Part I – Main results of the workshop

A) Introduction

Urban and Peri-urban Forestry and Greening (UPFG) can contribute to a more sustainable development of urban areas through their economical, ecological and social values. UPFG deals with the urban green resource, i.e. all green areas under urban influence such as parks, gardens, allotments, cemeteries, trees along streets, forests and woodlands in or around the city. Urban Agriculture is usually not included in the concept of UPFG, although the land use planning related to urban development has to take into consideration in an integrated manner the agricultural, forestry and other "green" uses. UPFG is a holistic approach to the urban green resource, involving legislation, stakeholders, strategic planning, management, technology, design and maintenance.

The Food and Agriculture Organization of the United Nations (FAO) believes that UPFG can contribute significantly to achieve a better urban and peri-urban livelihood, particularly in the developing countries and countries with economies in transition. One of the important aspects addressed under Forestry Outlook Study for West and Central Asia (FOWECA) is the long-term prospect for UPFG in West and Central Asia, especially in the context of urbanisation.

The nature of urbanisation varies in the West and Central Asia (WECA) region, mainly because of the differences in economic development and the nature of migration within and between countries in the region. Depending on the social, economic and cultural characteristics of the population and the local ecological conditions, the demand for UPFG is expected to vary from one country to the other.

Being a new area of action, emphasis should be given at all levels, including the policy, planning and operational. Focus should be on governmental and local authorities as well as research and education. Increased collaboration within and between the international community in order to promote UPFG at technical, decision-making and policy level should be sought. Inclusive participation, including the civil society is of highest importance in order to create ownership and sustainability.

The FAO Regional FOWECA, initiated in 2005, integrated the theme of urban issues. The primary objective of FOWECA is to provide a long-term perspective of the development of the forestry sector in the region in the context of economic, social, institutional and technological changes. A thematic regional study on UPFG was carried out in the 23 countries[2] (Akerlund *et al*. 2005). In addition, six case-studies were initiated on cities representing the main trends and local conditions of the region. The cities are Abu Dhabi (United Arabic Emirates), Amman (Jordan), Astana (Kazakhstan), Izmir (Turkey), Kabul (Afghanistan) and Yerevan (Armenia). The leadership of the FOWECA study is under Forest Products and Economics Service (FOPE), while the Urban and Peri-Urban Forestry thematic study is under the Forest Conservation Service (FORC).

The city case-studies on UPFG have been undertaken by national consultants. The Danish Centre of Forest, Landscape and Planning (DCFLP) provided technical advice.

A three-day workshop on "Urban and Peri-Urban Forestry and Greening in West and Central Asia" was

[2] The 23 countries: Afghanistan, Armenia, Azerbaijan, Bahrain, Cyprus, Georgia, Iran, Iraq, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Tajikistan, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan and Yemen.

held in FAO headquarters, Rome, from April 5th to 7th, 2006. The workshop was organized by the FORC with assistance of the DCFLP.

The objectives of the workshop were to: a) initiate a forum for information sharing on UPFG in the region; b) identify and collect the complementary information in order to finalize the city case-studies; and, c) draw recommendations for the promotion of UPFG in the cities studied and their respective countries, as well as for the WECA region in general.

