Review of Regional Policy Instruments, Developments and Trends in Central and West Asia and North Africa (CWANA)[1]

(Summary of Presentation)

Introduction

The region of Central and West Asia and North Africa extends from Morocco in the West to Pakistan in the East. This region lies between 17° W to 70° E longitude, which explains the tremendous diversity in almost everything. Within its borders, the region includes high mountains as well as the deepest depression on earth, reaching 400 meters below sea level. The climate varies widely from hot humid tropics to extremely dry desert. However, the majority of the region, especially in the Arab block, is located in one of the driest environments.

These vast differences in climate and geographical location have resulted in wide diversity in vegetation and fauna. The richness of the plant diversity is not limited only to wet and dense forests but is also evident in the drylands of many Mediterranean and central Asian countries, which are relatively rich in plant diversity, with several thousand plant species. This situation gives the CWANA sub-regions a special importance with regard to plant genetic resources. Besides its rich biodiversity in general, the CWANA region is also very rich in agrobio-diversity, including many endemic species adapted to extreme environments. Contained within its borders lies one of the world's three centres of origin of agricultural crops and three Vavilovian centres of crop diversity, located in the Mediterranean, southwest Asian and east African regions. The Mediterranean region and southwest Asia are believed to be the centres of origin of more than 150 plant species grown in the world today.[2]

The same kind of extreme variation is also experienced in economic terms, which has a major impact on all aspects of life for the CWANA population. The region contains within its boundaries some of the wealthiest countries, such as the Arabian Gulf states, and some of the poorest areas, where populations survive on an average income of less than US$ 2 a day, such as places found in central and west Asian countries.

Despite its importance as a centre of crop diversity, only modest international attention has been given to providing support for the conservation and sustainable use of the biological diversity of CWANA. In terms of country-specific activities, this situation is worsening, particularly in countries that are considered amongst the most economically and environmentally challenged in the world, such as Afghanistan and some of the independent states of the former Soviet Union. This burden has been aggravated by globalization, which has had a severe impact on the fragile environment and the livelihoods of the CWANA people.

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[1] Background paper prepared by Amer Jabarin.

[2] The Arab League. Feasibility study on establishment of a genebank for plant genetic resources in the Arab World. http://www.arableagueonline.org/arableague/english/details_en.jsp?art_id=1643&level_id=707

These circumstances, together with the fact that the all the countries in the region are considered developing countries, emphasize the need to apply and benefit from international treaties related to plant genetic resources (PGR), the Convention on Biological Diversity (CBD) in particular. The lack of international attention in general has been included as an important part of the CBD in Article 20, which emphasizes the importance that should be given to the special situation of developing countries, including those that are the most environmentally vulnerable, such as those with arid and semi-arid zones and coastal and mountainous areas.

The last decade has witnessed better co-operation and understanding between international, regional and national partners. This co-operation, especially at the regional level, has primarily been focused on issues related to adopting and implementing the international conventions, especially the CBD, Biosafety Protocol and the FAO International Treaty (IT). Several regional activities have been implemented to establish capacity-development programmes focusing primarily on issues of access to genetic resources and benefit sharing (ABS), protection of traditional knowledge (TK) and biosafety.

Concepts of Access and Benefit Sharing in CWANA

As mentioned above, the last decade witnessed a special focus on the issues of current and potential use of plant genetic resources, access to them and benefit sharing, especially within the framework of the CBD and IT. The enforcement of the CBD after 1993 and its ratification by many nations worldwide demonstrated the immense need to revise the International Undertaking on Plant Genetic Resources and to adopt a multilateral system. This has been done with the IT, which in reality complements the CBD and facilitates the exchange of plant genetic resources for food and agriculture.

The significance of traditional farming systems in CWANA is represented in the accumulated knowledge of indigenous farmers. Historically, indigenous farmers, through their traditional farming systems, were able to conserve a high degree of plant and animal biodiversity. The majority of the indigenous farmers in the region are still living in direct contact with the environment with minimal access to external inputs, capital, or modern scientific knowledge. However, the impact of the swift structural changes in the economic, political and social systems in the region may soon cause a rapid disappearance of many traditional farming systems, even in remote areas. This situation signifies the importance of linking the conservation of biological diversity with the social and cultural diversity and economic capability of the indigenous farmers.

There are cross-cutting similarities among the traditional benefit-sharing practices in the different sub-regions of CWANA. PGR have been shared among different individuals of the same community, with other communities and across generations in a way to develop, conserve, innovate and sustainably use agricultural biodiversity at a minimum cost. These traditional sharing practices have been inherited and respected from generation to generation. However, the dramatic changes of globalization and the shift to market-oriented economic systems, especially in many of the newly established states in central Asia, have raised the need for adoption of a well-identified access and benefit-sharing system that would enhance the exchange of plant genetic resources for food and agricultural production at both the regional and national levels. It is believed that the lack of any multilateral system is what led to the serious drop in the exchange of plant genetic resources for food and agriculture that was recorded in the last decade.

Given the recent advancements in the exploitation of genetic and other biological resources, genetic resources are becoming more economically valuable resources that need better attention for the benefit of humanity as a whole. The allocation of rights among the different stakeholders is needed more now than at any other time. The consequences of environmental degradation and the increasing demand of industry, investing large capital to generate new products based on these resources, push toward the establishment of a well-defined legal system at all levels. Given these facts, traditional concepts of property rights and allocation of benefits with respect to tangible natural resources are challenged. To encourage the preservation of genetic resources and indigenous knowledge in the CWANA sub-regions, additional global attention is needed. The traditional concepts of property rights should be given more thought by leading agencies and stakeholders within the new framework of World Trade Organization (WTO) agreements, CBD, the Biosafety Protocol and the IT.

Review of Regional Policy Instruments Related to Genetic Resources in CWANA

Available technical literature indicates that the erosion of genetic resources and the loss of agro-biodiversity have been extensively debated in the last few years. However, there are only a few policy instruments to deal actively with this serious dilemma. It is argued that current efforts are limited to providing direct financial support to preserve plant and animal genetic resources in small selected areas. Other instruments include binding law through market-oriented instruments and labelling.

