to the development of forest growing in the country. In autumn 1998 a large park zone on the area of 3 000 hectares with 2.5 million young plants planted, was laid in foothills of the Kopetdag mountains, in the south of Ashgabat. In autumn-winter period of 1999 only along the highway Berzenghee-Khinduvar in the 500-m belt, on its both sides, 1 million of conifers (pine-tree, cypress, thuya, juniper, etc.) were planted. Along other highways and in the park zone of Ashgabat, during 1999 there have been planted 2 100 000 plants on the area of 3.600 hectares. Besides, in 1999 works on establishing 6-row forest belts, fringing Ashgabat, velayat and etrap centres, began." (Ministry of Environment of Turkmenistan, 1999)

There are many programs, especially at the national level, that target the expansion of forests and green space in general. However, most of the policy programs implement international agreements, conventions and declarations. Primarily, these are state programs on climate change, and programs to combat desertification (see below, section 3.2, the international legal framework). Many of these national programs include the establishment of national parks as recreation areas, or the establishment of green belts to decrease pollution, and thus also aim at the expansion of urban green resources.

In most cases, national (forest) programs aiming at UPFG refer to green belt plantations, trees along highways and the establishment of parks for recreation or biodiversity conservation. The National Reforestation Program of Lebanon, for example, aims at the restoration of the country's green cover that was lost throughout the years because of by urban expansion and migration (NRP Lebanon, 2004). There can be other programs aiming at the expansion of UPFG, such as programs to develop tourism. Tajikistan, for example, approved the state development program for tourism

for the period of 2004-2009, which aims at the development of eco-tourism and therefore includes some UPFG aspects (COP Tajikistan).

Municipal level

Most programs on urban greening in the WECA region exist at the municipal level, such as those in Amman, Astana, Izmir, Teheran and Yerevan. One illustration is the program of the municipality of Tehran: over 150 local parks were created in Tehran in 2004 and 2005 by the Tehran Parks and Green Space Organization, affiliated with the Tehran Municipality (Iran Daily, September 2004). Furthermore, the organization developed a greenbelt program in 2002 primarily to discourage construction of residential units in the urban fringe (Iran Daily, December 2004). Other objectives of the program included job creation, food and fruits production, and the improvement of general living conditions (Tehran Parks).

Municipalities develop their programs to green the city within the boundaries of the municipality. Such programs exist in almost every city and are financed by the local budget of the city. Again these programs can have various names and objectives. The greening can be a means for different targets, such as noise reduction. For example, municipalities in Kyrgyzstan develop special noise reduction programs that include as one of the measurements the greening along roads (Kyrgyzstan 2001). However, in some cities like Tbilisi (COP Georgia), no real initiatives, either public or private, for increasing the green zones exist or are planned.

Urbanization policies

Migration and urbanization policies must focus on urban green resources because uncontrolled migration to some cities has negative effects on the development of cities. For example, the migration to Karsiyaka, Turkey exceeds three times the acceptable population growth of a city (UNDP 2005). The migrants, mostly from rural areas, start building their houses on lands which are not identified as parcels and are generally owned by the state. The illegal “gecekodu” areas, which started surrounding cities in a very short period of time, have become the major accommodation of the urban poor population. According to statistical data, more than one 1/3 of the population live in such areas in Istanbul, Ankara and Izmir. This example illustrates the important role of (sustainable) migration policies. However, policies aimed at limiting population movements are the most important factor for the preparation and implementation of projects related to the evolution and future structures of the cities

Rural policies in urban areas

In general, related policy programs do not distinguish between urban, peri-urban and rural areas. However, a distinction should be drawn between areas under urban influence (comprising urban and peri-urban areas), on the one hand, and rural areas, on the other hand. National forestry policy programs often deal only with rural communities and their role in the forestry sector, although these programs also include peri-urban areas. Although it might be very difficult to determine precise borders, a certain differentiation between rural and peri-urban areas is necessary because of varying management requirements and conditions.

This issue, however, must be distinguished from the need to promote urban-rural-linkages and to put an end to the urban-rural dichotomy. A clear differentiation is necessary to avoid a strict segregation between projects in the urban and rural environments, taking into account the relationship between rural and urban areas and the variety that exists in the nature of these linkages. With this approach, UPFG and UPFG-related projects would suit each area and meet its special features and needs.

Urban agriculture policies

Urban agriculture (UA) is recognized as a discipline by policymakers more than UPFG. UPFG policy and decision makers can benefit from the experiences made in the field of UA in the WECA region and around the world. UA and UPFG have many similarities as well as much to learn from each other (RUAF 2004), as they overlap in many respects. UA and UPFG provide food and shelter to the urban poor. UPFG includes elements of the green structure that also fall under the broad definition of UPFG and under the definition of UA. UA on the other hand also includes a tree component.

Concrete urban agriculture projects in the WECA region focusing on policies and programs to enhance urban food marketing and food security exist in Amman/Jordan, Beirut/Lebanon, Damascus/Syria and Kabul/Afghanistan. Amman is one of the first cities in the region to embrace UA. FAO provided technical assistance to the City of Greater Amman in urban food security in 2001. UA in the MENA countries, especially in Amman and Beirut, is at present a highly varied and widespread activity, yet it endures for the most part without recognition by planners, agriculturists, policy-makers, researchers (Cityfarmer 2005). The experiences of Middle Eastern urban agriculturists can offer lessons on food security benefits to urban populations of other arid regions.

3.2 International legal framework

There is no legally binding global agreement that deals specifically with UPFG. However, there are numerous conventions that, though not focusing on UPFG as such, do have some influence on urban green resources. Some international documents refer to elements of the urban green resources by using such terms as greening, forestry and biodiversity. However, the relevance of the international instruments to UPFG derives from the multi and cross-sectoral nature of the latter. Instruments relevant to UPFG that have resulted from the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro (Brazil) in 1992, included Agenda 21,⁷ the Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, the Framework Convention on Climate Change (UNFCCC), and the Convention on Biological Diversity (CBD)⁸. Another set of relevant documents were developed under the auspices of UN-Habitat. However, the contribution of those instruments to sustainable UPFG management is limited to the specific aspects they cover. Most countries in the

⁷ Agenda 21, *Report of the United Nations Conference on Environment and Development*, UN Doc. A/CONF.151/26, Annex II, paras. 6.12. and 18.47.

⁸ UN Convention on Biological Diversity, 31 I.L.M. 818 (1992) (entry into force 1993).

WECA region, with the exception of Iraq, are parties to CBD, UNCCD⁹ and UNFCCC, the three main legally binding international agreements relevant to UPFG.

Table: International agreements concerning UPFG in the WECA region

	CBD	UNCCD	UNFCCC ¹⁰	Kyoto Protocol ¹¹
Afghanistan	R	AC	R	-
Armenia	Acp	R	R	AC
Azerbaijan	Apv	AC	R	AC
Bahrain	R	AC	R	-
Cyprus	R	AC	R	AC
Georgia	AC	R	AC	AC
Iran	R	R	R	-
Iraq	-	-	-	-
Jordan	R	R	R	AC
Kazakhstan	R	R	R	Only signed
Kuwait	R	R	AC	AC
Kyrgyzstan	AC	AC	AC	AC
Lebanon	R	R	R	-
Oman	R	AC	R	AC
Qatar	R	AC	AC	AC
Saudi Arabia	AC	AC	AC	AC
Syria	R	R	AC	-
Tajikistan	AC	AC	AC	-
Turkey	R	R	AC	-
Turkmenistan	AC	R	AC	R
United Arab Emirates	R	AC	AC	AC
Uzbekistan	AC	R	AC	R
Yemen	R	AC	R	AC

Acp=Acceptance
Apv=Approval
AC=Accession
R=Ratification

Relevance of the international instruments to UPFG

The **Habitat Agenda**, the main political document which emanated from the Habitat II conference held in Istanbul (Turkey) in June 1996, is of importance for the promotion of UPFG. The challenges of urban poverty and environmental degradation have many dimensions that are best handled through a multi-faceted, multi-sectoral response. The major international response, thus far, on the part of UN-Habitat addresses the crisis in terms of shelter and associated problems such as health risks, poor environmental care, insecurity and weak urban governance. There is no

⁹ UN Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, UN Doc. A/AC.241/27 (1994) (entry into force 1996).

¹⁰ United Nations Framework Convention on Climate Change, Status of Ratification, data available online at

<http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/ratlist.pdf> (last modified on: 24 May 2004).

¹¹ Kyoto Protocol, Status of Ratification, data available online at

<http://unfccc.int/files/essential_background/kyoto_protocol/application/pdf/kpstats.pdf> (last modified on: 29 April 2005)

comparable international initiative that addresses the urban crisis in food and nutrition security, the deterioration of urban natural resources, or a possible response through agriculture. The National Report of Habitat II emphasized the prevention of natural disasters, the improvement of slum areas, the provision of proper recreation areas, and the increase of parks, the significance of improving urban habitat and forestry

Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations system, governments and major groups in every area in which human activities impact on the environment (UN, 2003). Agenda 21 recognizes the benefit of urban green resources for the urban poor by calling for the activation of “green works” programs to create self-sustaining human development activities and both formal and informal employment opportunities for low-income residents (Chapter 7.20.(b) Agenda 21). Chapter 11, paragraph 13(h) of Agenda 21 refers explicitly to “urban forestry” in the context of the achievement of the objective to promote greening of urban and peri-urban human settlements.

Agenda 21 sets out the framework of necessary actions. It is widely recognized that the actions based on these policies rely on partnerships which involve many stakeholder, including local governments. Following is an example of a municipality that promoted a Local Agenda 21 in Turkey:

Box 3: The Local Agenda 21 Initiative in Izmir

The Izmir Metropolitan Municipality area in Turkey is an example of uncontrolled urbanization in the last thirty years. Therefore, within the framework of **City Habitat Local Agenda 21**, the government prepared a Master Plan and a Strategy of urban forestry for the Karşıyaka Municipality within the greater İzmir Metropolitan Municipality. The strategy was developed with the collaboration of central and local government units, volunteer organizations, academic institutions, and the private sector in the context of the UNDP supported project “Implementation of Local Agenda 21 in Turkey” (November 2001). The most significant target of this project aims to increase the quality of living by creating green areas and thus minimizing the risk of erosion and natural disasters, and reducing the effects of air pollution. The program also aims to create green areas for recreation in Karşıyaka within the borders of İzmir Metropolitan Municipality Area (personal communication).

The commonly known **Forest Principles** are a declaration that is a “non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests” adopted at UNCED. The forest principles refer explicitly to greening, stating that efforts “should be undertaken towards the greening of the world.” (FAO, 2005)

UNCCD has an impact on UPFG insofar as there is a linkage between UPFG and forests in UNCCD.

Box 4: Implementation of UNCCD and Forest Principles in Iran

Since UNCCD and the adoption of the Forest Principles, Iran has overhauled its management of the country's natural and man-made forests, to include forest restoration, biological diversity, and water and soil protection. In addition, the country was able to finalize its own National Action Program to combat desertification in 2004. Institutional, legal and planning processes within the framework of 20 year outlook and five-year Socio-Economic Development Programs are also under way. Part of this program includes the establishing of about 2 million ha green space consisting of adapted tree and shrub species (COP Iran).

The **CBD** promotes biological diversity in urban and peri-urban areas with regard to urban green resources. The convention is relevant to UPFG because green areas play a vital role in urban biodiversity.

Under **UNFCCC** the international community has committed itself to reducing net greenhouse gas emissions. As UPFG overlaps with the term "forest", UNFCCC and the Kyoto Protocol are of relevance to UPFG, even if this role has to be considered as one subordinate to forests in their natural understanding. (FAO 2005)

Box 5: Implementation of the UNFCCC in Azerbaijan

One example illustrating the impact and role of international conventions for the policy programs of a country with direct impact on UPFG is the implementation of the **UNFCCC** in Azerbaijan. Azerbaijan has prepared a special state program on climate change. According to this program the forest area in the Republic should be extended up to 20 percent of the territory. As such, the President of Azerbaijan signed a decree on 26 December 2001 on the preparation of a National Programme on the rehabilitation and extension of forests in the Republic. In compliance with the decree, the Ministry of Ecology and Natural Resources together with state and local self-governing bodies and scientific institutions prepared a National Program. Pursuant to this program, 200 thousand ha of forests will be rehabilitated, 43,000 ha of new forests will be planted. In addition, the program will oversee the creation of a new national park – Shadagh National Park – and the creation of buffer zones. A long-term project of the program envisions the formation of another National Park (Azerbaijan, 2002). This program aims at UPFG as it foresees the establishment of National Parks that serve as recreational areas for urban dwellers in peri-urban areas.

The Millennium Development Goal 7, Target 9, integrates the principles of sustainable development into country policies and programs and with a view to reversing the loss of environmental resources. Target 11 sets to achieve by 2020 a significant improvement in the lives of at least 100 million slum dwellers, and to ensure environmental sustainability addresses UPFG in a very broad sense as part of the environment and the forest.

The General Assembly of the UN established the World Environmental Day in 1972. The UN uses the environmental day to stimulate awareness and enhance political attention and public action. The signing of the "Urban Environmental Accords" capped the United Nations World Environment Day Conference in San Francisco in 2005. The nonbinding Urban Environmental Accords list 21 specific actions that can make cities greener. The vision for the Accords is to create a grassroots political

movement through public citizens' ability to influence mayors who are already responsible for tackling many urban environmental issues. The accords call for policies to expand affordable public transportation coverage for city residents within a decade. They also call for creating an accessible park or recreation space within a half-mile of every city resident by 2015 and to pass legislation that protects critical habitat corridors from unsustainable development and to adopt urban planning principles and practices that also take into account open space systems for recreation and ecological restoration. Poverty alleviation in the context of UPFG is not taken into account although this document was also signed by mayors of cities from developing countries.