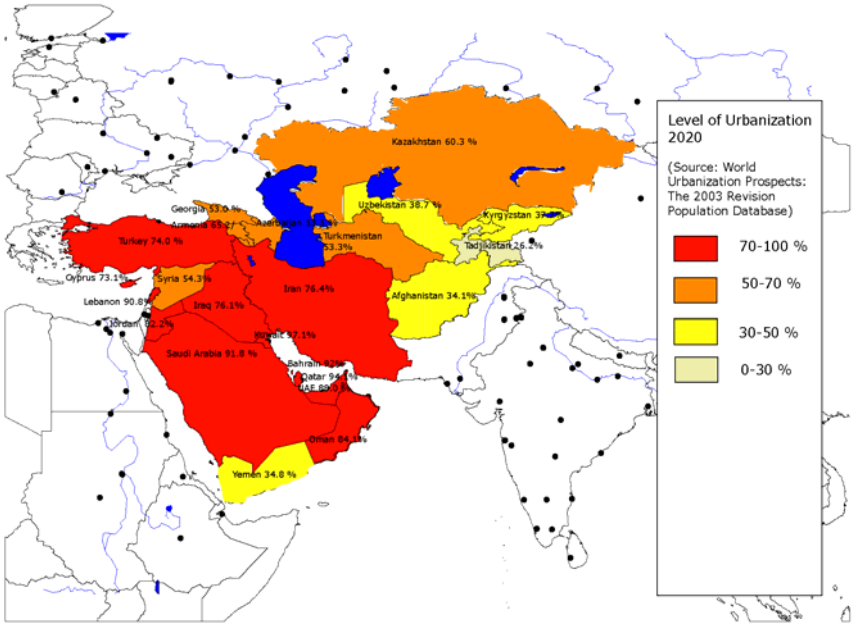


Figure 1. Countries of the WECA region and their level of urbanization.

The Organizers invited 18 participants as follows: two participants from each of the city case-studies (including the author of the city case-study); two international specialists, and three international advisors from DCFLP and IUFRO Working Group on urban forestry. All the invitees could attend except for those from Astana (Kazakhstan). FAO officers mainly from FORC, FOPE, AGNP, SDRN, LEGN and the Interdepartmental Working Group "Food for the Cities" participated (List of participants see page 49).

The working language of the workshop was English. No simultaneous translation was provided. The workshop agenda is presented in Annex 1. The background documentation is presented in Annex 2, and additional reference material in Annex 3.

B) Main features of group discussions

Four working groups (WG) (I, II, II & IV) meetings were held during the workshop. These were grouped in two sessions; WG I and II focusing on strategic planning analysis, technology transfer, training and education, were as WG III and IV were primarily used as an opportunity to look more specifically at the need for additional information to finalize the case studies.

In WG I and II, the participants were evenly distributed, having experts from each case city represented to discuss similarities and differences within the region related to "Benefits from Urban Forestry – Socio-Economics options and Livelihood" and "Decision making process', equitable and inclusive participation, and management tools (planning, monitoring and evaluation)".

In WG III and IV the participants were grouped according to the acknowledged similarities between the cases. Thus, WG III was represented by Abu Dhabi and Amman, and WG IV was represented by Izmir, Kabul and Yerevan.

WG III highlighted the global trend of urbanization from rural to urban areas for economic reasons; and some environmental restrictions due to the dry, subtropical climate of the countries producing water shortage emergencies. WG IV highlighted the urbanization phenomenon linked with the political situation (wars and conflicts, fuel shortage, poverty).

The main themes discussed as key entry points to approach the analysis of UPFG need for the cities were overall planning and management issues, as well as operational issues. Planning and management issues relate to the fact that planning and management of the cities are not made in line with their natural environment, including the characteristics of its topography, landscape and ecosystem. The mismanagement of the mountains and watershed around cities leads to disasters and emergency situations such as floods and desertification. Operations related to UPFG is in all cases related to huge challenges regarding soils (e.g. mountains, deserts), lack of water (i.e. irrigation) and the right types of plant species (i.e. species selection).

The main findings of the group discussions are presented below:

Heterogeneity and Commonalities within of the region

The participants were questioning which criteria were motivating their grouping in a region called "West and Central Asia". Indeed, the 23 countries of this region were grouped for the exercise of the Forestry Outlook Study for various administrative, technical and financial reasons. At a first glance, the 5 countries represented in the workshop did not see their commonalities, but rather their differences: Kabul (war and cold, Farsi language); Amman (arid, Arabic language); Abu Dhabi (no poverty, strong oil economy; Arabic language); Izmir (temperate climate, potential to be member of the European Community, Turkish language); Yerevan (cold climate; former soviet country; Armenian and Russian language); Kazakhstan (Cold climate; plains landscape; former soviet country; Russian language). They are a mix of what is called developed countries, developing countries and countries with economies in transition.

However, over the discussions, it was made clear that the cities and countries shared many commonalities

and these, as it regards UPFG could eventually be exploited as opportunities for the promotion of trees and forests, their planning, and management. The cities could be grouped around various common points, such as language (Russian, Arabic), ecological issues (mountain, desertification, low forest cover countries), socio-political context (wars and conflicts, energy dependency, poverty), economical (oil-economy), cultural (religion), and institutional (low knowledge in UPFG, low expertise).

It was finally felt that differences were elements of a pool of expertise and experiences that, even in various contexts, could contribute to the development of appropriate practices, methodologies and strategies for each case.