As is the case in other regions, the CWANA sub-region has witnessed a dramatic movement towards market liberalization and openness on international markets. Many countries in West Asia, North Africa and the Arabian Peninsula, including Jordan, Pakistan, Egypt, Morocco, Tunisia, Oman, Qatar, Kuwait, United Arab Emirates and Bahrain, have already became full members in the WTO; others are still observers and may soon become full members. A few are still in the process of early negotiations.

Several other Mediterranean countries, such as Tunisia, Jordan, Morocco, Lebanon and Palestine, have already signed partnership agreements with the European Union, in addition to membership in the WTO. During 27–28 November 1995, after intense discussion and negotiation, the Barcelona Conference launched a process for establishing what is called ‘a Euro-Mediterranean partnership’. The 15 Members of the Union and 12 Mediterranean nations have started a process of political and economic co-operation with ambitious development and trade objectives. The main medium for progress in this process was the gradual development of a free trade area between the EU and the Med-12, over a transitional period of 12 years, to be established by 2010. This process involved progressive elimination of tariff and non-tariff barriers on manufactured products and progressive market liberalization of trade in services and farm products. The EU-MED partnership agreements rely heavily on the philosophy and the governing rules of the WTO and its agreements. The free trade area is based on provisions specified in the Agreement as well as the General Agreement on Tariffs and Trade (GATT) and the General Agreement on Services (GATS). The EU-MED agreement covers a wide array of topics, including trade in industrial and agricultural products, right of establishment, trade in services, payments and capital movements, competition, intellectual property rights, financial co-operation, economic co-operation in the field of industry, agriculture and investment, standards and measurements, transportation, telecommunications and energy, science and technology, environment and tourism, statistics, and the fight against illegal drugs.

In Central Asia, the only newly independent state that has joined the WTO is the Kyrgyz Republic (20 December 1998), while Kazakhstan, Tajikistan and Uzbekistan are observer members in the process of completing the necessary conditions for becoming full members. These states of Central Asia are currently in the process of moving towards market-oriented economies after decades of communism.

Turkey and Cyprus were among the first countries that joined the WTO in 1995. In addition, both countries have strong trade and political links with the EU. Cyprus will soon become a full member of the EU, while Turkey is till struggling to join the Union. Cyprus ratified the CBD in 1996 and the Biosafety Protocol in 2003, while Turkey ratified the CBD in 1997 and the Biosafety Protocol in 2004.

The West Asia sub-region includes Jordan, Lebanon, Syria, Palestine, Iraq, Iran, Pakistan, Yemen, Afghanistan, Cyprus and Turkey. Within this sub-region, the major Mashreq countries (Syria, Iraq, Jordan, Lebanon and Palestine) share some of the common features that characterize this area, including (1) the cultural set-up of the communities, (2) the high similarity in environmental conditions, (3) the richness and diversity in plant genetic resources, (4) similarity in agricultural practices and cropping patterns, and (5) the common challenges and constraints facing the production of food and agricultural products. As mentioned above, except for Iraq, the Mashreq countries have been involved in one way or another in the process of global market liberalization during the last decade. However, the level of advancement in this process varies from one country to another because of their different political situations and the regional events that affected and still affect the stability of the region.

Intellectual Property Rights

A crucial issue in all these treaties, protocols and agreements is the link between conservation and accession of plant genetic resources and the related intellectual property rights. As demonstrated in this section, there is wide variation in the advancement of implementation and compliance with property rights issues.

Within the West Asia sub-region, the process of adapting and utilizing the permitted advantages in the international agreements is still at a minimum. This is mainly due to the fact that many countries of West Asia have either joined the WTO recently (and are still in the process of adapting their legislation) or they are not yet full members. Among the countries of the Mashreq, Jordan is the most advanced country in terms of signing, ratifying and adapting the different IP instruments related to plant genetic resources for agricultural and food products.

Fewer countries in the CWANA region, as compared to other regions, have implemented and adopted the convention of the International Union for the Protection of New Varieties of Plants (UPOV) that was established by the International Convention for the Protection of New Varieties of Plants. Several versions have been issued and applied, starting with UPOV.1 1961/1972 Act, which establishes the International Convention for the Protection of New Varieties of Plants as of 2 December 1961. The final version of the act, in which many of the recent new members in the convention are involved, is the 1991 Act. As of October 2004, the list of parties to the UPOV Convention (1961), as revised at Geneva (1972, 1978 and 1991), shows that Tunisia is the only country from the CWANA region that has been a member of this convention since August 2003. However, many countries in the region, such as Jordan and Egypt, are currently very close to qualifying for membership. These two countries have

agreed to join UPOV (Geneva Act 1991) and ratify the agreement. Jordan has drafted new laws that were approved by the government, including Law # 24/2000, Plant Variety Protection Law (PVP), and a new by-law has also been issued: number 76/2002 (Plant Varieties Registration). The new Plant Variety Protection Law was tested by UPOV and found to be compatible with the UPOV system and law.

Institutional Structures

Adapting and implementing international and regional agreements, conventions and treaties, as well as new national laws, by-laws and other forms of legislation require adequate institutional structures and satisfactory levels of government commitment to provide secure long-term conservation of plant genetic resources. In general, the institutional structure across the CWANA sub-regions varies considerably from one region to another and from one country to another, depending on the current political structure and pre-independence prototypes.