Implementation of International Agreements in the WECA Region

Most of the analyzed countries have implemented the conventions they have ratified by developing and introducing programs which, in part, establish or preserve urban green resources. The majority of the programs were developed at the national level, largely with the support of international organizations.

Even though various programs were developed, their implementation is often a crucial issue. Implementation heavily depends on the availability of financial resources. Many countries in the WECA region, except for the oil rich countries in the Near East, depend on financial aid from abroad. Therefore, despite signing various international agreements, many countries cannot implement them due to lack of adequate resources. For example, in December 2000, Yemen established several programs to implement the National Plan for Combating Desertification. The National Work Plan for the Environment was also launched in 1996. The National Strategy and Action Plan for Biological Diversity are currently under preparation. Despite these efforts, however, according to the Outlook Country Study Yemen has very limited abilities to implement these agreements.

3.3 The legislative framework at national level

There is no specific legislation on UPFG at national level in the countries analyzed, but there are several general laws with specific provisions on UPFG at national or regional level. Therefore, when looking at legislation that pertains to urban green resources, it is necessary to examine forestry and environmental legislation in addition to several other laws and regulations. Such laws can be found in legislation that specifically refers to one or more urban green resource elements or, very generally, to trees within a municipality. The present document focuses primarily on the analysis of forest legislation.

Forest legislation

The forest acts of most countries play an important role in the legislative framework of UPFG at national level. Most forest acts either explicitly refer to urban forests and/or partially regulate elements of urban green resources, mainly by referring to greenbelts, shelterbelts or trees along highways.

How do forest laws address UPFG?

Countries with recent forest laws, particularly those in Central Asia and the Caucasus

Region, provide for UPFG by referring to forest parks, shelter belts, urban forests, anti-erosion forests, green belts of populated areas and health facilities, and belts along river banks. Some also refer to protective shelter belts on the right-of-ways of the railways and public domestic and international roads, trunk pipelines and other line structures, sheltering forest belts along railways and public automobile roads (see for example Article 23 of the Forest Law of Turkey) and soil protecting forests.

The laws of some countries classify “urban forests” as one category; another category is the “protection forest”, part of which consists of peri-urban forest (e.g. shelterbelts, greenbelts, forests of park zones around the cities)¹². The definitions of forest types differ from country to country, and include more or less elements of urban green resources according to the definition of UPFG provided in this paper.

It is important to note that the terms “urban forest”, “municipal forest” and “city forest” are often used interchangeably in forest laws. The meaning of urban and city forest is restrictive compared to the definition used in this paper (see the Definitions section, page 11). The terms only refer to forests defined as such by the respective forest codes and situated in a city.

Generally it can be said that “urban forest”, “municipal forest” or “city forest”, “forest parks” and “green belts” are often covered by national forest laws in the WECA region. In particular, the “protection forest”, where such a category exists, includes various elements of urban green resources, as this category refers to shelterbelts and green belts.

Box 6: Definitions referring to UPFG in some forest laws:

- **Article 1 of the Forest Code of the Kyrgyz Republic:**
“City forests are forests within city (town) limits belonging to the Forest Fund.”
- **Article 4 of the Forest Code of the Republic of Kazakhstan:**
"Urban forests and forest parks" means forests, designated for sanitary and recreation purposes, located within an urban settlement's boundaries, and enrolled into the State forest fund.”
- **Art.2 of the Forest Regulation 1967-1991 of Cyprus:**
“Municipal forest means a minor state forest assigned by the Council of Ministers to a municipality for the purpose of obtaining fuel, timber and other forest produce therefrom or in order to be used and enjoyed by the citizens for the purpose of their amenities and recreation.”
- **Article 21 of the Forest Code of Georgia:**
“The category of *green zone forests* is assigned to the forested areas adjacent to cities and other settlements, recreational areas of the Usable State Forest Fund, where forest management mainly implies improvement of recreational, sanitary, hygienic, and aesthetic properties of forests.”

The functions of the elements of urban green resources according to forest laws

The majority of laws define the functions of municipal or urban forests as protective, ecological, sanitary-hygienic, cultural and for recreation and health improvement purposes. The purpose of obtaining fuel, timber and other forest produce from the different UPFG categories mentioned above is either excluded entirely, or not seen as

¹² See for example: Article 9 of the Forest Code of Armenia, Article 18 of the Forestry Code of the Republic of Tajikistan, and Article 15 of the Law on Forest of Uzbekistan.

a primary function. An exception is Cyprus, where the purpose of the municipal forest is to obtain fuel, timber and other forest produce (Article 2 of the Forest Regulation).

The “state forest fund” doesn’t generally include shrubs and plants in cities and other settlements, individual trees and clusters of trees with an area below a certain limit¹³ if they are not part of a city or town forest, and trees and shrubs within gardens.¹⁴ In some countries even protection trees along railways and motor roads are excluded from the state forest fund. Hence, the application of forest codes to urban green resources is limited because they mainly address state forest funds. The forest law of Azerbaijan excludes all green space from the forest fund that can be found within the city boundaries (Article 7 of the Forest Code). The exclusion of gardens that contribute in some regions to the livelihood of people and the exclusion of tree nurseries, etc., inside of a city explains, in part, why the functions of UPFG regulated by the forest laws are often limited to amenity and environmental purposes, and exclude the economic aspects. As a result, **forest uses** are restricted. Many forest laws that deal with “urban forests” and “forest parks” restrict the forest uses for these categories. In most countries, only cleaning and sanitary cutting is allowed (see for example Article 26 of the Law on Forest of Uzbekistan).

Box 7: Article 39 of the Forest Code of Armenia: Features of forest use in urban forests:

“Urban forests are used in first place for cultural and health purposes and for recreation of the population.

In urban forests cutting of wood, harvesting of secondary forest materials, industrial procurement of non-timber forest products and grazing of animals is prohibited.

By the legislation of the Republic of Armenia, in urban forests other kinds of forest use may be prohibited if they are incompatible with recreation and cultural purposes.”

Responsibilities in respect of UPFG according to the forest laws

In Central Asia, the responsibilities for management, use and control of urban, municipal and city forests or city parks are generally assigned to the municipality, local self-government bodies or local state administrations.¹⁵ In contrast, the management of parts of the peri-urban forests regulated by the forest law is often assigned to the forestry departments of state bodies (see for example Article 15 of the Forestry Code of Tajikistan). For example, the State Department of Forestry manages green zone forests in Georgia (Articles 16 and 21 of the Forest Code). In Azerbaijan, access to state-owned forests (part of which form peri-urban forests), including greenbelt forests, is controlled by the State Forest Enterprise, which has the exclusive power to cut and sell wood or to grant licenses for fuelwood collection. However, the control is quite limited in reality, with a considerable amount of illegal harvesting taking place, particularly in areas that are relatively accessible from villages or near roads (Government Azerbaijan).

¹³ See for example Article 1 of the Forest Law of Turkey.

¹⁴ See for example: Article 7 of the Forest Code of Azerbaijan; Article 6 of the Forest Code of the Republic of Kazakhstan; Article 10 of the Forest Code of the Kyrgyz Republic; and Article 6 of the Law on Forest of Uzbekistan.

¹⁵ See for example: Article 3 of the Forestry Code of the Republic of Tajikistan; Article 10 of the Forest Code of the Kyrgyz Republic; and Article 10 of the Forest Regulation of Cyprus.

Environmental laws

The general objective of environmental laws is to maintain the environmental balance, thus ensuring environmental safety to prevent hazardous impacts of industry and other activities on natural ecosystems, preservation of biological diversity, and proper use of natural resources.¹⁶ The definitions of environment provided by national environmental laws are directly relevant for the protection of urban green resources. Some environmental laws explicitly refer to “urban areas” (see for example Article 1 of the Environmental Law of Turkey) by setting out the objective to protect and make optimal use of the land and natural resources in rural and urban areas. However, it is rare that the laws distinguish between the three categories: urban, peri-urban and rural. In most cases the distinction is drawn only between rural and urban areas.

Institutional responsibilities for the protection of elements of the urban green resources differ under environmental laws and forest laws. Under the former, environmental authorities are made responsible the protection of elements of the urban green resources, while under the latter the responsibility lies with forest authorities.

The laws on specially protected areas provide the legal basis for preserving natural areas, *inter alia*. Such areas are mostly defined for the protection of biological diversity and ecosystems, tourism and recreation, taking into consideration social and economic factors and interests of local people, and involving local people and social organizations in preservation and management activities (see for example Article 3 of the Law on Specially Protected Areas and Objects of Azerbaijan). To the extent that protected areas are located in peri- and urban areas, they are relevant to UPFG.

The laws on protected areas partly cover UPFG by regulating:

- the management of national parks (which may be close to, or under the influence of urban areas);
- natural monuments that can be found within the boundaries of a city or on its fringe; and
- zoological parks, botanical gardens and dendrological parks in urban and peri-urban areas.

The responsibilities for protected areas can be divided between forest and environmental authorities, if the forest law establishes a protected area category. For example in Turkey, there are two different schemes in regard to protected areas. The first one is applied by General Directory of Forestry and based on the Forest Act. Within this scheme, a forest that is critical for water and soil protection is declared as “conservation forest”. Most forestry activities are banned or strictly limited within this management class except for indispensable interventions such as pest and disease control operations. The second scheme is applied by Ministry of Environment and Forestry and based on the National Parks Law. (COP Turkey)

¹⁶ Article 1 of the Foundations for Legislation on Nature Protection of the Republic of Armenia; Article 3 of the Law on Environment Protection of the Republic of Azerbaijan; and Article 1 of the Environmental Law of Turkey.

Specially protected natural areas in urban and peri-urban areas may be under exclusive public ownership. Privatization of lands in such areas may be restricted or entirely excluded (see for example Article 3 of the Law on Specially Protected Areas of Armenia). Obviously, use rights in those lands are very restricted. Cutting is allowed only for maintenance, sanitation, or for the reconstruction of stands of economically low-value and which lose their protective and ecological functions.

Ownership of urban and peri-urban forests and green space

The analysis of ownership of the land, on which elements of urban green resources can be found, plays a decisive role to raise awareness of policy and decision makers and stakeholders about their role and responsibility in the policy, institutional and legal framework of UPFG.

Most green structures within city boundaries belong to the municipality or the government. For example, urban forests and green areas in Tbilisi generally belong to the municipality. However, the state owns forests which are well outside the municipality and managed by the Tbilisi State Forestry Enterprise. In Yerevan, there are two main owners of green space and urban and peri-urban forests: the Municipality is the owner of green areas, gardens, orchards, parks and cemeteries; the state owns some land that is part of the state forest fund and located within the boundaries of the municipality and on its fringe. The forest enterprise in Yerevan (one of 22 state forest enterprises, which belong to the State Forest Agency under the Ministry of Agriculture) manages urban and peri-urban forest land. However, small orchards and gardens are privately owned by individuals and/or organizations (personal communication x2). Under the land code, the privatization of certain lands that are categorized as land of general use (for example of boulevards and gardens) may be prohibited.

Countries of the WECA region distinguish between private and public **forest ownership**. In some countries, such as Armenia, Tajikistan, Turkmenistan and Uzbekistan, the forest is still the exclusive property of the state (although, for example, in Uzbekistan, there are preconditions on transfer of the forest lands to private ownership on long term rent basis (COP Uzbekistan). This means that in these countries all categories of forests, including elements of urban green resources, are state owned, including protection forest with shelterbelts and green belts, and city or urban forests.¹⁷

Because of the great diversity of existing provisions, it is difficult to draw generally valid conclusions regarding the ownership of forests in urban and peri-urban areas under forest laws. The state forest fund pertains to the public domain. Most forest laws distinguish between private and state forests forming parts of the forest fund. In doing so, some forest laws explicitly list the forests comprised in the private forest fund and the forests comprised in the state forest fund.

In Armenia, Azerbaijan, Tajikistan and Uzbekistan all forests are state owned. This means that in these four countries the state owns the following elements of urban

¹⁷ See Article 4 Forest Law of Uzbekistan, Article 2 of the Forestry Code of Tajikistan, and Article 3 of the Forest Code of Armenia.

green resources: (i) forest parks; (ii) city, urban and municipal forests; and (iii) all forest lands that are located in the urban and peri-urban areas and that are elements of the urban green resources. Therefore, in the mentioned countries, only land excluded from the forest fund can be privately owned. Such land includes individual trees and clusters of trees with an area below a certain limit, trees and shrubs within gardens, etc.

The establishment of private landownership is one achievement in the transition from centrally planned to market economies in Central Asia. While land was deemed to be public property when the countries were part of the Soviet Union, following the first stage of land reform after independence, some categories of land were transferred to physical and legal persons as private property. After the land reforms, privatization of land gained ground at state and, municipal level in the countries analyzed (see for example Article 4 of the Land Code of Armenia). These reforms led to increasing privatization of land lots that are part of urban green resources, especially gardens, orchards, family residences and agricultural fields where use rights are generally not restricted. Nevertheless, the ownership of city parks and city (urban, municipal) forests remains public in most CIS countries.