Poverty alleviation, livelihood improvement and food security

Since its inception, FAO has been fighting for food security – defined as the access of all people at all times to the food they need for an active and healthy life - by promoting sustainable agricultural, which also includes forestry, fisheries and environmental sectors of activity. A specific priority of the Organization is encouraging sustainable agriculture and rural development, on a long term strategy for increasing food production and food security while conserving and managing natural resources (including forestry, fisheries and environment). In an urbanized world where the relationship between rural and urban development are closely linked, FAO actions in urban areas have continuously increased. The present workshop focuses on urban areas, and the forest, tree and other vegetation related to sustainable development of the cities and poverty alleviation. UPFG fulfil a wide range of functions and have a substantial impact on the living conditions of human beings who depend on tree-based systems resources and their products for their livelihoods.

The workshop participants discussed spatial arrangement related to forest and trees as a functional ecosystem with its drinking water, soil, wood, livestock feed, fruits, wild game and medicinal plants. These features are of central importance for many of the urban and peri-urban populations, the most underprivileged and poorest members. Green spaces with trees are places of work (e.g. street markets), habitat for animals and sites of spiritual significance; they provide building materials, fuel wood, and the large variety of fruits and other non wood forest products. Many countries have a long tradition of urban dwellers supplementing their diet and economy with local agricultural produce, and thus providing urban employment as well. Timber and other wood products are also very important in urban areas; their overuse in the Central and West Asian region caused the deterioration of the overall tree cover in and around the cities, in large part due to lack of protection and a huge need for firewood. This situation is exacerbated in time of fuel shortage, consequences of wars and conflicts and sudden economical or political changes. The multipurpose use of the tree cover, as well as the recycling of wood waste resulting from management operations at large scale, can become a sustainable source of fuelwood, even if marginal in term of the overall energy needs. Implementing adequate fire control practices will prevent the potential hazard from (forest) fire.

The many advantages of trees and vegetation in urban area overcome the inconveniences, which can be avoided with good UPFG practices. These environmental and economic advantages include prevention of landslides and floods, stabilization of urban micro-climate and provision of food. For that, the city must be

managed as an element of its overall eco-systemic, landscape and watershed environment.

Beyond the evaluation of the environmental benefits of UPFG, it was made clear that the valuation of the direct economic benefits for the people and even enterprises would be essential to promote the sustainable integration of trees, forests and other green areas in the cities for the "people". The tree nurseries appear to be an interesting economical activity either for small enterprises (e.g., Kabul with family/individual initiatives), or for large enterprises specialized in landscaping in relatively wealthy cities (e.g., Amman, Abu Dhabi).

Good practices (transfer, development and implementation) and capacity building

All experts in the workshop recognised that the needs and issues must be addressed in a clear distinct manner depending if they are faced in developed or developing countries. Even within the WECA region large differences exist between the countries. In the developing countries, many poor people have been forced to migrate from rural to urban areas during the last three – four decades. The cities have been expanding rapidly as a consequence. Most of these people live in peri-urban areas in very poor conditions without being able to respond to their basic need for food, drinking water, fuelwood and construction material, straining the scarce resources available in and around most of the related cities.

There was a consensus that in relation to the dominating rural – urban migration little was mastered in terms of "where to plant which tree and why". Overall planning and programming in relation to the integration of green structures and migration is lacking, and so is the question of tree selection. The requirements seem to be fast growing species, suitable for harsh growing condition (lack of water), but at the same time with a high produce of both food, fodder and even as fuel wood!

There seem to be a lack of knowledge and awareness of the UPFG potential at both policy and planning levels. However, this does not mean that UPFG is not acknowledged in the WECA region. People in urban and peri-urban areas are not fully benefiting from the important potential of UPFG because trees and other elements of green resources are simply not well perceived and well documented by government officials, and therefore receive little attention in the formulation of national policy and planning (Knuth 2005). No structural inventory of UPFG resources has been carried out so far at national or international level. Thus, it is very difficult to compare performances and gain mutual inspiration. There is a need for more structural inventories and evaluation of knowledge existing within countries and regions, as well as of needs and key-issues. Moreover the international dissemination of relevant knowledge needs to be improved.

Dialogue at national and international level

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 processes refer to elements of the urban green resources by targeting concepts such as desertification, forestry and biodiversity. However, the relevance of 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 *inter alia* Agenda 21, the Convention to Combat Desertification (UNCCD), the Framework Convention on Climate Change (UNFCCC), and the Convention on Biological Diversity (CBD). Another set of relevant initiatives were developed under the auspices of UN-Habitat. However, the contribution of those instruments to optimal contribution of UPFG to harmonious city development is limited to the specific aspects they cover (Knuth 2005).