The institutional set-up at the national and international levels may be considered to be a major obstacle in adapting and implementing legislation related to PGR. At the national level, the major problems include overlapping authority between different ministries, contradictions, judiciary sequence and bureaucracy in the public system. Funding is another major difficulty related to the institutional set-up, which many countries in the region face in addition to deficiencies in facilities and personnel, especially in the newly independent states in Central Asia. For instance, in the republics of Uzbekistan and Turkmenistan, the land tenure system is often complicated by continued dependence on collective farms (the *tamorka*) for inputs, transport and market access. It is believed that independent peasant farms—niches where the landraces of several vegetables are reported to still be cultivated by local farmers—have been declining since 1995.[3] Changes in institutional structures related to agrarian institutions are still minimal. It has been reported that there is pressure within policy institutions to maintain the previous status, which is subsistence-level agriculture for peasants, with a governmental and administrative monopoly over land and water resources (Ilkhamov, 1998).[4]

Another significant factor affecting national institutional structures is the complicated institutional relationships that have been evolving among the different international institutions related to PGR. Funding agencies like GEF, EU, GTZ, JICA, etc., require certain institutional structures in order to channel financial or technical support. These arrangements vary from one agency to another, based on the institutional set-up of the international agency. For instance, many of these agencies require the establishment of steering committees, project management units (PMU), special financial windows, changes in financing systems, changes in the research agenda and institutions, etc.

National Priorities Underlying Current Rules Regulating Access

Cross-cutting priorities among the majority of CWANA countries include dealing with increasing poverty and food insecurity, managing degrading natural resources (soil, water and biodiversity), marketing and trade, and maintaining sustainable systems of genetic resources.

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[3] Kandiyoti, D. 1999. How to get it wrong in rural Uzbekistan: an ethnographic critique of household survey categories. UNRISD Discussion Paper, no. 106. United Nations Research Institute for Social Development, Geneva. http://www.unrisd.org/unrisd/website/document.nsf/0/84ACA72CD8216BEE80256B67005B716E?OpenDocument

[4] Ilkhamov, A. 1998. Shirqats, Dekhqon farmers and others: farm restructuring in Uzbekistan. Central Asian Survey 17(4):539-560.

However, recent trends related to trade have continued to offer both opportunities and challenges for the future of countries in the region, given the drastic changes in international market structures. An immediate priority that faces all the CWANA countries in relation to PGR is devising and adapting legal instruments related to trade and efficiently utilizing what is permitted in these agreements. With regard to plant genetic resources, the major legal and technical questions, among many others, that need to be answered in depth by the different parties include the following: How are patents granted? What are 'plant varieties' for the purpose of Article 27.3b?

Some of Mashreq countries have already undertaken extensive reviews of policies on agricultural development as a first step toward formulating and implementing an effective legal system for protecting plant genetic resources.

The priorities of the Central Asian countries seem to be linked to changes in their political systems and, consequently, changes in paradigms. During the Soviet era, the maintenance of diversity of genetic resources had low priority. Priority was given to the organized agricultural production system of state collective farms producing the commodities dictated by the central command economy. Production focused on cotton and grain crops, such as barley, with farmers receiving standardized seed material for their fields. Many indigenous crops were neglected and much diversity was lost. Currently, the priority is given first to focusing on horticultural crops, such as vegetables, and non-tree fruits, such as melons, and then work with communities to conserve the remaining agricultural heritage.

Regional Initiatives, Institutions and Approaches

Different roles are played by the different regions in the use and conservation of plant genetic resources. Collaboration among the different countries in each sub-regions is strategic in order to harmonize polices related to PGR and to encourage additional exchange of experiences from different PGR contexts around the world. The focus should be on complementary interests, views and experiences, as well as mutual learning. Interregional collaboration could contribute to implementation of the agreements related to PGR.

Biodiversity Actions Plans and Strategies

Technical co-operation among countries in the Mashreq region has been growing during the last five years. International donors (mainly GEF, FAO, UNEP and IPGRI) have played a vital role in building co-operation between the different countries in the region and with the rest of the world through many projects that have provided necessary new expertise, promoted awareness, explored the value of PGR and identified the major constraints and threats facing this important resources to human welfare. For instance, all of the Mashreq countries except Iraq have signed and ratified the CBD. These countries received financial and technical support from GEF for preparing biodiversity actions plans and biodiversity strategies.

The Maghreb countries (Morocco, Tunisia, Algeria and Libya) have also signed and ratified the CBD. Morocco, Tunisia and Algeria received technical and financial support for preparing biodiversity action plans and biodiversity strategies.

Regional Projects

One of the first regional initiatives between the Maghreb countries is a regional co-operation project supported by GEF, entitled 'Participatory Management of Plant Genetic Resources in Oases of the Maghreb'.

Due to the importance of dryland agriculture in the Mashreq region, a long-term regional project, funded by GEF and managed by ICARDA, has been approved and implemented in this region. Mashreq countries, except for Iraq, are participating in the project on 'Conservation and Sustainable Use of Dryland Agro-Biodiversity'. This regional project aims at promoting the conservation and preservation of important wild relatives and landraces of agricultural species by introducing and testing *in situ* and on-farm mechanisms and techniques to conserve and, in a sustainable way, use agro-biodiversity. The project also provides a survey of the state of scientific, technical, legal and other methodologies and tools for the conservation and utilization of plant genetic resources. Policies affecting the property rights of PGR occupied a position of great importance in the set-up of this project.

Thematic group meetings and workshops have been used to harmonize working methodologies among the four participating countries. Several thematic group workshops for policies and legislation related to biodiversity were organized during the last three years to harmonize the adaptation of the CBD for domestic application. Policies and legislation at the country level were reviewed and analyzed, and recommendations for modifications were proposed based on the research findings of the project. The expected output of this component is to provide proposals for the reform of (1) national policy alternatives, which take account of social, economic and cultural factors to promote the maintenance of plant genetic resources, (2) national policy options for the management of natural vegetation in selected ecosystems, which balance the perspectives of land users, the nation and future generations, and (3) land tenure arrangements for the use of land for profitable and sustainable production and for the introduction of conservation measures.

Cartegena Biosafety Protocol

Another relevant agreement is the Cartegena Biosafety Protocol. Among the countries of the Mashreq region, only Jordan had signed and ratified this protocol, as of October 2004; however, although the other countries have not yet signed, they are working towards adapting their national regulations and laws within the Protocol. The National Biosafety Framework Project, which is implemented with UNDP and funding by GEF across many eligible countries in the region, is expected to promote regional and sub-regional collaboration and exchange of experiences on issues of relevance to national biosafety frameworks. Several workshops and activities have been held in the region to streamline policies and regulations.