A major problem related to maintenance and management of land is the lack of financial resources. Therefore, in Central Asian countries, privatization is often seen as the only solution, even for typically public areas of responsibility and duties such as the maintenance of parks. The Urban Institute of Bishkek, for example, recommends the privatization of parks in Kyrgyzstan which are not sufficiently managed due to financial constraints and lack of specialized personnel, thus attracting private sector for management (KUIB, 2005).

Land (planning) legislation

In many countries of the WECA region, local planning is not part of a coordinated and well planned process. For example, in Turkey, the Planning Law Act No 3194 provides for a single procedure for “local physical plans”¹⁸ for all cities (Turk). This means that the same procedure regarding the development of local physical plans apply to cities with over 300.000 inhabitants and cities having between 50.000-10.000 inhabitants despite their different features. The main objective of the development of “local physical plans” in urban areas is the achievement of a “healthy” urban structure, to provide land development and to regulate the use of private and public land for public interest. The other important objective is to prevent uncontrolled sprawl of the city. (Turk)

Competencies for urban planning are not clear because of overlaps and gaps. For example, in Turkey there are several insufficiencies regarding the urban planning due to several legal exemptions. This has a negative effect on the planning of urban green areas that are insufficient in terms of quantity. The old strategies for spatial development planning adopted by the CIS countries are characterized by several weaknesses, such as spontaneous land privatization, inconsistent land reform, and insufficient information on land use and land ownership. They also reflect imperfect and incomplete legislative frameworks regulating spatial development planning,

¹⁸ The term “local physical plan” refers to master plan.

overlapping competencies among central, regional and local state bodies in matters of land regulation, weak coordination of activities and lack of cooperation among agencies.

Legal status of land categories relevant to urban green resources

The land codes include several provisions on the function, status, management and control of the different categories relevant to UPFG. Under land laws, each category of land has its own legal status, including its destination (purpose), rights in relation to possession, use and leasing, and specified use restrictions. For example, Article 6 of the Land Code of Armenia and Article 9 of the Land Code of Azerbaijan recognize the following categories of lands relevant to urban green resources:

- lands of agricultural destination;
- lands of settlements;
- lands of industrial, communication, transport, defence and other destination;
- lands of Specially Protected Natural Areas; and
- lands of the Forest Fund.

Each of the mentioned categories may include elements of urban green resources. For instance, laws dealing with lands of the forest fund implicitly deal with urban and peri-urban forest land, as the forest fund also consists of urban and peri-urban forest lands (see the section on forest legislation). When these lands are located in urban and peri-urban areas, they offer space for urban greening.

The development of cities and urban areas is often achieved at the expense of forest and agricultural lands. This challenge can only be faced with proper land use planning, through the adoption of land planning schemes or the development of other integrated land use programs. Therefore, ecological and economic zoning of UPFG areas is of great importance in resolving issues concerning effective use, protection and recovery of forest resources and to prevent uncontrolled urban sprawl.

The problems experienced in land use and land management of urban green resources vary from country to country, which makes it impossible to provide a solution for the whole region. It is necessary to analyze each country with its own characteristics and features in order to establish a sustainable system or to improve the existing system. For example, since the 1990s, in some Central Asian countries much progress has been made, although further improvements are still needed¹⁹. In Iraq, the systems of land management are weak and need an overhaul due to the lack of reliable information following three decades of changing and incoherent land policy, internal conflict, and more recently the destruction of public records (UNDG, 2003).

Problem of enforcement of laws

In some cities of the CIS countries, like Tbilisi and Yerevan, private buildings such as cafes and restaurants are built in green areas without proper licensing or other authorizations. For example, the environmental authority in Yerevan is required to approve construction works before they commence, but the approval is frequently not obtained. Therefore trees are cut down and lawns are destroyed during construction process. As a rule, projects are not subject to the processes of due planning,

¹⁹ For instance in Tbilisi, primarily because of the uncertainty of the legal requirements, the green zone is not managed (UNEP 2002b).

consideration and agreement. As a result, green zones are invaded by private “investors”, which results in reduction of park and green space areas (UNEP 2000b).

Municipality Laws

Municipality laws provide for the establishment of municipalities, their role in local government, and their legal and financial basis, among other matters. Municipalities can design local environmental programs, which deal with environmental protection and may include planting of greenery. Programs may also include collection and processing of the domestic waste, water, air and land protection from pollution, and implementation of the environmental activities along with neighbouring municipalities and other local measures.

For example, the municipality of Astana, Kazakhstan developed a strategy for the protection of the environment and natural resources of the city until 2010 (KG, 2005). Part of the strategy involves the analysis of the status of the environment (especially air pollution). The attraction of investments and technology from different sources is regarded as an opportunity to solve environmental problems. In order to improve the city’s micro climate, the strategy measures to be taken include the establishment of a sanitary protective green zone, the development and realization of a greening program, and the establishment of micro zones for recreation.

Laws on municipalities generally contain specific provisions on UPFG or of relevance to UPFG. They either refer to UPFG in general terms by regulating nature and environment protection in the municipalities, or specifically by addressing particular elements of UPFG, such as gardens, parks and urban forests.

For example, the duties of all municipalities under to the Municipalities Law of Afghanistan include the maintenance of forests, gardens, meadows, enlarging forests, tree planting in lands which cannot be used for agricultural purposes, establishment of tree nurseries, and city planning, whereas the establishment of gardens and zoos is a duty of those municipalities that have more income (Articles 9 and 10).

The mayor of Yerevan is responsible for nature and environmental protection according to Clause 1.2 of the Decree on the Administration of the Municipality of Yerevan. He takes part in the development of state programs on the protection of nature and the environment and implements them on the territory of Yerevan. He also contributes to the preservation and use of specially protected areas and to the realization of measures against cutting of forest, and collaborates with the organizations and people involved in nature protection (Clause 1.21. of the same Decree).

In general, institutional capacity and municipal policies related to urban forests and trees are insufficiently developed because UPFG is not perceived as a discipline. Therefore, existing regulations cover UPFG fragmentarily.

4. INSTITUTIONAL FRAMEWORK

4.1 Responsibilities for UPFG in the WECA region

In most of the countries analyzed, there are several agencies responsible for UPFG policies and strategies, and for the management of urban green resources (see relevant sections above). There are three levels of government: national, regional and local (district, city and village administrations). At the national level, competent institutions may be the Ministry of Environment, State Forestry Department, State Department of Protected Areas, Ministry of Agriculture and Food, Ministry of Finance etc. The forestry departments have a key role in UPFG in many countries of the region (see above section on forest law) because planning and management of green belts is often their responsibility. The environment authorities are also key actors at the national level. The planning and management of green areas within city boundaries generally is under the responsibility of the municipalities. For example, in Turkey, the Parks and Gardens Department, under the Mayor of Izmir Metropolis, administers the elements of urban green resources within the boundaries of the municipality.

It should be noted that cooperation and communication among the aforementioned different authorities is extremely weak in many countries in the WECA region (Gegeshidze). This is mainly because urban green resources are not conceived as an important discipline, and because of the lack of cooperation and communication between the responsible authorities in general.

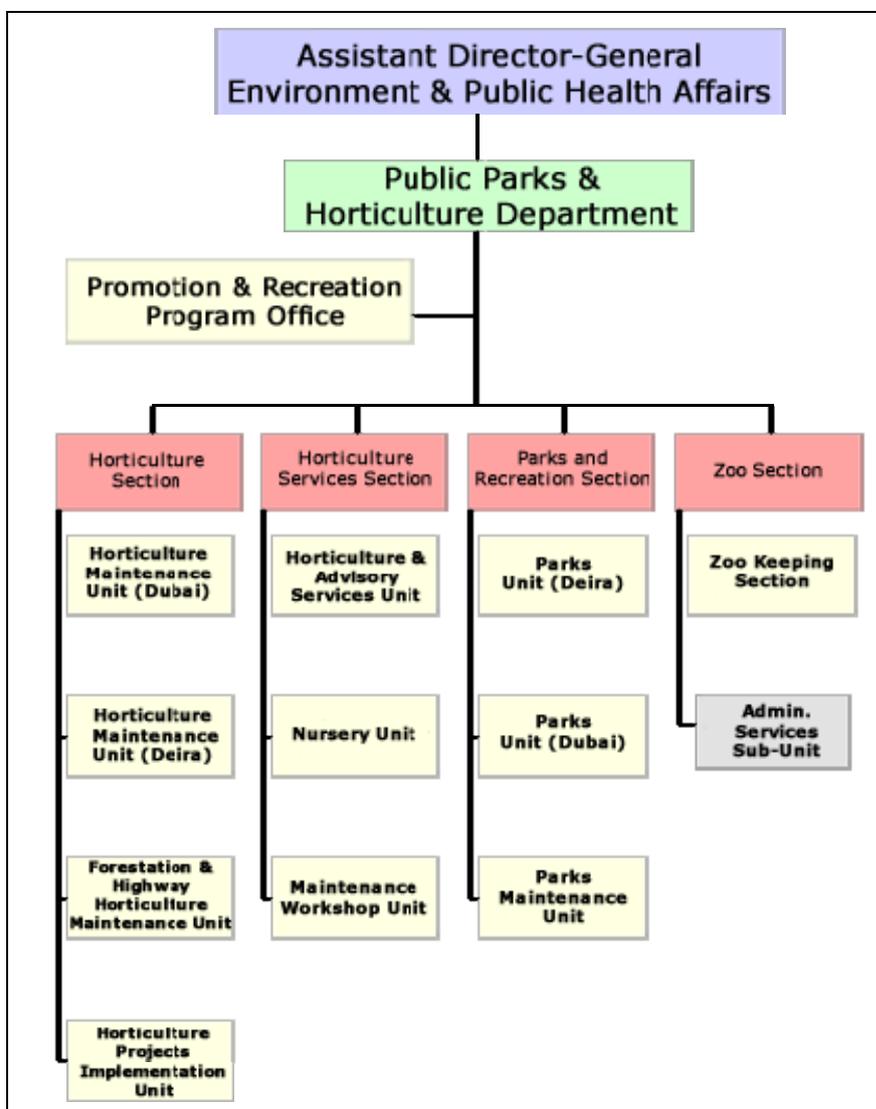
As UPFG is a multi, cross-sectoral area, many authorities are involved in decision making and management. This is illustrated by the following two examples..

The first example from **Iran** and illustrates the involvement of the different authorities at the national level.

Box 8: UPFG responsibilities in Iran at national level

The department of Environment manages protected areas which include national parks, ecological reserves, wilderness areas and sanctuaries. Biological diversity protection is put in priority and the extent of protected areas is enhanced. Rare plant specie reserves, peri-urban man-made parks, and protection forests are managed by the forestry sector (COP Iran). The Forest, Range and Watershed Management Organization (FRWO) affiliated to Ministry of Jihad Agriculture, is in charge of rehabilitation, protection, exploitation and development of forest, range and watershed. It is the main governmental institution responsible for planning and implementing forestry programs, including urban and peri-urban forestry activities as mandated by the Forest and Range Nationalization Law and the Protection and Utilization of Forests and Ranges Law (FAO 2000). To plan, supervise and conduct activities, FRWO is comprised of many departments, all relevant to UPFG, including Forest Management, Afforestation and Parks, Range Management, Sand Dune Fixation and Combating Desertification, Extension and Public Participation, Training, Protection, Legal Affairs, Land Survey, Planning and Programming and Institutional Affairs. According to the Country Outlook Paper of Iran, the development of intersectoral collaboration at the national level aims to protect soil, water and biodiversity, as well as urban forestry development. To this end, the forestry sector could protect biological diversity in cooperation with the Department of Environment and develop urban forestry in collaboration with municipalities. The creation of incentives for the private sector and the increase of local communities' involvement in urban and peri-urban forestry activities are considered as one of diverse financial resources for UPFG.

The next example from the **United Arab Emirates** of Dubai Municipality illustrates the involvement of the different departments at the municipal level. Dubai Municipality has six divisions. The responsible division for urban green resources is that of the Assistant Director General for Environment and Public Health Affairs, which consists of seven departments. One of these is the Public Parks and Horticulture Department (see organizational chart below). Its responsibilities are limited to elements of urban green resources in urban areas, and include planning, development, operation and maintenance of horticulture works of roads, squares and parks, as well as providing horticulture guidance and services related to the child city and zoo of Dubai. The department is divided into the following units: Promotion and Recreational Programs Office, Horticulture Section, Horticulture Services Section, and Parks and Recreation Facilities Section. The gardening services they offer include monitoring of horticulture companies for compliance, ensuring the operation of the irrigation network of the city street plants, and increasing the green areas of the city.



Source: Organization chart for Dubai Municipality 2004, available online at <http://vgn.dm.gov.ae/DMEGOV/parks-horticulture>

4.2 Decentralization and public participation

Decentralization²⁰ is becoming increasingly important in the WECA region. In this context, responsibilities related to UPFG tend to shift to lower government levels. The effect of decentralization policies will also lead to greater involvement of local community groups, municipalities, and grass-root organizations in the various aspects of UPFG development and management. However, this requires capacity building and awareness raising campaigns, and sufficient financial resources.

Decentralization is not the end objective of reform in the UPFG sector, but rather a means for achieving sustainable urban development (UN 2001). More responsibilities and leeway in decision making should will provide better delivery at lower costs also in the urban forestry sector and help address the needs of local constituencies more effectively than central governments.

With the exception of Turkmenistan and Uzbekistan, **Central Asia** countries have introduced a decentralization policy or are on the way of implementing this. Currently, in the framework of the program “the development of the local governance in Central Asia”, strategies for the development of many cities are designed. The objective is to give to the local government and citizens the possibility to actively foster future social and economic developments instead of merely reacting to events that have already happened (KUIBa, 2005).