Also, at the international level general acknowledgement of UPFG as a vital resource for the urban poor is lacking. As an example, the Millennium Development Goals (MDG) of the United Nations does not consider the place of UPFG in its indicators for achievement in 2015. These goals include: eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/aids, malaria and other diseases, ensure environmental sustainability, and develop a global partnership for development. Within these goals lies much potential for UPFG as a theme. The general lack of international agreements related to UPFG calls for even stronger international cooperation within regions. However, networks related to UPFG in the WECA region are missing.

At the national level, there seems to be several agencies responsible for UPFG policies and strategies, and for the management of urban green resources. There are three levels of government: national, sub-national and local (district, city and village administrations). At the national level, responsible institutions may be the Ministry of Environment, State Forestry Department, State Department of Protected Areas, Ministry of Agriculture and Food, Ministry of Finance. The forestry departments have a key role in UPFG in many countries of the region because planning and management of green belts and forests is mainly their responsibility. The environment authorities are also key actors at the national level. The planning and management of green areas within city boundaries is generally under the responsibility of the municipalities (Knuth 2005). For example, in Turkey, the Parks & Gardens Department, under the Mayor of Izmir Metropolis, administers the elements of urban green resources within the boundaries of the municipality; the role of the Ministry of Forestry will focus on the surrounding environment and the watershed protection. It was noted that cooperation and communication among the aforementioned.

As UPFG is a multi, cross-sectoral area, many local authorities are involved in decision making and management. Local authorities are extremely weak in many countries of WECA region. This is mainly because urban green resources are not conceived as an important discipline and because cooperation and communication between the responsible authorities are in general lacking.

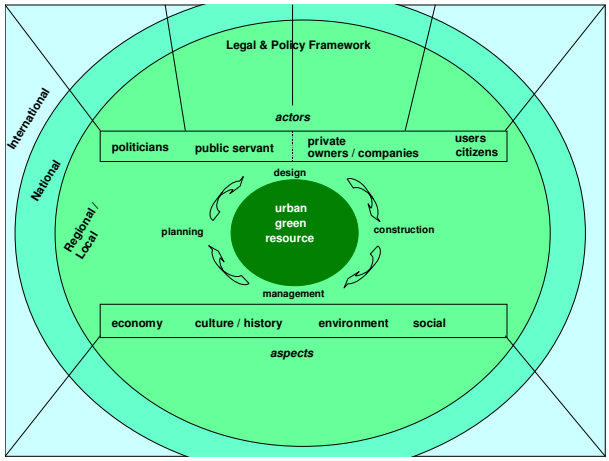
The workshop made it clear that there is a general absence of coherent policies and programs related to UPFG at international as well as national level. The establishment of parks and shelterbelts around urban areas could be proclaimed as a policy objective. However, this is a very complex issue since it involves many departments, e.g. forestry, agriculture, environment, planning, central and decentralized bodies of governmental and local authorities. 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 a clear and framework UPFG programs.

Integrated approaches at all levels

It was generally felt that there was no integrated approaches in place between disciplines (e.g., foresters, landscape architects, agronomists, geographers, sociologists), and sectors (e.g., forestry, agriculture, environment, water, planning). The workshop discussed the need for multidisciplinary, multi-sectoral and even multi-institutional approaches.

The model below presented by Randrup *et al*. (2005) was used as a basis for these discussions. The model defined the Urban Forest in order to grasp the many different academic disciplines and expertises involved in relation to urban forestry. Urban forestry was at the workshop commonly understood as to cover all woody and non-woody green spaces, and thus the planning and management of these resources can be defined as 'urban green space planning and management'. The Park Management model (the PM-model; Figure 2), explains the relations associated to green spaces. On one side, the actors, stakeholders or human interests are defined, and on the other side the "aspects" of disciplines (economy, culture, environment, and social) are defined.

Figure 2. The Park Management model (Randrup *et al*. 2005)



The actors in relation to public urban green spaces are the formal decision makers, the politicians, and the administrative staff of governmental and local authorities; among the staff belong the green space manager. Outside the public administrative system, there is the private sector, including companies (e.g. contractors, consultants, planners, and designers), the citizens at large, and the users of the green space. Research and education institutions, as key actors, are often part of the two categories (private and public). The aspects in relation to public urban green spaces are the four basis of the concept of sustainability: economy, ecology, cultural and social aspects.