In North Africa, Egypt, Tunisia, Morocco and Algeria have signed and ratified the Protocol. Regional meetings were conducted in which representatives from Egypt and Jordan participated to harmonize biosafety regulations and guidelines at the regional level.

The International Treaty on Plant Genetic Resources for Food and Agriculture

The International Treaty on Plant Genetic Resources for Food and Agriculture (IT) is about the conservation and use of PGRFA and the creation of a multilateral system of exchange. In the Mashreq region, Jordan, Lebanon and Syria have signed the Treaty. Jordan and Syria have ratified it and are in the final stages of adapting the articles of the treaty. The regional activities aimed at conserving agro-biodiversity helped both countries in preparing the draft legislation and clarifying some of the ambiguous issues related to benefit sharing and property rights. In North Africa, Egypt, Tunisia and Morocco have signed the treaty and are currently in the process of implementation. None of the Central Asian countries has yet signed the treaty.

Agreements of the WTO

The agreements of the WTO are expected to play a vital role in shaping issues related to regional and international PGR-related property rights. Jordan is the only country that has joined the WTO and adapted the related agreements (TRIPS, SPS and UPOV) to PGR.

Greater Arab Free Trade Area

Another important regional instrument, connected to the WTO, is the Greater Arab Free Trade Area (AFTA), of which all Arab countries in the CWANA region are members**.** The AFTA was declared by the Economic and Social Council's Resolution No. 1317 on 19 February 1997. According to the declaration, the aim of the Agreement is to facilitate and develop Inter-Arab trade with a vision to establishing a pan-Arab Free Trade Area that keeps pace with the conditions and needs of all Arab States and *is consistent with the provisions of the World Trade Organization.* The AFTA should be established over 10 years, starting on 1 January 1998. It will lead to the elimination of import duties and other barriers to trade on goods of Arab origin. According to the Agreement, any disputes related to IP issues and obligations between members of the AFTA that cannot be resolved within the AFTA framework are to be resolved in the same manner followed by the WTO's dispute settlement procedures between WTO members.

The International Center for Agricultural Research in the Dry Areas

The International Center for Agricultural Research in the Dry Areas (ICARDA) is one of the pillars for conserving plant genetic resources in CWANA. ICARDA is involved in regular activities with all the countries in the region at all levels (national, regional and international). It is currently conducting several programmes covering all the CWANA sub-regions: (1) the *Arabian Peninsula Regional Program (APRP)* in which the germination behaviour of native species is investigated and germination protocols developed, (2) the *Central Asia and Caucasus Region Program* in which the preparation for a regional initiative among the five Central Asian countries is currently underway, and (3) the *North Africa Regional Program (NARP)*. The new phase of the WANADDIN project will be implemented in Algeria, Morocco and Tunisia and it has a significant seed component. ICARDA serves also as the focal point for many networks related to PGR within CWANA.

The Arab Organization for Agricultural Development

The Arab Organization for Agricultural Development (AOAD) of the Arab League is an agricultural development agency with a strategic role in applied research, co-ordination and food policy in such areas as the conservation and sustainable use of plant genetic resources within a biodiversity context. AOAD activities are directly relevant to plant genetic resources for food and agriculture. AOAD is also currently participating in the work programme of the CBD to ensure complementarities within the conservation work undertaken by the environmental sector.

The Arab Center for the Studies of Arid Zones Dry Lands

Another vehicle for regional co-operation is the Arab Center for the Studies of Arid Zones Dry Lands (ACSAD). ACSAD is a regional institution linked to the Arab League and deals mainly with issues related to the management of natural resources in the dry areas of the Arab region. The centre's activities on plant genetic resources are limited to fruit trees (almond, olive, pistachio, fig) and grapes. Germplasm collections of some of the local clones and cultivars of these fruit trees are preserved in Syria.

Organization of the Islamic Conference

The Organization of the Islamic Conference (OIC) aims at fostering collaboration between member countries. The OIC is taking steps, jointly with IPGRI and ICARDA, to assist

member countries from Central Asia in the establishment of programmes for the efficient conservation and use of plant genetic resources.

The Centre for Environment and Development for Arab Region and Europe

The Centre for Environment and Development for Arab Region and Europe (CEDARE) is another important organization, based in Egypt, involved with the use of PGR to address environmental conservation and ecosystem rehabilitation. CEDARE's main mission is capacity building, particularly in the area of environmental management, environmental education and development of environmental policies.

A National Approach Potentially Serve As a Model for Others in the Region

One of the three goals of the policy and legislation component in the UNDP/GEF agro-biodiversity project in Jordan is the

> *Reform of national policy alternatives that take account of social, economic and cultural factors to promote the maintenance of plant genetic resources.*

To achieve this goal, as it was agreed upon in the thematic group meetings for policy and legislation, the first step was to develop a set of policy options related to policy alternatives that could be used to reform the existing polices related to the maintenance of PGR in Jordan. These policy options were based on a socio-economic survey that was conducted by the socio-economic component at the early stage of the project. The policy options were designed to serve the following purposes: (1) to identify ways to mitigate the negative consequences of actions affecting the biodiversity in the project areas, (2) to identify the proper instruments for implementing environmental policies related to biodiversity conservation, (3) to provide options that fit with the socio-economic needs of the local communities, such as economic options for food security, biodiversity conservation, eco-tourism and economic growth through utilization of indigenous knowledge systems as part of sustainable economic, social and environmental development, and (4) to help in adapting the CBD and implementing laws and legislation designed to conserve biodiversity in Jordan and in the region.

The policy options that were identified in the socio-economic survey include the following:

- improving extension services
- investing in research and extension
- creating incentive measures
- establishing or creating a farmers' association for improving the productivity of landraces and promoting water-harvesting techniques and participatory breeding
- promoting new activities that would increase value-added through increasing diversity and encouraging organic production
- rehabilitation/restoration, reseeding of native populations
- empowering local communities
- tenure security, land consolidation or exchange
- *in situ* and *ex situ* conservation

The policy and legislation team organized a workshop to discuss policy options with a group of 30 participants from the different groups of stakeholders, including farmers, government officials and researchers from the National Center for Agricultural Research and Technology

Transfer (NCARTT) and universities, and the team leaders of the other agro-biodiversity project components. This participatory approach allowed for a thorough discussion and interaction among the different concerned stakeholders.