However, the process of actual transfer of power and resources has encountered a number of difficulties. The laws and decrees providing for the interactions between various levels of government are often inconsistent and even conflicting (Dabla-Norris et al, 2000; Doane et al, 2000; KDG, 2005). These legislative gaps are primarily caused by a lack of clearly defined criteria for the allocation of authority between the central and local authorities. Also, in a number of cases, the transfer of responsibilities rather than rights has occurred. In other words, the decentralization of responsibilities is rarely matched by sufficient resources (UNECE, 2002). This has undermined local budgets and consequently led to the failure of the municipalities to address many local issues.

An additional problem occurred in some countries that have already implemented the decentralization policy, because of insufficient financial income of the municipalities, that are not only exercising more power but also have more control over financial resources. Local entities frequently have only the authority to collect land taxes, but they do not have the competence to determine fiscal policies. Collection of land tax is very difficult and the outcome quite small (personal communication). This affects the funding of the development and management of urban green resources as these, within municipalities, are mainly under municipal ownership and greatly depend on public funding.

Decentralization is also an increasingly important trend in the sub-region of the **Near East**. Many countries are attempting to transfer control of resources and decision-

²⁰ “Decentralization is a complex multifaceted concept. It could be described as the process of transfer of authority and responsibility for public functions from the central government to intermediate and local governments or quasi-independent government organizations and/or the private sector” (World Bank, 2001).

making powers from central to local government level (MCW, 2005), because highly centralized systems of governance with limited autonomy and accountability at the local level do not provide government officials the right structure and incentives to address the basic needs of the population (World Bank).

While in some countries in Western Asia municipal taxes do exist, in practice it is the central authorities which administer the collection and disbursement of municipal funds. In cases where more functions are assigned to local governments, they are not matched with the resources needed by municipalities to perform as managers and decision makers rather than as the simple executors of plans made and managed by the Government. The conditions which would enable local authorities to assume such an expanded role are still not in place (UN 2001). This also affects the funding of UPFG activities as a responsibility of municipalities.

In the oil rich countries, except for Iraq, funding is not a major issue. In these countries the involvement of local people, NGOs and other stakeholders is the key issue. In Afghanistan, Jordan, Lebanon, Syria, Turkey and Yemen, lack of funding is the main problem to address in the context of decentralization. For example, in Jordan's municipalities (with the exception of Amman), the lack of expertise, coupled with the lack of tools caused by financial constraints undermine urban planning and urban management activities (UN 2001), thus negatively affecting urban green resources. Local governments in Jordan have failed to establish themselves as credible institutions that can handle growing levels of urbanization and meet the needs of the urban population for public amenities (UN 2001).

The problem of resource mobilization for UPFG activities, whether through intergovernmental transfers, fiscal reform or income generation at the local level, has not yet been explored in West Asia. However resource mobilization is essential to the sustainability of local urban development and the efficient performance by municipalities of their duties and responsibilities, including urban green resource management.

4.3 Greening projects linked to poverty alleviation – NGOs and other initiatives

Generally speaking, there is a lack of awareness of the linkages between urban and peri-urban forests, green space and the alleviation of poverty. Only some of the analyzed projects in the region explicitly mention the urban poor as a target group in the context of greening and planting trees. One of them is the Global Partnership for Afghanistan (GPA), a non-governmental organization comprising citizens and organizations, including non-profits, corporations, and educational institutions, which support Afghanistan's economic and environmental development.

The objectives of project Afghan Conservation Corps (ACC), implemented by the United Nations Office for Project Services (UNOPS), are restoring nurseries, planting trees along roads, greening schools and mosques. However, the ACC has the potential to undertake many more activities if it had more resources at its disposal (personal communication x4).

Box 9: Partnership for a Green Afghanistan

Under the direct supervision of the Global Partnership for Afghanistan, tree-planting initiatives aimed at quick impact have been launched, including development of orchards, tree nurseries, woodlots and greenbelts. These projects, building upon local skills and best practices, strive to both protect natural resources and reduce poverty. This program includes: launching a people-to-people tree planting initiative, initially to include 80,000 trees. Funds have been raised via corporate, foundation and private contributors to finance the planting of trees in local Afghanistan communities. Specifically, this program includes sponsoring of new orchards, woodlots and greenbelts by friends in the US and attendance by farm families in Afghanistan. (American Forests)

The second project in the area linking UPFG with poverty alleviation is the Armenia Tree Project (ATP) founded in 1994 and funded by contributions from Diaspora Armenians to foster environmental protection in Armenia. The project's aim is to improve social and environmental conditions in Armenian's social institutions by involving and training people in tree planting and care, partly in urban areas. For example, a major program initiative for 2005 is the planting of 90.000 trees at urban and rural sites. By planting fruit trees, ATP provides food, as well as long and short term employment opportunities. ATP recognizes that people directly affected by the greening programs have a direct impact on the success or failure of the greening program. The full participation of citizens and community groups is essential from the very beginning of the project for the protection and maintenance of green areas.

There are only few international projects that aim at UPFG and poverty alleviation. One example is the project for the improvement of urban habitat by developing an urban forestry/greening master plan for Karsiyaka Municipality, Izmir by UNDP and the Republic of Turkey. A team of experts developed an alternative solution for an area, which is both a habitat of a modern society and that shows the typical characteristics of an irregular housing situation, to tackle environmental problems to improve the living conditions of marginalized and disenfranchised residents.

5. ACTUAL STATUS AND CONSTRAINTS OF POLICY, LEGAL AND INSTITUTIONAL FRAMEWORKS

People in urban and peri-urban areas are not fully benefiting from the important potential of UPFG because trees and other elements of urban green resources are neither well perceived nor well documented by government officials, and therefore receive little attention in the formulation of **national policy and planning**.

In the Caucasus, high incidence of corruption and the low capacity of law enforcement bodies also result in illegal cutting. This lack of capacity alone causes an overall decline in forest quality. (CEO)

In CIS countries the public **administration** has largely been characterized by a centralized and technocratic ‘command and control’ approach to planning, resource management and public order. In essence, technical staff from line ministries such as agriculture and forestry determine land uses, and the local population is expected to respect the technical guidelines issued by competent authorities. This approach is inadequate to the requirements of today. Official plans often bear little reality to the actual situation, and local populations, faced with few alternatives, use and overuse common resources despite technical planning directives.

Limited public funding, especially within the municipalities, and the ongoing decentralization and privatization policy are likely to lead to a decrease in urban green resources. In practice, programs are and will be implemented only to the extent that financial means allow. The financial commitment of governments is not always insured because of priorities set at different levels. The financial back up of municipalities and the provision of their income will play a key role in the future for urban green resources.

Other than funding, a significant obstacle to development and management of urban green resources is the lack of specific laws and regulations on UPFG within the region. The absence of adequate laws leads to the misuse and destruction of urban green resources. Even where legal prohibitions on the use of urban green resources exist, enforcement may be too costly or there is not sufficient management staff. This problem is particularly evident in the case of informal settlements, such as for example in Izmir.

The policy, legal and institutional constraints involved are listed below.

Policy constraints:

- Lack of awareness of the importance of the perception of UPFG as a discipline in general;
- Lack of clear distinction between urban, peri-urban and rural areas (fundamental for the development of laws and policy programs);
- Lack of awareness of UPFG as a multi-sectoral discipline;
- Lack of a clear definition for “urban green resource”;
- Absence of new approaches towards urban planning.

Legal Constraints:

- Lack of specific laws on UPFG; existing laws are incomplete, incoherent and inapplicable;
- Lack of legal definitions for UPFG and urban green resources;
- Lack of systematic rules on urban expansion which take into account the preservation of elements of urban green resources;
- Lack of coordination between relevant authorities.

Institutional Constraints:

- Lack of qualified personnel, especially at the local level (FAO 2004);
- Lack of financial resources (need to secure income for municipalities);
- Lack of mechanisms for public participation;
- Lack of coordination between relevant ministries, e.g. greenbelts around cities are often the sole responsibility of forestry authorities.

6. RECOMMENDATIONS

A range of policy options and institutional and legal recommendations were presented in this chapter. The following recommendations are of a general nature and need to be refined according to specific local needs. The recommended policy instruments incorporating UPFG should be considered in the following policy areas: urban food security, environmental policy, social development policy and urban land use policy.

Given the number and needs of low-income people that depend upon urban green zones, it is necessary that they play a central role in the planning and implementation of UPFG. In poorer countries the focus must be on helping to meet basic needs first. This can be best achieved through multiple use of urban green resources (Kuchelmeister 1999). Most foresters working in development cooperation have in most cases restricted their mandate to rural areas.

UPFG should be incorporated into **national policies**. For example, the establishment of parks and shelterbelts around urban areas should be proclaimed as a policy objective. This is a very complex issue since it involves many departments, e.g. forestry, agriculture, environment, planning, central and decentralized bodies of governmental and local authorities. Guidelines for policy and decision makers at governmental and municipal levels would assist them in designing their own frameworks and regulations in response to their needs. People living in urban and peri-urban areas should increasingly participate in decision making of UPFG policies at the local, regional and national level. Regular dialogue, consultation and coordination with UPFG stakeholders should be an integral part of UPFG programs. **Specific programs** on the development, establishment, preservation and/or expansion of urban green resources need to be developed and implemented at sub-national levels. Requirements or rules to the review of program implementation should be developed. Experiences in the field of UA in the Near East could be used for the development of policies at various levels.

In **urban planning**, trees and other elements of urban green resources should play a major role. Tree and plant care is centred on crisis management. Therefore greening projects require long-term planning and adequate funding to maintain the vegetation. At the same time the adaptation to recent local needs and requirements should be feasible.

The environmental and institution building guidelines of Agenda 21 should be incorporated into urban UPFG planning wherever possible.

One policy objective at national and sub-national levels should be to turn degraded elements of urban green resources into environments that can be put to productive use by poor families, thereby offering them income opportunities and/or food for household use. Awareness must be raised at the national level of the potential for income generation opportunities derived from urban green resources and their potential as a source of food for the urban poor.

Urban zoning by-laws need to be revised and green structures should be integrated in zoning plans, indicating zones in which UPFG is allowed. Peri-urban green zones can be included in city development plans as part of green belts or green corridors in order to avoid uncontrolled development and soil destruction. Buffer zones can be created and inner-city areas can be preserved by giving these areas to community groups and/or unemployed people under medium term leases for gardening and other greening purposes.

Protection and conservation legal measures may impose restrictions on exploitation and sometimes forbid exploitation of private land. While such measures contribute to the protection of ecosystems and have a positive effect on urban green resources, they may have directly affect land owners' and users' food security and income. In view of this, compensation measures are required to ensure the sustainability of laws on UPFG. **Laws** should balance state, public and private interests in UPFG.

The legal frameworks and the means to implement the new laws and regulations need to be developed at national and sub-national levels. The issue of overlaps and gaps of laws has to be especially taken into account since UPFG is a multi-sectoral area. In most cases laws at local level are more appropriate for dealing with the specific needs and conditions of individual cities. In many cases, simply integrating UPFG into existing city institutions could be the easiest way to get a program started. However, legislation needs to clearly define the **responsibilities** of the different authorities directly or indirectly responsible for UPFG.

The authority in charge of planning and **management** of green belts must be capable of handling urban problems and making adjustments to the green belt policy. The ministry of forestry alone may lack those capacities, because it is not an urban planning authority (Burat, 2000). Therefore, landscape architects, horticulturists and foresters together should be involved in urban planning and greenbelt management.

Furthermore, the legal framework should also address the existing inter-relations of UPFG with other sectors and areas, such as agriculture, environmental management, town planning and budgetary constraints. Urban green resources cannot be managed in isolation from other sectors and disciplines. The linkages between UPFG and other sectors require comprehensive strategies. Development planning requires a high level of **coordination** between the concerned agencies and institutions. Non-wood forest products, services and functions of UPFG should be coordinated with the objectives of city and town development strategies, environment management, forestry, health, etc.²¹

The objectives of tree planting and the establishment of green zones should be incorporated into relevant legislation. The concept of a green city should be integrated into building codes, laws on urban development, and other related laws.

A comprehensive regional and sub-regional **information system** with relevant data on urban green resources is needed to improve the effectiveness of planning.²² Such

²¹ These non-wood functions could include the protective, ecological, recreational, social, and economic benefits of UPFG.

²² This data might include statistics on the area covered with various elements of the urban green

an information system will help to identify the actual status and level of development of the urban green resources, and to select useful programs and projects on development and preservation.

Funding should be sought from a combination of national, regional and local governments, international donors and private enterprises. The trend towards decentralization should parallel a necessary increase in fiscal responsibilities of sub-national governments. Local funding and fiscal authority should be linked to the service provision authority and functions of the local governments. This refers to the local governments access to sufficient resources to fund its own expenditures.

resource, ownership of the different elements of the urban green resource, variations in species, quantity, etc.

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ANNEX I: CASE STUDY ON ARMENIA

I.1 Introduction

This case study is to help understand the policy, institutional and legal framework of UPFG (urban and peri-urban forestry and greening) in Armenia in order to comprehend its status, gaps, overlaps, and thus to improve it. The analysis was undertaken from the livelihood perspective. The livelihood perspective looks at the contribution of urban green structures as a natural resource to the livelihood strategies to poverty alleviation and food security of poor people. This study therefore examines what contribution trees make to poverty alleviation in Armenia.