This model puts the green space at the centre for any discussion. This requires that in principle all actors and all aspects are in equal position. However, this is rarely the case in practice, where formal decision makers tend to give to economy the priority in most planning and management decisions. The workshop had a primary focus on the public green spaces, the public Organization, the social, the economical and the ecological aspects.

Table 1. Summary of the 6 city case studies

City	Strengths	Weaknesses	Opportunities	Threats
Abu Dhabi	High tech. standards, e.g. for irrigation systems; Use of new materials and techniques to help overcome problems; One Organization responsible for management and planning of all green resources in and around	Relatively short tradition for greening; Long-term sustainability of established green areas not always clear	Clear policy focus for greening the country and city; Available budget for greening activities; Available technical knowledge	Difficult climatic conditions and need for permanent irrigation; Balancing act between establishment of new areas and long-term management of existing areas
Amman	Cross departmental and cross stakeholder cooperation, ('day of the tree' and 'towards a green Jordan'); Active planting programme (desertification projects) and aim to increase the number and size of green space annually	Insufficient financial support for greening and forestry projects; Regulations are not satisfactory regarding greening and forests; Geographical nature of some areas esp. the eastern areas, is hard to be planted	Active NGO's and private sector contributing to greening	Difficult climatic conditions and need for irrigation; Continued urbanisation and city expansion leading to reduction of existing green areas
Astana	Environmental programme to improve green space quality and quantity Tradition for strategic green space planning going back to WW2	Air-pollution, due to the increased number of private cars, and a number of polluting industries. Green space development ambitions were not always followed by sufficient budget	Clear policy aim to improve the current green status by extensive planting/establishment programmes Scientific support available for e.g. species selection	City development pressure Illegal harvesting Harsh climate with long cold winters and dry summers
Izmir	Experiences in developing and implementing a master plan for urban forestry gained in Karsiyaka in reaction to the watershed degradation and floods can be used in other initiatives	Unclear responsibilities for funding, planning and management of UPFG; Forested land is 'given away' for other 'public' functions	Involvement of NGO's and other local interest groups in future UPFG projects	Continued rapid urbanisation

Table 1. Summary of the 6 city case studies (suite)

City	Strengths	Weaknesses	Opportunities	Threats
Kabul	Long history for green space planning (especially in the post Soviet period); International funding agreements for tree planting in place Proper justification for UPFG projects funding. Interest of government authorities and their support. Environmental acts. approved by the government and the parliament Forest act has been drafted. Forestry policy and strategies, that has developed within the last 4 years	Unclear central decision making/responsibility for urban green Lack of upgrade of staff within the responsible departments Lack of motivation amongst the private sector and the citizens Lack of irrigation sys. Negligence of technologies Limited research No regular cooperation between stakeholders	Afforestation projects involving local nurseries and NGO's; Local and international press attention for tree planting Employment opportunities to local citizens in forest production Foreign technical consultants in the issue	High level of poverty, other priorities than green are more important; Deforestation due to high demand for fire- and construction wood Continued urbanization Shortage of energy for lighting, heating and cooking Lack of awareness programs
Yerevan	Long history for green space planning active local NGO's, that work for improvement and protection of urban green spaces	Existing guidelines and standards for urban green space are not enforced	Many guidelines and standards are in place; Funds allocated to restore irrigation systems; Tree planting started (2005)	Uncontrolled development due to high demographic pressure; Corruption among city authorities; Harsh climatic conditions, topography, heavy pollution; vegetation needs continuous irrigation

C) Main results of the workshop

The main results from the workshop were:

- Complementary information for the finalization of the publication on urban and peri-urban forestry in West and Central Asia, including the case studies, by FAO and the DCFLP (to be published end of 2006).
- The present proceedings of the workshop (in English).
- FAO Radio Documentary on Urban Forestry in West and Central Asia (extract in Annex 1)

  (Available at: http://www.fao.org/audiocatalogue/index.jsp?category=2&lang=EN)

D) Conclusions and recommendations

Preamble:

In response to the need expressed by the WECA countries in the FOWECA process, in the light of the challenges and opportunities posed by continuing urbanisation in the region, and taking note of the results of the FOWECA study;