According to the original set-up of the logical framework of the policy component, two surveys were completed to test the above-mentioned policy options. The two surveys targeted the two major stakeholders in Jordan who are concerned with the reform of biodiversity policies and legislation: farmers and policymakers. After pre-testing, a sum of 60 questionnaires were completed by farmers, of which about half were from the Ajluon site and half were from Muaqar, where the major activities of the project are taking place. The objective of this questionnaire was to identify win/win policy options to assist policymakers in drafting policy, legislative and economic reforms, and in pursuing the introduction of legislation for reforms by parliament.

Another questionnaire was designed to identify and test the opinions of the decision makers involved in agro-biodiversity conservation in Jordan. Twelve decision makers were interviewed.

The results of the two questionnaires were analyzed using descriptive analysis. The results will be used to propose changes in the current existing policies and legislation related to agro-biodiversity conservation in Jordan. The results will also be used to draft new legislation based on the policy options tested in order to achieve the goals of the component mentioned above. The final draft of the proposed modification in policies and legislation is expected to be completed by the end of this year (2004). Then the drafts will be circulated using official channels through the Ministry of Agriculture to the Agricultural Committee in the Jordanian Parliament.

This particular national approach to supporting the recovery of PGR by adopting the CBD and altering current legislation that limits benefit sharing and other win/win options is being developed by using the extensive debated ideas raised during the different thematic group meetings that were held at the regional level. This systematic approach has the potential to induce positive policy reforms in current legislation and policies.

Regional Activities and Networking Efforts

The last five years witnessed the establishment of many regional activities and networks related to PGR. Regional activities, programmes and networking efforts dealing with the use and conservation of PGR should be an effective means for establishing collaboration and better exchange of information on such products at the national and international level, particularly to support capacity building and information exchange through communication and collaboration in the different sub-regions of CWANA. To progress towards a successful regional/national development strategy, countries of the region should increasingly share their experiences and lessons learned in using and conserving PGR.

Several regional networks dealing with the conservation, use and exchange of plant genetic resources have been established in CWANA:

1. A regional network for range-land seed information was established, with two sub-regional nodes, one in Jordan to serve the Mashreq countries (Iraq, Jordan and Syria) and one in Morocco to serve the Maghreb countries (Algeria, Morocco and Tunisia). The network's several objectives are to document information on range-land seed plants in the region; to promote the exchange of information, genetic materials and experience relating to the distribution, availability and ecotypes of pastures plants; and to strengthen national research programmes and the production of pasture seed.

Training courses on information handling, computer use and practical applications for range-land plants have been organized. Similar efforts are being planned for the countries in Central Asia.

2. The Central Asia Network (CAN) on Plant Genetic Resources, was established in 1997 with the support of ICARDA and IPGRI. The main objective of the network is to deal with research on rangeland resources and livestock production in Central Asian countries. The network is currently implementing activities in Uzbekistan and Kazakhstan in collaboration with the GL-CRSP and USDA/ARS.
3. The International Germplasm Testing Network has the main objective of disseminating advanced lines and parental lines and segregating populations of barley, durum wheat, bread wheat, lentil, kabuli chickpea, faba bean and vetches. The network was developed by ICARDA, CIMMYT, ICRISAT and national programmes. Feedback from the national programmes assists in developing adapted germplasm. More than 52 countries worldwide are involved, of which many are from CWANA.
4. The Southern Europe and WANA (SEWANA) Durum Wheat Research Network in Turkey enforces co-operation between durum breeders and crop-improvement scientists from southern Europe, West Asia and North Africa (SEWANA) in developing techniques and breeding material. Involved countries are Algeria, Jordan, Lebanon, Morocco and Tunisia.
5. WANA Plant Genetic Resources Network (WANANET) was set up to specify priorities in plant genetic resources and to identify and implement collaborative projects and implement regional activities. The network is co-ordinated by the IPGRI Regional Office for CWANA and the ICARDA Genetic Resources Unit. Countries involved are WANA Countries
6. WANA Seed Network encourages stronger regional seed-sector co-operation, exchange of information, regional consultations and inter-country seed trade. Co-ordinated by ICARDA, the countries involved are Algeria, Morocco, Iraq, Cyprus, Turkey, Jordan, Syria, Egypt, Sudan, Libya and Yemen
7. The Agricultural Information Network for WANA (AINWANA) was set up to improve national and regional capacities in the management, preservation and dissemination of information. Co-ordinated by ICARDA, the countries involved are WANA countries.
8. The Network on Drought Management for the Near East, Mediterranean and Central Asia aims at enhancing technical co-operation among concerned national, regional and international organizations in the region, particularly the exchange of information and experience. Co-ordinated by ICARDA, it involves countries in the Near East and Mediterranean.
9. The Central Asian and Trans-Caucasian Network facilitates the development of national programmes and connects activities related to cereals, forage and pasture crops; fruit, small fruit, subtropical crops and grapes; vegetable and melon crops; industrial crops; wild-growing, aromatic, medicinal plants; grain legumes, forest and nut-bearing species, and cotton. The involved countries are all in the Central Asian and Caucasian sub-region. It is co-ordinated by IPGRI and ICARDA.

Review of Regional Instruments, Developments and Trends in Selected Countries in the CWANA Region

This review of the legal instruments for PGRFA in the region is presented for six countries (Jordan, Syria, Lebanon, Egypt, Tunisia and Morocco) in tables 1 through 6. The tables include the type of legal instrument for PGRFA, status and the most recent developments and trends in implementation at the country level. Table 1 contains the review of all legal instruments signed, ratified and domesticated by the Government of Jordan (GOJ). As

mentioned above, Jordan is the leading country in the Mashreq region in adopting international legal instruments related to plant genetic resources for food and agriculture.