This study is supported by the LSP Sub-Programme 3.1 (LSP 3.1), FONP, FORC and LEGN and the Forestry Outlook Study in West and Central Asian Countries (FOWECA). It is based on desk-work and on the information gathered in a mission to Armenia. During this mission, many stakeholders of UPFG (representatives of the Municipality of Yerevan and Gyumri, different Ministries, the region and NGO's) were interviewed. The study tries to give beside the analysis of legal documents, some insights into the status of UPFG nowadays in Armenia.

Armenia was chosen for this case study primarily because of the Armenia Tree Project, an NGO that links UPFG projects with poverty alleviation, and that has had several experiences in this field. It is one of the few NGO's in the whole west and central Asian (WECA) region that has expertise in UPFG applying the livelihood approach.

I.2 Background

Yerevan is one of three "millionaire" cities with over 1,200,000 inhabitants in the Caucasus region (CEO 2002). Armenia has an urbanization level of around 50 percent (UN Habitat 2001). Apart from the normal migration trend from rural to urban areas there is also an urban to urban migration trend caused by closing industries in and around settlements of urban type into cities like regional and national capitals (Ackerlund 2005, UNEP 2000).

Poverty has declined in Armenia since 1996, but the rate of decline has been frustratingly slow. In 1998-99 more than half of the population of the country were still living below the poverty line and in urban areas it was over 60 per cent. (UNDP 2002) The income gap between rural and urban areas is widening, and during the past ten years, urban poverty is diminishing slowly, while rural poverty remains stagnant. The levels of rural poverty have been stable since the mid 90s, while urban poverty is slowly diminishing (UNDP 2004). These facts have to be taken into consideration for the development of any natural resource policy including UPFG in the context of poverty reduction. One means to create jobs is the UPFG sector. Another asset deriving from the urban and peri-urban forests and green structures is the provision with food and other non-wood forest products.

In urban areas, being unemployed and not having another source of income makes it more likely that one will be poor, considering that home grown food is not likely to be obtained in cities. Unfortunately, more than a third of the urban population do not have a job in Armenia. Once again, job creation is the key to poverty reduction.

I.3 Policy framework

National level

At national level, there are no specific greening programs or planting tree initiatives in the urban and peri-urban areas of Armenia, but there are several programs including UPFG

components. The section below describes the main policies including UPFG components, and policies having an important impact on the development and planning of UPFG.

The Government of Armenia has adopted a **National Forestry Policy and Strategy** (NFPS, September 2004) with the involvement of a wide range of stakeholders. It sets out a vision for the country's forests and the actions that need to be taken to bring it about. The main goal of the National Forest Policy of Armenia is to ensure sustainable development of forests and forested areas (NFPS 2004). As municipal forests are part of the forest concept in Armenia, the NFPS plays an important role in the field of UPFG. Therefore, the strategic objectives and strategic activities set in this document refer, in part, to the urban green resource. The policy, decision maker and stakeholders should be aware of the implications of the NFPS for municipal forests, greenbelts and peri-urban forests that are considered to be part of the forest (according to the forest law). The most important UPFG relevant strategies of the NFPS are:

- the development of educational programs
- the adoption of legal acts regulating forest relations
- the enhancement of public participation in decision-making
- the establishment of sustainable financial mechanisms in the field of forest management and biodiversity conservation
- the development of ecotourism

The **National Forest Program** (September 2005) has been developed without the direct involvement of urban stakeholders. It does not include any general policy objectives on UPFG in general or on municipal forests in particular but is aimed at some specific components of the urban green resource: the rehabilitation of green belts in settlements and around them under the responsibility of the Ministry of Agriculture, the Ministry of Nature Protection, the *Marz* administrations, the municipalities, the communities as well as NGO's. Another component of UPFG is addressed by the support of the development of ecotourism and recreation development (NFP 2005). Some components of the program are of a more general nature such as the institutional reforms of forest management state bodies.

On the basis of the NFP, a draft action plan has been developed for mitigating actions to help address the problems associated with **illegal logging**, with the support of the Forest Institutional Support Project (FISP). It addresses the problem of subsistence use of firewood that is linked to poverty and lack of affordable alternatives, and illegal commercial production of firewood which is driven by high demand for fuelwood and a lack of affordable fuel alternatives in some urban areas. A phased approach has been adopted for this action plan with the implementation of pilot projects with the most successful used for replication. One of the recommended components of the action plan includes alleviating rural poverty. However, urban poverty is not explicitly addressed. (Armenia 2004) FISP assisted in developing the Illegal Logging Action Plan, which was adopted in 2004. The World Bank is currently assisting in installing an illegal logging monitoring system (FAO/BTO 2005). The government plans to extend a gas network to all households by 2007. However, even if this is achieved, poor people may not find it affordable. Consequently, some will still choose to collect fuelwood illegally from forests instead of paying for gas or fuelwood sold in markets. Other types of illegal logging are also noted, i.e. organized illegal logging for fuelwood to be sold in markets and that for commercial timber. The illegal cutting of trees in order to obtain fuelwood in urban and peri-urban areas is expected to decrease with the introduction of this policy.

As urban agriculture overlaps with UPFG²³, and since both have many features in common, the agriculture policies have to be analyzed as an important related area. At present, the Government policy in the sphere of **agriculture** is aimed at the effective use of existing potential, expansion of food processing opportunities, as well as the organization of agricultural services and supplies with the assistance of Government. The Government pays attention to the protection of the interests of farms and other agricultural units. The Armenian Government facilitates the cooperation in the agricultural sector and the establishment of farmers associations (Armenia 2002a). Urban agriculture does not seem to be an issue on Armenian policy agendas. There is still some urban agriculture practiced in Yerevan (Dalmatinskie Sadi) but with the new master plan, this area is going to be a green zone where agriculture is prohibited because of contamination of the ground from chemicals. In the peri-urban areas, the *datchas* (allotments), a Soviet legacy, still exist. They are small plots of land close to the cities used by the citizens to grow vegetables, fruits and herbs. While the privatisation of land, and private enterprise in the agriculture addressed many of the legacies of the Soviet period, some problems remain, including irrigation, insufficient credit opportunities for agribusiness, insufficient equipment, and underutilization of land. Some of it is caused by the small size of average farms, between 1.5 and 2 acres. Marketing of agricultural commodities, both domestically and abroad, is also a major challenge for many farmers (Armenia 2002).

Today the **Poverty Reduction Strategy** (PRS) is the principal vehicle for translating national priorities into a coherent funded program. The United Nations Development Group has repeatedly stressed that it supports national PRSs and is committed to supporting and strengthening this framework. UNDG's support for the PRS has also been translated into clear operational guidelines to all Resident Coordinators. Repositioning the United Nations system to provide effective support to national PRSs is a core challenge. (UNDP 2005) The I-PRSPs 2001 identifies as one of the key areas of reform in the area of environmental protection the development of a sound policy for the exploration, maintenance, reproduction and use of land and forests, the development and enforcement of procedures for compensating damage to the environment, and the reduction of losses and increase of forest coverage.

In the 2001 report on the status of implementation of the **Millennium Development Goals**, the recommendation regarding international assistance to achieve Goal 8 (Improving the Environment) was to support improvements in the legal framework aimed at implementing not only prohibitions, but also aimed at economically endorsing mechanisms for the ecological orientation of the country. This recommendation still applies to the actual status of the legal framework concerning environmental legislation.

Map design activities are being carried out in Armenia as a priority of **urban development** programs established under legislation (UNDP 2002a). In order to develop new practices in urban construction design under economic liberalization, the GTZ (*Gesellschaft für Technische Zusammenarbeit*) supported the implementation of a pilot project for two-stage zoning design for the communities of Armenia. This cooperation facilitated a transition to a democratic system of urban zoning design which requires participation of citizens and a demand-driven approach. The experience will serve as a basis for future development of relevant legislation and will help other communities in drafting similar projects, to pursue the goal of raising investment attractiveness of settlements and creating a controllable and socially-oriented investment-construction market by means of urban development planning. The final report on the results of the project is expected for December 2005.

Sub-national levels

²³ Urban agriculture and UPFG overlap, when urban (and peri-urban) agriculture is combined with forestry activities within or around the boundaries of cities (FAO 2005).

Almost every municipality in Armenia has a policy program for greening the city. For example, Yerevan developed such a greening program for 2005-2007 and the municipality of Gyumri developed a one year greening plan for 2005 with an estimated cost of ca. 17.800 US\$ (personal communication¹). Furthermore, a number of activities exist at the local level that are UPFG related, such as the Local Agenda 21 initiative and the International Council for Local Environmental Initiatives (ICLEI).

Local Agenda 21

The urban development project Local Agenda 21 has an urban forestry component and local urban forestry related initiatives. Many cities implementing Local Agenda 21 have incorporated urban greening components. The regional project of Caucasus REC “Sustainable Cities - Local Agenda 21” was implemented in January-December 2003 in Armenia with the financial support of the Government of Switzerland. The NGO Project leader was the “Association for Sustainable Human Development of Armenia”. The project objective was the elaboration of specific recommendations for the two towns: Hrazdan and Charentsavan. A survey conducted in the two cities identified that the majority of people evaluated the quantity and quality of green zones in their respective city as unsatisfactory. The results of the surveys were presented to local government representatives, round-table discussions with city administrations were organized, concrete suggestions for adopting Local Agenda 21 for each city were made, and specific environmental activities such as planting of trees were carried out together with citizens of the respective cities. On the basis of the survey results, Local Agenda 21 guidelines were developed and issued in Armenia.

In general, Local Action 21 is a mandate to local authorities worldwide to move from agenda to action and ensure an accelerated implementation of sustainable development. Local Action 21 reflects advances in local sustainable development planning and management. The creation of sustainable communities and cities is furthered by identifying and removing barriers to sustainable development. Barriers such as poverty, injustice, exclusion and conflict, unhealthy environment, and insecurity, are to be proactively addressed through strategies to create viable local economies, just and peaceful communities, eco-efficient cities, and resilient communities and cities.

Membership in UPFG-relevant organizations

After the Local Agenda 21 project was carried out in Hrazdan, the city became a member of international organizations and initiatives (the European sustainable cities and towns campaign and ICLEI) that have UPFG relevant issues on their agendas. ICLEI is a membership association of local governments and national and regional local government associations that have made a unique commitment to sustainable development. In order to build sustainable cities the objective is to provide technical consulting, training, and information services to facilitate capacity-building, knowledge sharing, and support to local government in the implementation of sustainable development at the local level. The basic premise for ICLEI is that locally designed initiatives can provide an effective and cost-efficient way to achieve local, national, and global sustainability objectives.

Conclusion

The NFP includes UPFG to a very restricted extent. The involvement of urban stakeholders in the development of the NFP is very weak. The same is true for National Action Programs and the Poverty Reduction Strategy. Reasons for not incorporating UPFG as a subject in national planning are that: UPFG is considered to be the responsibility of local governments, namely the municipalities, and that UPFG is not a priority area.

At the local level the usual greening programs exist and are developed for one or more years but there are only a few initiatives that link UPFG and poverty alleviation, which recognize

that the UPFG sector can provide start up jobs and permanent employment (Kuchelmeister 1999) for the maintenance and management of urban green resources.

I.4 Institutional framework

Responsibilities for UPFG

There is no authority directly responsible for UPFG as it is perceived by this paper. But there are numerous authorities involved in the development and management of UPFG. The next overview aims to show the main responsible authorities for UPFG at various levels of the country.

Ministry of Nature Protection

The Ministry of Nature Protection is responsible for protected area management and has a monitoring /inspection function on forest management all over the country. (FAO/BTO 2005) The Ministry also operates a network of State inspection units. National parks are under the responsibility of the Ministry of Nature Protection. The parks are primarily financed by the state budget. Budget expenditures do not take into account expenses related to park development, including inspections and monitoring. Low wages inevitably affect the capacity for effective conservation of the park (MNP 2002).

Management responsibilities over community lands are mainly vested in local self-governing bodies, with the Ministry of Nature Protection as the inspection authority. Local self-governing bodies have inspection responsibilities as well (MNP 2002). A clear separation of responsibilities between the Ministry of Nature Protection, local authorities and local self-governing bodies is lacking.

The Ministry of Nature Protection also controls the management activities of Hayantar which is subordinated to the Ministry of Agriculture.

Ministry of Agriculture and Hayantar

According to the Governmental Resolution of the Republic of Armenia N 7 (15.01.2004) the Ministry of Agriculture is a state authorized body for the guarding, protection, regeneration and use of the forests of the Republic of Armenia.

According to Governmental Decision N 96-N the Forest Management Agency was established in the structure of the Ministry of Agriculture of the Republic of Armenia as a separate sub-division. This state agency Hayantar, a closed joint stock company (CJSC), is responsible for forest management. Hayantar manages municipal forests, group of trees that are considered to be a forest according to the Forest Code in peri-urban areas.²⁴ The forest enterprise in Yerevan, one of 22 state forest enterprises, manages urban and peri-urban forest land (especially the municipal forest land). There is no landscape architect or urban forester working for Hayantar.

Hayantar employs about 860 staff, of which more than 50 work at its Headquarters in Yerevan. 22 Forestry Enterprises (Ieshoz) belong to Hayantar. Since independence, Hayantar, the former State Committee on Forestry, was shuffled a few times between the Ministry of Agriculture and the Ministry of Nature Protection. The latest transfer of Hayantar from the

²⁴ Definition of forest according to Article 2 of the new Forest Code: interconnected and interacting integrity of biological diversity dominated by tree-bush vegetation and of components of the environment with the minimal area of 0,1 ha, minimal width of 10 m and with the tree crowns covering at least 30 percent of the area.