Recognising the need to raise the priority of UPFG issues in global, regional, national and local decision and policy making;

Recognising the need to approach UPFG issues within urban agriculture, land and ecosystem management and environmental frameworks;

Being aware of the knowledge and capacities in the participating countries, and the lack of sharing of expertise;

Welcoming the cross-sectoral and cross-disciplinary approaches followed within FAO and among the workshop participants and taken by the workshop's organizers;

Being aware of the need to address benefits, legal, institutional and policy aspects, technology and practical implementation, as well as participatory processes, in line with the local and site-specific context;

The Meeting presents the following general recommendations grouped into 5 themes: policy making and legal frameworks, research and education, technological and expertise transferring, communication and advocacy and UPFG in the WECA region.

Policy making and legal framework recommendations:

- To acknowledge that Urban and Peri-urban Forestry & Greening (UPFG) should considered as a whole. Trees and forests (urban forestry) together with other vegetation (greening) should constitute together the green network promoted by UPFG in the WECA region;
- To stress UPFG issues in international processes and agreements;
- To appoint clear coordination institutions and responsibilities for UPFG, while promoting the role of local governments; institutional framework should be assessed and improved at international, regional, national and local levels;
- To recognize UPFG as an urban land use, also from a legal perspective, and to develop a clear, comprehensive legal framework for UPFG, starting from the national level, with special emphasis on the local level;
- To implement overall legislation at the local level through specific regulations and guidelines for UPFG;
- To emphasize the need for cross-sector and cross-disciplinary approaches and multi-stakeholder processes, involving governmental, municipal, private and civic actors, by means of applying a integrated approaches, with attention to landscape, watershed and ecosystem. In doing so, the role of urban, forestry and landscape professions (designers, planners and managers) should be recognized and strengthened at the international, national and local levels;
- To promote implementation of UPFG in countries and cities by having a special attention to cost-benefit analyses as a tool for decision makers within a multi-stakeholder approach;
- To produce guidelines for policy and decision-making for UPFG at national and local level, taking into account those tools developed in related field of activities (e.g. IDRC guidelines on urban agriculture).

Research and educational recommendations:

- To set up UPFG pilot projects in selected cities of the WECA region, for examples on strategic planning and management, production of goods and services, establishment and maintenance good practices and awareness raising;
- To develop training material and training opportunities (e.g. through UFUG Master, IUFRO framework), with a special attention on planning project design and monitoring, and on technology, practices and expertise exchanges;
- To enhance UPFG from strategic to operational levels.

Technological and expertise sharing recommendations:

- To improve resource management technologies, practices and guidelines for UPFG dealing with the specific landscape, site and other biophysics and climatic conditions in the region; for example, to pay attention to appropriate planning and management approaches and practices related to UPFG, proper selection of tree species and optimal use of water resources; to identify, develop and implement technologies and practices for communication, public awareness raising and stakeholder involvement strengthening networking, capacity building and technology transfer on UPFG in the WECA region in support to good practices implementation in UPFG;
- To integrate systematically UPFG dimensions into existing forest resource assessment processes (e.g. FAO Forest Resource Assessment Programme) and into urban resources inventory.

Communication and advocacy recommendations:

- To fully recognize, assess and highlight the multiple contributions of UPFG in alleviating poverty, enhancing urban livelihoods and improving the quality of urban life;
- To raise awareness on UPFG among different stakeholders at international, national, regional and local levels;
- To improve capacity building as regards to Species-Soil-Water relationships and especially at the local level, through the improvement of knowledge, technologies and practices;
- To continue and strengthen the networking process for UPFG development and implementation in WECA region with support of FAO and other relevant partners (EUFORIC, IUFRO, DCFLP, University of Florence);
- To initiate information sharing through FAO Content Management System (e.g. manuals, fact sheets, good practices guides).

UPFG in the WECA region – recommendations for immediate consideration by the workshop participants:

- Each respective country should provide, as needed, translation and dissemination of the workshop proceedings;
- Each respective country should initiate information sharing (e.g. manual, fact sheet, good practice guides, list of specialized institutions, training programmes), including potentially through the FAO web site;
- Each country should explore possibilities for developing projects among the five participating countries (Afghanistan, Armenia, Jordan, Turkey and UAE), and consider for instance national and regional FAO Technical Cooperation Programmes (TCP).