Table 1. Jordan Review: Development and trends in implementation

Jordan		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
Convention on Biological Diversity (CBD)	• Signed by the Government of Jordan (GOJ) 11 June 1992 • Ratified 12 Nov. 1993 • Enforcement date 11 Nov. 1993	To implement and domesticate the CBD agreement the following development took place: • Amendments were made to existing Ministry of Agriculture (MOA) laws to harmonize the articles of the law with the contents of the CBD related to conservation of genetic resources. The new MOA Law # 44 /2003 was approved by the Cabinet in 2003 • Establishment of biodiversity division at the MOA • Establishment of Biodiversity Conservation Unit at Ministry of Environment • Introduction of the concept of biodiversity conservation in the curricula of Ministry of Education, especially at the primary level
Cartegena Biosafety Protocol	• Signed by the GOJ 11 Oct. 2000 • Ratified 11 Nov. 2003 • Enforcement date 2 Feb. 2004	UNEP-GEF: Development of National Biosafety Frameworks project was completed in April 2004. The aim of this project is – to prepare Jordan for the entry into force of the Cartagena Protocol on Biosafety – to encourage harmonization of biosafety regulations and legal instruments – to involve stakeholders in the design and implementation of a national framework for biosafety • Part of this project resulted in putting together the draft for the by-law for biosafety, which will be submitted by the Ministry of Environment (MOE) to the Prime Minister's office to proceed with legislative procedures for applying the protocol • The UNEP-GEF project aimed also at strengthening national capacity to implement biosafety procedures to maximize the potential for the safe use of biotechnology and enhance environmental management • The project also aimed at promoting regional and sub-regional collaboration and exchange of experience on issues of relevance to the national biosafety frameworks Regional meetings were conducted in which representatives from Jordan and Egypt participated with the purpose of harmonizing biosafety regulations and guidelines at the regional level

Jordan		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
World Trade Organization TRIPS Agreement	• Jordan's Accession to WTO 11 April 2000 • Jordanian Parliament ratified the Law on Jordan's Accession to the WTO 24 Feb. 2000 • Enforcement date 24 Feb. 2000	To achieve the goal of joining the WTO, the GOJ conducted major economic and legislative reforms to bring the Jordanian foreign trade regime into conformity with WTO requirements • Amendments were made to existing laws • Several new laws were drafted, especially in the field of intellectual property rights: – Plant Variety Protection (PVP) – amendment of trademarks and copyrights laws – new laws on patents, models and industrial design, integrated circuits, trade secrets and unfair competition, and geographical indications
World Trade Organization SPS Agreement	• Jordan's Accession to WTO 11 April 2000 • Jordanian Parliament ratified the Law on Jordan's Accession to the WTO 24 Feb, 2000 • Enforcement date 24 Feb. 2000	To domesticate the SPS agreement, the MOA made structural changes in sanitary and phytosanitary system in Jordan as follows: • Two committees were formed: (1) the sanitary committee and (2) the phytosanitary committee. The two committees are in charge of all rejections due to SPS violations for imported agricultural products. Any rejections due to health reasons of imported agricultural products should be justified by those two committees • The other legislative structural change is the issuance of Law #44 for the year 2002 in which the age and sex of imported animals is specified
UPOV (Plant Breeders' Rights)	• Jordan has not signed the UPOV treaty yet; however, GOJ has recently submitted the Terms of Accession in line with the Geneva Act 1991 • Jordan's representative attended the last meeting and it seems that Jordan is now accepted as a member	• Jordan agreed to join the International Convention for Protection of New Varieties of Plants (UPOV) (Geneva Act 1991) and ratify the agreement • A new Law was drafted and approved by the GOJ including: – the Law # 24/2000, Plant Variety Protection (PVP) endorsed by His Majesty the King – a new by-law was also issued by the GOJ, #76/2002 (Plant Varieties Registration) • The new PVP law was tested by UPOV and found to be compatible with UPOV system and law • An office for plant variety protection was established at MOA to comply with IP laws and by-laws • A committee for plant variety protection was formed from among the different stockholders in Jordan for reviewing and approving plant variety registration applications. Also all required forms and documents have been finalized. The first registration application was recently received from a French company • Jordan was committed to ratify UPOV as a prerequisite to joining the EU Association Agreement and the US-Jordan Free Trade Agreement. In the EU agreements, it was stated that

Jordan		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
		Jordan shall accede to seven multilateral conventions on intellectual property rights, including the UPOV agreement, before the end of the fifth year after entry into force of the association agreement. While, in the US-Jordan Free Trade agreement, Jordan agreed to ratify the UPOV Convention within one year from the date of entry into force of this Agreement
International Treaty on Plant Genetic Resources for Food and Agriculture	• Signed by the GOJ 9 Nov. 2001 • Ratified 5 May 2002 • Enforcement date 5 May 2002	• According to the MOA, until last December, the total number of countries who signed the Treaty was 35, which means that the international treaty is not enforced yet. However, according to the Treaty website, the number of instruments reached 40 (the required number of instruments in order for the Treaty to enter into force) in March 2004. The date of entry into force is 29 June 2004 • According to the Treaty, each country that ratifies will then develop the legislation and regulations it needs to implement the Treaty • The GOJ formed a specialized committee representing the different parties involved in genetic resources to comment on the Treaty. The committee prepared a detailed report in which recommended modifications were proposed • The new MOA Law # 44 took into consideration the articles of the treaty as well as the other treaties mentioned above

Table 2 contains a review of the status and most recent developments and trends in implementation by the Government of Syria (GOS). Although Syria is not a member of the WTO, some important legal instruments for PGRFA have been adopted.