Ministry of Nature Protection to the Ministry of Agriculture occurred in early 2004. Hayantar's status and function have not yet been clearly defined and there are concerns about its capacity to effectively and efficiently manage forests. Hayantar, a non-commercial state owned organization was established by Governmental Resolution N 1054-N, though it still functions on the basis of the State Close Joint Stock Company charter. In fact, until 2004 the same body simultaneously implemented both forest control and forest management. Consequently, it was difficult to implement appropriate control. It is obvious that the described management system could not provide for sustainable forest management and prevention of illegal loggings. As a result of each restructuring it lost part of its authority which resulted in a partly uncontrolled situation and an increase of illegal loggings. Consequently, radical structural changes were needed in the sphere of forest management. (NFP 2004)

The Marz

The State has a regional structure with a division of the Armenian territory into 10 regions. The *Marzes* (Regions) manage state owned land not in community ownership; preserve the ecological balance at the regional level; and coordinate measures to combat plant diseases and weeds.

The Departments of Agriculture and the Environment of the Marz are responsible for ensuring the operative and effective implementation of the Marzpet's (the Marz Governors) powers vested by environmental legislation and Presidential decree on agricultural and environmental matters; for cooperation with governmental and non-governmental environmental organizations and civil society.

The Presidential Decree on State Government in Regions stipulates that the Marzpet controls the execution of the legislation on nature protection and in case of infringement of laws informs the responsible authorities. The Marzpet participates in the protection of specially protected areas.

Regional administrations, however, have the authority to supervise and intervene as deemed necessary in the day-to-day life of lower government structures, the Communities (*Hamaynkner*), that are located in their provinces.

Yerevan

Although Yerevan has a regional status, local self-government and state administration in Yerevan have special features. The twelve city districts function as units of local government. The districts vary greatly with respect to territory and public parks. They have less authority than the heads and legislative bodies of other urban communities throughout Armenia. Unlike the latter, Yerevan district administrations can not decide on the "pattern of the use of lands" in their respective areas. These responsibilities, instead, are the prerogative of the appointed Mayor of Yerevan (Eurasianet).

The mayor of Yerevan is responsible for nature and environmental protection according to Clause 1.2 of the Decree on the Administration of the Municipality of Yerevan. He takes part in the development of state programs on the protection of nature and the environment and implements them on the territory of Yerevan. He also contributes to the preservation and use of specially protected areas and to the realization of measures against cutting of forest, and collaborates with the organizations and people involved in nature protection (Clause 1.21. of the same Decree). Yerevan has a Greening Department that consists of five people, two dendrologists, one ecologist, one agriculturist and one general service person. The department manages green areas situated within the city borders and of regional importance and not only community level. The communities of Yerevan manage their green areas on their own. Primarily they contract private enterprises that manage and monitor everything.

Municipalities

Under the Armenian Constitution, all cities, villages, and the 12 Districts of Yerevan have the status of a Community and are governed by a locally-elected Community Chief and a legislative body called the *Avakani* (Council of Elders). In cities, Community²⁵ Chiefs hold the title of Mayor.

The main source of regulation for governance at local level is the Law on Local Self Government (LSG). LSG is based on a system that distinguishes between the State and local government (Local Self Governing Bodies). This distinction follows from the Armenian Constitution. Local Government is organized in a one-tier system in a number of districts/municipalities. Their function according to the Constitution is to “manage local property and solve problems of local significance”. Together with the Presidential Decree on State Government of Regions, the LSG defines in a general manner the tasks of municipalities and regions as regards waste management as well as the divisions of this competence.

The Armenian Constitutional arrangement grants autonomy to local government. It is therefore important how competences concerning UPFG development and management have been allocated. The LSG draws a main distinction between its own powers, which are powers initially vested in local government and powers delegated by the state. Its powers are again divided into mandatory and voluntary ones. Voluntary powers involve "any activity pertaining to the Community's interests and not contradicting the law, unless it is vested in other state bodies by legislation." Article 38 of the LSG assigns to the head of the community the responsibility to organize improvement and greening of communities as an obligatory responsibility. The head of a community is charged with mandatory responsibilities such as land use and environmental protection. In Yerevan, these responsibilities are divided among the city administrations, the council of Yerevan and individual district communities (Tumanyan 2002).

The heads of the communities and the head of Yerevan name parks and have to ensure proper maintenance of cemeteries (Tumanyan 2002). Some communities have transferred the preservation, maintenance and servicing of cemeteries to special agencies on a contractual basis. Various institutions in community ownership such as parks and kindergartens, are under direct control and supervision of local governments (Tumanyan 2002). Local self-governments are responsible for providing the public service of landscaping and community improvement. Landscaping and community improvement are mainly carried out in cities, due to lack of funds in villages.

Forest management is important to mention in this context as parts of the urban green resource are regulated by the forest legislation (see section 4.2.1.). Local self-governing bodies are vested with certain rights in forest guarding and use as well. Article 45 of the LSG states that the head of the community organizes the guarding of lands regarded as community property, forest and water areas as well as the environment. The nature and scope of these rights are unclear. Mechanisms by which communities should fulfil responsibilities delegated to them by the state are not mentioned either. Therefore, the role and authorities of the local self-governing bodies within the system of forest administration need to be clearly defined.

According to the Law on Flora, the LSG defines the authorities of local self-governing bodies on flora protection, maintenance, reproduction and use (Article 8 on the Law on Flora). The LSG remains very general about the responsibilities of the local self-governing bodies. According to the LSG, the head of the community has mandatory responsibilities in the field of nature and environment protection (Article 38). He has to realize the control of the use in the field of nature protection and organize the use and protection of vegetation resources (Article 45).

²⁵ The Russian version of the LSG uses the term municipality.

Other Institutions

Botanical gardens, dendroparks and national parks are under the supervision of different institutions and have different management authorities. Yerevan Botanical Garden and other botanical gardens are under the supervision of the National Academy of Science. Most dendroparks have been, at different times, supervised by the Ministry of Nature Protection, Hayantar and others. Dendroparks, where mostly trees and bushes are grown and exhibited, are first of all decorative landscape vegetation and of recreational significance. Other dendroparks are considered to be the property of the concerned cities and are supervised by city authorities.

The role of the NGO in the UPFG sector

Typically for former CIS²⁶ countries there is a large number of local NGOs but few that are seriously engaged with the forestry sector. NGO's are supported financially almost solely by grants from international organizations and funds. Another major source of funding is private donors that are Diasporan Armenians. Membership fees, financial help from the state or municipalities or other resources are not sufficient. In addition, the legislation of the country does not provide incentives for fundraising (State of the Environment 2003).

The NGO **Armenia Tree Project** (ATP) was founded in 1994 during Armenia's darkest and coldest years with the vision of securing Armenia's future by protecting Armenia's environment. Funded by contributions from Diasporan Armenians, in 11 years ATP has planted and rejuvenated circa 573.000 trees at 500 sites all over Armenia (personal communication2).

Since 1994, ATP has been performing tree-planting projects at community sites in 11 regions of Armenia. Two nurseries, founded in the refugee villages of Karin (Ashtarak area) and Khachpar (Masis Area) not only provide 40.000 to 50.000 trees annually for tree planting all over Armenia, but are also a source of employment for these refugee villages. Because of ATP in Karin, eleven people found a job and ten people in Khachpar. The nurseries were established to produce own quality seedlings and to ensure the refugees with jobs.

The goal of Community Tree Planting projects is to improve social and environmental conditions at Armenian's social institutions by involving and training people in tree planting and care. ATP plants decorative and fruit trees at kindergartens, orphanages, senior centres, schools, police academies, military bases, villages, churches, etc. within and around cities. By planting fruit trees, ATP provides food and jobs. Due to the success of the project, Armenian organizations and institutions approach the Tree Project to request trees.

The Head of the establishment who wants to receive trees signs an agreement to ensure care for the trees. An institution that wants to receive trees must meet the following requirements: 1) appropriate irrigation system, 2) appropriate soil for planting, 3) caretakers, and 4) security. In the post-Soviet period, where people were used to the State doing everything for them, the notion of responsibility needed to be developed. ATP set up its own rules. The heads of local institutions, such as schools, old age homes and hospitals, must sign an agreement with ATP that if 70 percent of the planted trees do not survive, they have to replant the lost amount of trees. ATP first evaluates the soil quality, availability of water, security and most importantly the motivation level of the residents and participants. Once accepted as a site, the residents receive the training and tools necessary to tend the trees by the NGO. Only 30 percent of the trees requested are given the first year and the remaining 70 percent are provided the following year if the survival rates are acceptable. By setting up a system whereby the

²⁶ In this report CIS refers to all former soviet countries in WECA, i.e. Armenia, Azerbaijan, Georgia, Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan.

residents must take responsibility for the trees, a model was formed of how an NGO, such as ATP, stimulates the self initiative and sense of responsibility. In this way ATP encourages residents to become environmental stewards.

One example of how much a fruit tree can provide in terms of harvest was followed up by ATP. In 1995, ATP gave 500 people four to five apricot trees, and a total number of 2,400 apricot trees. At present, there are two to three apricot trees in each family's backyard. The trees are 10 years old. Every tree produced about 40 kilograms of apricots. If we consider that a family has three trees, it means that every family harvested circa 120 kilograms of apricots a year. Many families use the apricots for their own consumption and sell part of it on the market. It means that ATP helped the family make a profit and to ensure food needs for the summer and winter periods. The fruit tree can provide direct cash benefits if the fruits are sold and indirect cash benefits by freeing cash income for other uses.

ATP has employed hundreds of people on a temporary and permanent base to plant and rejuvenate trees at hospitals, schools and parks. For example, in the park "Andramik" in Yerevan no trees were left anymore because of lack of management and illegal cutting during the years of the energy crises. Nowadays, there is a green park of trees with benches that can be used by the inhabitants of this area. These type of city parks are especially important for the urban poor who cannot afford to travel to national parks or join private sporting clubs, and otherwise have only few recreational outlets. Cityparks, dendroparks and municipal forests located within a reasonable walking distance from poor neighbourhoods can substantially increase the quality of life for these people by providing opportunities for leisure activities.

The NGO **Shen's** declared objective is to promote social and economic development and empowerment of remote and vulnerable rural communities of Armenia. But Shen also carried out a UPFG project in 2004, the rehabilitation of an artificial forest in the vicinity of Yerevan (Jervezh) that had suffered during the energy crises, funded by Swiss Agency for Development and Cooperation (SDC). As a practical part of the project a tree nursery was established on three hectares. The first quarter of hectare is already planted with oak tree seeds.

The **Armenian Ecotourism Association (ARMECAS)** was created in 1997 to unite the people who regard ecotourism as a means of sustainable development for the country. Members of the organization are people of different professions; most of them are specialists in areas of natural and cultural heritage and the tourism business. This association promotes ecotourism - contributing to a better understanding of the natural and cultural heritage and providing revenue to the local community sufficient for people to value, and, therefore protect the environment as a source of income by providing jobs to local people at all levels of management and operation and raise environmental awareness.

Armenian Forests NGO began in 2002 as a project of the Tufenkian Foundation. As a means of reclaiming, protecting, and expanding forested areas, Armenian Forests NGO involves individuals, communities, other NGOs, government, and businesses in a variety of solutions on multiple fronts including changes in policies, norms of thinking and action, economic improvement, public education, and media advocacy. The NGO's objective is the protection of forests. The Armenian Forests NGO will reforest an area of 30 ha in Kotayk village in the vicinity of Yerevan.

The **Regional Environmental Centre for the Caucasus (REC)**, created with the support of the European Union, assists Armenia in solving environmental problems, supports building civil society, promotes public participation in the decision making process and helps developing the free exchange of information (REC Caucasus 2005). The partnership process between governmental and non-governmental institutions greatly benefits from the help provided by the REC. The information exchange and promotion of public participation are

important issues to UPFG. Such currently existing institutions could be used to promote UPFG.

Private stakeholders

Non commercial state enterprises manage and plan specially protected areas (Personal communication³). In Yerevan, in any community a private enterprise manages the green zone. The enterprise is paid by the community, in some cases they also work for the Municipality. The distinction is between areas of local significance (responsibility of the community) and areas of regional significance (responsibility of the municipality of Yerevan). The specialists for green areas are dendrologists, there are no landscape architects or staff with an urban forestry education. These enterprises do not only manage, but also plan and develop the greening programs for the respective communities. In Armenia, the transfer of management tasks to special agencies and private enterprises in the field of UPFG is very common, especially at the community level.

Financial mechanisms and budget issues

Of all the mandatory powers delineated in the LSG, the adoption of a local budget appears to be one of the most significant. The Communities do not have the authority to introduce and/or collect local taxes by themselves. All taxation is controlled by the central government despite the fact that the funds of the local budget are in ownership of the community according to Article 169 of the Civil Code. Nevertheless, taxes on land and other property and 15 percent of all income and profit taxes collected within a community go directly into its budget. In addition, the Communities are allowed to collect income for their property and enterprises. The LSG also gives a city or village the right to set "duties and payments." This includes fees for enterprise registration, notary services, and the like. However, there is an apparent contradiction with another law that fixes the same standardized nationwide tariffs for such services (Tumanyan 2001). According to the United Nations Human Development Report for 1998, the local revenues of Armenian Communities make up less than 30 percent of their budgets. This means that the bulk of local funds are provided by the central government in the form of subsidies. A city, village, or Yerevan District decides its budget allocations, but budget deficits and financial dependence on Yerevan leaves them with few choices (Eurasianet). These financial constraints restrict the promotion of UPFG at the local level. A higher decentralization level in financial terms with the provision and ensuring of fiscal authority at local level will promote UPFG.