Table 2. Syria Review: Development and trends in implementation

Syria		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
Convention on Biological Diversity (CBD)	• Signed by the GOS 29 Dec. 1993 • Ratified 12 Dec. 1995	• Ratification was endorsed 10 Dec. 1995, legislation # 364 • Still ongoing work to prepare the legislation required to harmonize the articles of associated laws related to conservation of genetic resources with the CBD • Participating in the regional project to conserve agro-biodiversity in the drylands. This project contains a component on adapting the CBD by modifying current national legislation to incorporate the articles of the CBD • Tax exemption is enforced on the projects financed by

Syria		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
		international institutions concerned with the Biodiversity Conservation and Natural Reserves Management Project • Currently working on joining some sub-conventions related to biodiversity (ACCOBAMS) • Still working towards becoming a contracting party to other conventions (agreements) related to biodiversity, such as CMS, AEWA, CITES, Cartagena
Cartegena Biosafety Protocol	• not a signatory	• On 3 March 2002, legislative Decree #33/2002 was issued by the President of the Republic ordering the formation of the General Committee for Biotechnology • Currently, the Ministry of State for Environmental Affairs is working towards becoming a contracting party to the Cartagena Protocol on Biosafety; also, the Ministry is preparing to participate in the National Frameworks Development Project in relation to Biosafety • Syria has fulfilled all the financial obligations set by the convention
World Trade Organization TRIPS Agreement	• not a signatory	• No actions
World Trade Organization SPS Agreement	• not a signatory	• No actions
UPOV (Plant Breeders' Rights)	• not a signatory	• No actions
International Treaty on Plant Genetic Resources for Food and Agriculture (IT)	• Signed by the GOS 13 June 2002 • Ratified 26 Aug. 2003	• Draft legislation for a plant genetic resources act was prepared and revised in September 2002 • The objective of the act is to provide for the conservation and utilization of plant genetic resources, to provide a system to facilitate access to PGR and to ensure that the benefits derived from the use of PGR are fairly and equitably shared with the Syrian Arab Republic • The draft of the act was passed by the government to the Syria Parliament for approval. The proposed act contained 14 articles that cover almost all related issues that were included in the IT

According to WTO records, Lebanon's Working Party was established on 14 April 1999. The first meeting of the Working Party took place on 14 October 2002 and the second meeting was scheduled to take place during early December 2003. Lebanon is still an observer member of the WTO, which means that the country has not signed or ratified the TRIPS, UPOV and SPS agreements yet. Table 3 contains a review of the status and the most recent development and trends in implementation by Lebanon. As in the case of Syria, although Lebanon is not a member in the WTO, some important legal instruments for PGRFA have been adopted.

Table 3. Lebanon Review: Development and trends in implementation

Lebanon		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
Convention on Biological Diversity (CBD)	• signed by the LG 3 May 1994 • Ratified 14 Dec. 1994	• A review of the National Biosafety Action Plan (NBSAP) was conducted to determine the extent of incorporation of CBD articles into the NBSAP and to estimate progress in the implementation of activities as stipulated in the various action agendas • Another milestone in solving Lebanon's difficulties related to biodiversity is the recently adopted Law for the Protection of the Environment (law # 444, 8 August 2002) which calls for the creation of the National Council for the Environment
Cartegena Biosafety Protocol	• not a signatory	• Lebanon is currently in the process of ratifying the Cartagena Biosafety Protocol • Lebanon will soon initiate the National Biosafety Framework Project with the UNDP, funded by GEF, which aims to assist up to 100 eligible countries to prepare their national biosafety frameworks and promote regional and sub-regional collaboration and exchange of experiences on issues of relevance to the national biosafety frameworks
World Trade Organization TRIPS Agreement	• not a signatory	• No actions
World Trade Organization SPS Agreement	• not a signatory	• No actions
UPOV (Plant Breeders' Rights)	• not a signatory	• No actions
International Treaty on Plant Genetic Resources for Food and Agriculture (IT)	• not a signatory	• No actions

Egypt was one of the first countries of the region to sign and ratify several international agreements and conventions related to PGR. Table 4 reviews developments and trends in implementing the five legal instruments for PGRFA.

Table 4. Egypt Review: Development and trends in implementation

Egypt		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
Convention on Biological Diversity (CBD)	• Signed 9 June 1992 • Ratified 2 June 1994 • Enforcement date 2 June 1994	• State Ministry of Environment (MOE) will be the focal point for the convention • Establishment of biodiversity division at MOE • UNDP funded some activities related to protection of medicinal plants in desert areas
Cartegena Biosafety Protocol	• Signed by MOE 20 Dec. 2000 • Ratified by Egyptian Parliament 24 Nov. 2003 • Enforcement date 24 Nov. 2003	• National Biosafety Committee headed by Deputy Prime Minister and Minister of Agriculture and Land reclamation with representatives from all interested ministries (Health, Agriculture, Environment, Education, Academy of Science) to Involve stakeholders in the design and implementation of a national framework for biosafety • Encouraging harmonization of biosafety regulations and legal instruments within all ministries • MOE has established a steering committee to prepare a proposal for national biosafety legislation. The committee should finish the proposal by the end of May 2004 • Regional meetings were conducted in which representatives from Jordan and Egypt participated to harmonize biosafety regulations and guidelines at the regional level
World Trade Organization Agreements (all WTO agreements)	• Egyptian Parliament ratified Accession to WTO 15 April 1995 • Enforcement date 1 Jan. 1996	• Ministry of Foreign Trade (MFT) is the focal point for WTO • A central administration for WTO established within MFT to handle all issues related to WTO • Focal units established within different interested Ministries to deal with WTO issues • Amendments to existing laws ratified by the Parliament • A new law for protection of intellectual property rights issued and ratified by Parliament 22 July 2002 • Experts from different Egyptian ministries involved in regional and sub-regional meetings to exchange experiences negotiation with WTO

Egypt		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
UPOV (Plant Breeders' Rights)	• Egypt is not a member of UPOV. Negotiations will be started through Ministry of Foreign Affairs and UPOV secretary for admission	• Attending all UPOV meetings in Geneva • Issued an IPR law that recognizes plant breeders' rights as a *sui generis* system instead of plant patent system • IPR law is 100% TRIPS compatible • An office for plant variety protection established with Ministry of Agriculture • A permanent board for plant breeders' rights formed with representation of different stakeholders (breeders, seed industry, experts, government officials, plant variety registration) to review all actions recommended by the Plant Varieties Protection Office • A booklet on plant breeder guidelines issued to help new breeders protect their innovative varieties
International Treaty on Plant Genetic Resources for Food and Agriculture	• Signed by GOE 29 Aug. 2002 • Ratified 31 Mar. 2004	• The Ministry of Agriculture is the national focal point for the Treaty • Both the Desert Research Center (DRC) and Agricultural Research Center (ARC) will be the main players for Treaty administration • IPGRI-GRPI initiate a support project to help Egypt set up national laws, policies and legislation related to access to genetic resources, with participation of all stakeholders • Different regional meetings organized, funded by FAO, Arab Organization for Agricultural Development to exchange ideas and expertise • A taskforce for genetic resources for food and agriculture established between ARC and DRC to oversee all activities related to the treaty

Tunisia and Morocco were the leading countries in the Maghreb region in signing and ratifying several international agreements and conventions related to PGR. Table 5 contains a review of developments and trends in Tunisia.