According to the Land Code the local self-governing bodies implement charges of land taxes and rent for the use of community land (Article 3). Maintenance of public areas such as gardens and parks are financed from the community budget and performed by local government enterprises or contracted to private companies through public tenders.

One of the main problems is the implementation of fiscal decentralization and local governments fiscal autonomy. Armenia assigns more financial responsibility to local self-governments than can be financed from their own revenue sources (Tumanyan 2001). Financial means for the development and maintenance (of what) are lacking. The green space suffers under financial constraints mainly due to the fact that UPFG is not a priority area.

The role of UPFG and education

The key of a successful urban greening policy and development is the availability of UPFG experts, the active participation of stakeholders and the awareness of the general public. Environmental education (including UPFG) at schools, through NGOs and universities is important to promote UPFG itself and in all related fields.

Analyzing education in the field of UPFG in Armenia, two different approaches should be taken. One that requires the education of specialists for the challenging urbanizing environment, this means experts for the development, management and monitoring of the urban green resource and all related areas such as land planning. And on the other hand the general education of the population, especially schoolchildren, on environmental issues that also includes the urban green resource.

In Armenia, education in urban forestry is very new. There is only one higher education institution, the Armenian Agricultural Academy, that offers an education program that focus on UPFG. One subject of the master's program, "Forest Farm and Settlement Greening," is settlement greening and urban forestry.

NGOs can play an important role in the education process of people. For example, the NGO Lore ECO Club from Stepanavan, focuses on the education of schoolchildren. This NGO carried out several tree planting initiatives with children, organized environmental campaigns and seminars in its region.

Outdoor education and education in botanical gardens are of special significance in the system of continuous environmental education focusing also on the urban green resource. This method is rarely applied in Armenia. The Armenia Tree Project (see section 3.2.) and Lore Eco Club have different methods and priorities in the environmental education of people.

The legal basis for environmental education in Armenia is the Law on Environmental Education. The education development state program (2001-2005) was approved by the President of the Republic on 31 June 2001. Special sections of the program are focused on environmental education. (State of the Environment 2003)

Conclusion

The current system of management and monitoring of UPFG is clearly not working properly. Responsibilities of authorities, especially at sub-national levels, are partly overlapping and are unclear. Therefore, the objective should be to build urban forest sector institutions that can ensure good UPFG governance, support community forestry, and manage the state's urban green resources sustainably.

A major problem identified is the current lack of experienced professional and technical staff in UPFG and related fields. Professional support will be required in urban planning, management, monitoring and development of the urban green resource.

However, there is continuing competition among NGOs for grants from international donors, which impedes the atmosphere of openness and cooperation among NGOs.

I.5 Legal framework

International legal framework affecting UPFG

Armenia signed all the relevant and binding UPFG international documents: the Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, the Convention on Biological Diversity (CBD), and the Convention to Combat Desertification (UNCCD). After adopting the Conventions and the Kyoto Protocol, Armenia started implementing a number of international projects. Several Armenian state institutions and non-governmental organizations within the environmental and forestry sphere participated in these projects. For example, the projects based on the CBD are the followings: "Development of the Forest

Sector” (1996-1997), “Assessment of Forest Resources” (1998), “First National Report on Biodiversity of Armenia” and “Biodiversity Strategy and Action Plan of the Republic of Armenia “(1998-2000), and “Conservation and Rational Use of Forest Genetic Resources in the Transcaucasus” (2001). The World Bank funded “Natural Resources Management and Poverty Reduction Project” (2001). (NFP 2004) These projects include some elements of urban green resources but do not focus on them. For example, the CBD projects are relevant to UPFG because green areas play a vital role in urban biodiversity (FAO 2005) and these projects aim at protected areas in peri-urban and urban areas, and forest conservation that in Armenia also refers to municipal forests.

National legal framework

Since its independence, Armenia has adopted new forest and environmental laws that are the main legal instruments regulating UPFG at national level.

The following sections give an overview on the laws relevant to UPFG including forest, environmental and land (planning) legislation.

Forest legislation

The most recent Forest Code has not been adopted yet (Final Draft)²⁷. The Forest Code of 1994 is still in force but will be substituted in a very short period of time by the new Forest Code. The Draft Forest Code includes some provisions on municipal forests and forests close to cities. The current Forest Code of November 1994 only refers to municipal forests. A definition on the term municipal forest is not provided by the draft forest code. Article 11 of the draft Forest Code determines that municipal forests and forests located close to cities are forests of special significance. There is no special regulation on municipal forests. The article relevant to municipal forest (see box 1 below) prohibits forest regeneration cuttings as well as the use of non-wood forest products which is according to article 42 of the draft Forest Code allowed as general forest use by citizens.

Box 1: Draft Forest Code: Provisions on municipal forests

Article 40. Peculiarities of forest use in forests of special significance

1. The order of forest use in the forests of specially protected areas of nature shall be determined by the Republic of Armenia legislation on specially protected areas of nature.
2. Municipal forests, forests close to cities, recreational, health, scientific and historical forests and forests protecting sanitary zones shall be used first and foremost for cultural-health purposes, as well as for the recreation of population.
3. Forest regeneration cuttings as well as use of non-wood forest products shall be prohibited in municipal forests, forests close to cities, recreational, health, scientific and historical forests and forests protecting sanitary zones.
4. The order on use of forest lands designated for the protection of recreational, health, historical, scientific and the protection of sanitary zones shall be determined by the Government of the Republic of Armenia.

According to the new Forest Code general use of forests by citizens includes the collection of wild fruits, berries, mushrooms and plants for personal consumption (Article 42). At the same time, the new Forest Code restricts the use of municipal forests to cultural, health and recreational purposes. The Regulation on Forests and Forest Land Use for Cultural, Health,

²⁷ The Revised Forest Code was approved by the responsible Committee in the National Assembly (NA) on 8 September and passed the first hearing in the National Assembly without further changes on 16 September 2005.

Recreational, Sports and Tourism Purposes has not been developed yet. Article 40.3. of the Draft Forest Code stipulates that in municipal forests cutting shall be prohibited. This provision refers implicitly to a regulation or another law that specifies the use in a municipal forest. However this regulation does not exist.

The provisions on municipal forests are incomplete and need amending. The article on municipal forests and their use requires the enforcement of by-laws, which are not developed yet and not planned to be developed. The problem goes much further since not even the national forest policy explicitly aims at municipal forests. But it should be clearly part of the National Forest Policy and National Forest Program since municipal forests are regulated by the forest code and thus considered to be part of the forest sector.

As there is no official definition on municipal forests, in practice the forest of the state forest fund or forest land within the administrative borders of a town is considered to be a municipal forest. Lack of rules on access, use and management of municipal forests is a problem.

According to the definition of forests of the Draft Forest Code, elements of the urban green resource are included if they are an “interconnected and interacting integrity of biological diversity dominated by tree-bush vegetation and of components of the environment with the minimal area of 0,1 ha, minimal width of 10 m and with the tree crowns covering at least 30 percent of the area” (Article 2). The various forests of special significance listed (forests included in the system of specially protected areas, forests of recreational and health protection significance, forests of historical and scientific significance and forests protecting sanitary zones) may all refer to elements of the urban green resource whereas municipal forests are an element of the urban green resource itself.

Environmental legislation

One of the purposes of nature protection is the maintenance of natural environment according to the Law on the Foundations for Legislation on Nature Protection (Article 1). The *Law on the Foundations for Legislation on Nature Protection* contains one very general provision that refers explicitly to trees that are not part of the state forest fund (see box 2). The article includes all elements of the urban green resource and forests outside the state forest fund. It is basically a definition of trees outside forests that also refers to urban green structures. This article enumerates many elements of the urban green resource: trees and groups of trees, and also other hardy-shrub species, in towns and other settlements, on strips of allotment of roads and channels, as having protective, improving, and aesthetic value. The article also separates decorative trees and groups of trees. This law sets out very generally that these elements are subject to protection, but there is no specification of what is actually meant by “protection”. A by-law or regulation does not exist. This law does not refer to municipal forests.

Box 2: Law on Foundations for Legislation on Nature Protection: Article 22. Protection of Forests, Hardy-Shrub Species and other Useful Vegetation, Not Included in the State Forest Fund

Forests of the Republic of Armenia, trees and groups of trees, and also other hardy-shrub species, that are not included in the state forest fund, in towns and other settlements, on strips of allotment of roads and channels, as having improving, protective and aesthetic value, and also separate decorative trees and groups of trees, any useful vegetation on the agricultural lands are subject to protection.

Relations in the sphere of use, reproduction and protection of flora are regulated by the legislation of the Republic of Armenia on flora.

According to the *Law on Administrative Offences*, the cutting and destroying of private or state owned trees and bushes as part of the forest fund, or outside of the forest fund on prohibited areas, is subject to prosecution. This is the only provision that protects the urban green resource not just in general terms. It specifies the legal consequence of cutting and destroying, but the wording leaves uncertainty about the term “prohibited”. Also missing, is a list of areas outside the forest fund where cutting and destruction is prohibited.

Box 3: Law on Administrative Offences: Article 66: The cutting and destroying of private or state owned trees and vegetation cover or damaging vegetation growth

In the forest funds, as well as on the lands outside of the forest funds the prohibited cutting and destruction of trees, bushes, state or privately owned vegetation a penalty of 50^s and 100^s time more of minimal salary; and for state servants of 100^s and 150^s time more of the salary will be determined. (the minimum salary in Armenia amounts 13 000 AMD, which equals to 30 US\$).

Another important law regulating UPFG is the *Law on Flora*. It also refers to the elements of the urban green resource by listing botanical gardens and the natural integrity of trees, bushes and herbaceous plants as part of flora being subject to protection, maintenance, reproduction and use of natural flora (see Article 1). Regarding the regulation on use and responsibilities the Act on Flora refers to other non specified legal acts (see Article 25).

According to the Law on Flora, the regional state bodies support the protection of specially protected areas (national parks and natural monuments), support the protection and use of forest plantations and forests, and implement measures on flora protection and reproduction with an agreement of the corresponding authorized body (Article 7).

The *Environment Impact Assessment Law* stipulates the environmental impact assessment for activities in town-planning, such as certain construction activities (Article 4). The assessment includes the forecasting, description and estimation of the possible direct and indirect impacts on the environment of settlements (Article 5). The EIA is a means, already in the planning process, to protect the environment in settlements which refers primarily to urban green resources.

According to the *Law on specially protected areas* specially protected areas are, *inter alia*, national parks and natural monuments. The former may be primarily used for ecotourism and the latter may be located in an urban and peri-urban area. For example, in Armenia the city of Dilijan is surrounded by a national park called the “Dilijan National Park”. National parks are divided in corresponding zones (see Article 10). The functions are limited to ecological, historical, cultural and aesthetic values (Article 10). The Dilijan national park is divided into three zones. Only in the first zone is the collection of berries, mushrooms and deadwood as fuelwood allowed (personal communication⁴). Specially protected areas are under the responsibility of the Ministry of Nature Protection. Economic activities in specially protected areas are forbidden. For the maintenance of natural monuments organizations are determined (Article 15).

UPFG related legislation

The following section gives a brief overview on the UPFG related areas that are very important to UPFG and should always be considered in the UPFG context.

The ownership of urban green resources

Most green structures within city boundaries belong to the municipality or the government. In Yerevan, there are two main owners of green space and urban and peri-urban forests: The Municipality of Yerevan is the owner of green areas, gardens, orchards, parks and cemeteries. The state owns some land that is part of the state forest fund and that is located within the boundaries of the municipality and on its fringe. However, small orchards and gardens are privately owned by individuals and/or organizations (personal communication⁵). Specially protected areas including national parks and natural monuments are state property (MNP 2002).

After adoption of land reforms, property at state level, municipal and private property developed in Armenia (see Article 4 of the Land Code; Article 167, 168 and 169 of the Civil Code). These reforms lead to an increasing privatization of land lots that are part of urban green resources, especially gardens, orchards, family residences and agricultural fields where use rights are generally not restricted. Nevertheless, the ownership of the city parks and municipal forests remains public.

Box 4: Civil Code

Article 168. The Right of State Ownership

1. Property belonging by right of ownership to the Republic of Armenia is in state ownership.
2. Land and other natural resources that are not in the ownership of citizens, legal persons, or a commune are in state ownership.
3. The bodies and persons indicated in Article 129 of the present Code exercise the rights of the owner in the name of the Republic of Armenia.
4. The funds of the state fisc are in the ownership of the Republic of Armenia.

Article 169. The Right of Ownership by Communes

1. Property belonging by right of ownership to city, rural, and district communes is in ownership by communes.
2. The bodies and persons indicated in Article 129 of the present Code exercise the rights of an owner in the name of communes.
3. The funds of the local budget are in ownership by the commune.

Armenia distinguishes between private and public **forest ownership**. In Armenia, according to the Forest Code of 1994, the forest is still the exclusive property of the state. This means that all categories of forests, including elements of the urban green resources, are state owned, including protection forest with shelterbelts and green belts, and municipal forests (see Article 3 of the Forest Code of 1994). This means that the state owns the following elements of the urban green resource: i) municipal forests; ii) and all the forest lands that are located in the urban and peri-urban area and that are elements of the urban green resources. Therefore, only lands excluded from the forest fund can be privately owned. These lands include individual trees and clusters of trees with an area below a certain limit, trees and shrubs within gardens, etc. With the Draft Forest Code this situation may change, because according to the new Forest Code, private ownership is permitted for forest outside of state forest and forest land (Article 4).

Community property consists of registered public assets. Community property rights are regulated by the Law on Property of Armenia, the Civil Code and the LSG. Local authorities have the right to sell public property. According to Government decision No.42 and No.52 parks fall under the category of community property, but the Land Code prohibits the privatization of parks and gardens classified as land of general use situated in settlements.

The right to transfer property is also excluded for the following elements of the urban green resource: civil cemeteries, dendroparks, botanical gardens, natural monuments and national parks (Article 60 of the Land Code).

Common condominium areas are jointly owned by apartment owners, with shares in proportion to the size of their apartments, and are consequently managed by the condominium associations (Tumanyan 2002). This means that green areas as part of the condominium are also managed by the associations. No specific rules exist on the management of trees and bushes on condominium areas.

Land (planning) legislation

Current land planning legislation is imperfect, especially in the field of land ownership, spatial planning and zoning, etc. Town planning practices are still based on Soviet approaches and do not reflect modern urban concepts, or the special nature of transitional economies. Whereas various state plans, programs and projects pertaining to land resources management do exist, financial and implementation mechanisms are insufficient or absent.

In Yerevan, especially in its centre, in recent years the urban building process has raised serious anxiety. A big issue is the violation of the legislation that regulates urban planning as well as lack of law enforcement. Illegal construction of unapproved and even rejected projects can be found in green areas such as public parks and gardens (State of the Environment, 2003). For example, the Circular Boulevard was designed by urban planners to beautify the city and to protect it from dry winds. Nowadays this area is covered by construction. Numerous cafes and restaurants have been built in this area.

The Law on Urban Development determines the hierarchy of planning instruments. For each planning zone, territorial plans are established that are consistent with the territorial plan of the country as a whole. Master plans are foreseen for settlements within each zone, but they exist at present only for a few of them (Armenia 2002a).

The town-planning projects, economic and other activity should have ecological substantiation submitted to the state authorized nature protection body, prior to the approval of projects, with the purpose of prevention of harmful influence on environment (see Article 14 Law on the Foundations for Legislation on Nature Protection).

Mandatory duties of the head of the community in the area of land planning relevant to UPFG include the following: to prepare the general development plan, to implement the land cadastre and approve detailed plans of certain sectors within the general urban development plan (Tumanyan 2002). According to the Land Code, local self-governing bodies implement land zoning and use mechanisms within the administrative territory of the municipality (Article 3).

The main ministries regulating land use and land resource protection are the Ministry of Agriculture and the Ministry of Nature Protection. The local self-governing bodies conclude agreements on nature use with individual users, after the details have been agreed with the environmental protection agencies. Their consent is also required in matters of land use, as with construction permits, which are issued by the regional authority. Regional authorities are responsible for the appropriate control of land use and land resource protection with the help of the regional inspectors (Armenia 2002a).

Overall, agencies in the land planning and management field experience similar financial and institutional difficulties, as do others involved in environmental and natural resources management.

According to the Land Code the local self-governing bodies develop the basic settlement plans of the municipality (Article 3). The LSG specifies the duties, the heads of urban communities prepare the general urban and local development plans and submit them to the regional governor upon council approval (Tumanyan 2002). According to Governmental

Decision No. 609 the master plan (general plan) is prepared by the head of the community. The head of the marzpet has to approve the master plan within five days after it was approved by the community committee members. After the approval of the Marzpet, the master plan has to be presented to the ministries for review and final approval.

The old master plan of Yerevan is from a legal point of view still in force although it is still from Soviet times and outdated. Therefore the master plan is no longer applied. Practically, the city of Yerevan does not have a master plan. The new master plan is already developed and finalized but has not been adopted yet. It is expected to be adopted in 2006 but there are still uncertainties regarding the timing. However, Yerevan is one of the few cities that developed a new master plan. In most cities of Armenia the master plans from the Soviet era are still in force. For only 20 communities zoning was accomplished. For the other 909 communities (obshini) zoning must still be completed. (personal communication6).

The master plan of Yerevan determines three categories of green zones: 1) green space of general use, 2) green space of limited use, and 3) green space of special use. The first category has primarily a recreational function. The second category is of limited use because it refers to green structures on public and private lands that are not freely accessible to everybody such as gardens of schools and private or public enterprises. The green space of special use implicates a special objective such as, for example, the harvesting of fruits in gardens or for the research and education in botanical gardens. (Personal communication7)

The Land Code stipulates that the right to land can be restricted in order to meet the requirements of nature protection and implement certain works, including: the protection of fauna, land layers, rare plants, nature, historical and cultural monuments and paleontological objects (Article 49). The permitted use of lands is, *inter alia*, defined by land zoning (Article 8). The schemes of land zoning and use in residential areas, according to the Land Code, must also include the main requirements on the main criteria for green plantations (Article 29 of the Land Code). But as already mentioned zoning was just carried out for very few communities in Armenia, which makes the determination of use rights difficult. The use of lands can impose responsibilities that are aimed at maintenance of green plantations (Article 8 of the Land Code). No specifications regarding these responsibilities are provided by this or any other law or regulation.

Objects of construction activity, according to the Construction Code, can be landscape complexes, recreational zones, nature reserves and specially protected zones (Article 3). No constraints for construction activities set by laws exist. The restrictions on construction are set by the Norms and Rules on Constructions (NRC, *stroitelnie normi i pravila*) that were binding norms in Soviet times which had to be followed for land use planning and the issue of building licenses. Point 4.1. on Landscape Architecture and Construction in Parks and Gardens of the NRC points out the importance of open space and green territories in cities and villages and stipulates the requirement of a minimum of 40 percent of green territory in build-up areas. The required area of green space on territories of general use depends on the size of the city. The NRC distinguishes between big, medium, and small towns and villages. The legal quality of these norms nowadays is unclear. In interviews these norms were reported to be followed and still considered as a norm but the reality regarding the construction in green areas of Yerevan does not reflect the adherence to the NRC.

According to Governmental Decision No. 286, tenancy rights on community and state owned lands are provided through tenders. One exception from this requirement applies to constructions for up to 20 sqm (kiosks, garage, trade points, etc.) This provision is usually used to build cafes, bars and restaurants inside of the green zones of cities without the necessity to participate through tenders. This is a very important issue in the cities especially in Yerevan.

Regional authorities issue building licenses according to the master plan. If the master plans are modified, the respective region requests an exemption from the Ministry of Urban Development, which has to respond within 15 days. (Armenia 2002a)

The Land Code includes several provisions that are relevant to UPFG. The Land Code classifies the land into different categories that are again divided into different subcategories. Each category consists of different sub-categories that are relevant to UPFG. The agricultural lands are divided into long-term plantations and cultivated lands that may be relevant to UPFG if located in an urban or peri-urban area (Article 9). The landowners and users can define the procedure for the use of these lands. Sub-divisions of residential lands are lands for general use such as parks and other public areas (Article 10). Lands envisaged for leisure activities and historical and cultural lands are a classification of lands of specially protected areas with relevance to UPFG (Article 19). Article 22 specifies what lands are considered as lands for leisure activities. The UPFG relevant are forested parks. Here, any activity contradictory to the purpose of the land is forbidden. Article 23 lists the following UPFG relevant classifications for historical and cultural lands: memorial parks, military and civil cemeteries. The UPFG relevant sub-divisions of forestlands are forests and bushes when located in urban and peri-urban areas (Article 25). There are inconsistencies regarding the terminology. Some sub-categories of land of the Land Code (for example forested parks and long term plantations) are not reused by other laws or regulations.

Municipal level

In Armenia, at the municipal level, usually the most relevant to UPFG, do not exist any specific by-laws on trees, parks or open space. It exists a Presidential Decree on the Administration of Yerevan according to which the mayor has some responsibilities in the field of UPFG.

Conclusions

The Forest Code plays an important role in the legislative framework of the urban green resource in Armenia. This is mainly due to the provision on municipal forests of the Forest Code.

Laws regulating urban green resources, such as the law on environmental impact assessment, nature conservation, national protected areas networks, contain many contradictions, ambiguities and gaps. As a result they are not clear and not enforced (REC Caucasus 2005). Specific by-laws are lacking as well.

Requirements for the issue of building licenses in parks seem not to exist. The only set limit is the Law on Environmental Impact Assessment but this applies only to certain construction activities.

There are no compensation measures for construction activity such as for example to plant a certain number of trees in order to compensate the loss of trees for a construction activity.

I.6 Recommendations

The urban green resource sector is not large enough to have a broad impact on growth and poverty reduction. But it can be seen as a public policy that stimulates more pro-poor growth. UPFG is a multi-sectoral discipline. Increased state control on its own will do little to stop the decrease of the urban green resource. The reasons behind that problem need to be analyzed and faced rather than solely addressing the effects of mismanagement.

Improvement of UPFG Policies and Institutional Framework

To improve the policy framework of UPFG a number of urgent tasks should be addressed:

- The implementation of policy programs should be planned long-term on the one hand and on the other hand it should be flexible and able to respond to changes.
- The consideration of UPFG issues in the NFP (organization of the process: participation of urban stakeholders, development of specific studies, implementation of actions) is fundamental.
- Local Agenda 21 activities and programs should be carried out in every municipality.
- - A national and local register for green zones is a key for proper management of the green zone. It does not exist in Armenia. It should be made by every municipality and communicated to a higher level where general policy decisions are taken for the green zones of the country.
- Clarification of functions of management bodies in Marzes and communities in the field of UPFG management and control is necessary.
- Involvement of urban forest specialists such as landscape architects is necessary.
- - Monitoring/inspection in green zones should not be carried out by the Ministry of Natural Resources but by the municipality itself to ensure effective control and immediate action.
- Implementation will need cross-sectoral support by a number of Ministries and local entities (e.g. Ministry of Nature Protection, Ministry of Urban Development, Ministry of Agriculture, the regions and municipalities).
- In order to achieve awareness, acceptance and implementation of UPFG activities, UPFG guidelines should be developed.
- Zoning has to be carried out for all the communities of Armenia as zoning is fundamental for the determination of the allowed, prohibited and restricted land use.
- New master plans for every town should be developed and adopted.

Improvement of the Legislative Framework

The legal framework of UPFG should be set up. Considering the existing gaps of the legal framework the following issues should be taken into consideration:

- A regulation on municipal forests is necessary to provide a definition of this term and stipulate the permitted land uses and municipal forest uses.
- Enactment of a tree by-law is necessary. The provisions of the tree by-laws should facilitate rather than prescribe management green resources. Parks regulations should be issued.
- Provision of a legal basis of mechanisms for involvement of non-state structures and citizens in urban and peri-urban forest rehabilitation and tree planting activities is necessary.
- Elimination of contradictions and duplications in different (related) legal acts.
- Harmonization of used legal terminology is necessary. For example such terms as green areas, green space, vegetation etc. often refer to the same subject and are therefore unclear. Laws using terminology referring to urban green resources should include definitions of the used terms.

- Provisions enabling the destruction of public green spaces by construction should be altered. The Governmental Decision No. 286 providing an exemption for constructions under 20 sqm should be altered.
- Revision of the legislation on land planning in general by incorporating provisions on urban green resources into the new planning laws and strengthening the participatory approach of concerned people. The numbers on minimum green areas provided by the Norms and Rules on Constructions (NRC) could be used as guidelines.

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Further information about the LSP

The Livelihood Support Programme (LSP) works through the following sub-programmes:

Improving people's access to natural resources

Access of the poor to natural assets is essential for sustainable poverty reduction. The livelihoods of rural people with limited or no access to natural resources are vulnerable because they have difficulty in obtaining food, accumulating assets, and recuperating after shocks or misfortunes.

Participation, Policy and Local Governance

Local people, especially the poor, often have weak or indirect influence on policies that affect their livelihoods. Policies developed at the central level are often not responsive to local needs and may not enable access of the rural poor to needed assets and services.

Livelihoods diversification and enterprise development

Diversification can assist households to insulate themselves from environmental and economic shocks, trends and seasonality – in effect, to be less vulnerable. Livelihoods diversification is complex, and strategies can include enterprise development.

Natural resource conflict management

Resource conflicts are often about access to and control over natural assets that are fundamental to the livelihoods of many poor people. Therefore, the shocks caused by these conflicts can increase the vulnerability of the poor.

Institutional learning

The institutional learning sub-programme has been set up to ensure that lessons learned from cross-departmental, cross-sectoral team work, and the application of sustainable livelihoods approaches, are identified, analysed and evaluated for feedback into the programme.

Capacity building

The capacity building sub-programme functions as a service-provider to the overall programme, by building a training programme that responds to the emerging needs and priorities identified through the work of the other sub-programmes.

People-centred approaches in different cultural contexts

A critical review and comparison of different recent development approaches used in different development contexts is being conducted, drawing on experience at the strategic and field levels in different sectors and regions.

Mainstreaming sustainable livelihoods approaches in the field

FAO designs resource management projects worth more than US\$1.5 billion per year. Since smallholder agriculture continues to be the main livelihood source for most of the world's poor, if some of these projects could be improved, the potential impact could be substantial.

Sustainable Livelihoods Referral and Response Facility

A Referral and Response Facility has been established to respond to the increasing number of requests from within FAO for assistance on integrating sustainable livelihood and people-centred approaches into both new and existing programmes and activities.

For further information on the Livelihood Support Programme,
contact the programme coordinator:
Email: LSP@fao.org

LSP WORKING PAPERS to September 2006

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