Table 5. Tunisia Review: Development and trends in implementation

Tunisia		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
Convention on Biological Diversity (CBD)	• Signed 13 June 1992 • Ratified 15 July	• Ministry of Environment (MOE) (Ministère de l'Environnement et de l'Aménagement du Territoire Centre Urbain Nord, Immeuble ICS) is focal point for

Tunisia		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
	1993	the convention • Completed: – National Biodiversity Strategy and Action Plan – First and second National Biodiversity Reports – Thematic Report on Mountain Ecosystems • At the regional level, Tunisia participated in the biodiversity workshop organized by the Arab League in Cairo, 2002, to harmonize concepts related to CBD in the Arab region • The WESCANA Program, in co-operation with the Tunisian Ministry of Environment and the IUCN National Committee in Tunisia, has developed a joint programme of work that covers technical assistance for the implementation of the Tunisia National Biodiversity Strategy and Action Plan and reinforcement of the management of protected areas in Tunisia. This programme provided assistance for implementing the CBD. Biodiversity planning support was provided to promote regional exchange of information, expertise and materials related to biodiversity planning. The main purpose of the programme was to share collective experiences related to NBSAP processes. This programme, which as forced on Arab States, was executed by IUCN and funded by UNDP. Three regional centres were established: MoE Lebanon, MoE Tunisia, and Environmental Affairs—Bahrain.
Cartegena Biosafety Protocol	• Signed by MOT 19 April 2001 • Ratified 11 September 2003	• Tunisia was among the countries that implemented the UNEP-GEF Pilot Biosafety Enabling Activity Project to encourage harmonization of biosafety regulations and legal instruments • The goal of the UNEP-GEF project was to provide assistance to the participating country in the development of national biosafety frameworks in order to increase the overall safety of biotechnology
World Trade Organization Agreements (all WTO agreements)	• Tunisia has been a member of WTO since 29 March 1995	• Ministry of Foreign Trade (MFT) is the focal point for WTO • Tunisia was among the developing countries that are not least-developed countries that had to apply the TRIPS Agreement's provisions by 1 January 2000. In 2000 and 2001, the TRIPS Council reviewed the legislation of the members whose transition periods expired on 31 December 1999 • Tunisia has benefited from ratifying the WTO agreement. The largest benefits come from the liberalization of foreign investment in financial services, communications and transportation. Liberalization spurs economic growth by eliminating inefficiency through increased international competition

Tunisia		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
		• Many experts from different ministries and institutions involved in regional and sub-regional meetings to exchange experiences negotiating with WTO
UPOV (Plant Breeders' Rights)	• Tunis not yet a UPOV member. Negotiation has been completed and instrument deposited with UPOV secretary for admission	• The International Union for the Protection of New Varieties of Plants (UPOV) issued an update in which it stated that Tunisia will join the Convention as of 31 Aug. 2003, becoming the fifty-third member of the Union. Tunisia had previously deposited its instrument of accession with the UPOV Convention and amended its laws on plant variety protection to bring them in line with the 1991 Act of the Convention
International Treaty on Plant Genetic Resources for Food and Agriculture	• Signed by GOE 10 June 2002 • Not Ratified yet	• Ministry of Agriculture is the national focal point for the Treaty

Morocco was also one of the first Arab counties to join the WTO. Also, it was one of the first in the Maghreb region to sign and ratify several international agreements and conventions related to PGR. Table 6 reviews developments and trends in Morocco.

Table 6. Morocco Review: Developments and trends in implementation

Morocco		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
Convention on Biological Diversity (CBD)	• Signed 13 June 1992 • Ratified 21 Aug. 1995	• Ministère des Affaires Etrangères et de la Coopération is the focal point for the convention—Directeur de la Coopération Multilaterale • National survey on biodiversity conducted (Project GEF/6105-92, Department of the Environment) • Completed: – National Biodiversity Strategy and Action Plan – First and second National Biodiversity Reports – Thematic Report on Mountain Ecosystems • North African Loop of BioNET-INTERNATIONAL (NAFRINET) created in May 2002 in Morocco. Member countries: Algeria, Egypt, Morocco, Mauritania and Tunisia. It is official, but not really operational due to a lack of means • Thematic Report on Protected Areas (terrestrial areas, humid areas and marine environment) completed for implementation of the programme on protected areas. Some areas are protected (reserves and parks); others

Morocco		
Legal instruments for PGRFA	**Status / Jurisdiction**	**Developments and trends in implementation**
		are under study in order to protect them. • Report on Implementation of GTI Work Programme (Report on Implementation of Programme of Work for the Global Taxonomy Initiative) completed by Ministère de l'Aménagement du Territoire, de l'Eau et de l'Environnement
Cartegena Biosafety Protocol	• Signed by MOE 25 May 2000 • However, Morocco is still non-party	• As in the case of the CBD, the Ministère des Affaires Etrangères et de la Coopération is the focal point for the Protcol—Directeur de la Coopération Multilaterale
World Trade Organization Agreements (all WTO agreements)	• Member of WTO since 1 Jan. 1995	• National responsible agency is Ministère de l'Industrie, du Commerce, de l'Energie et des Mines • Changes made to trade regime since the second review of trade policy in 1996 • Licensing system has only applied to products covered by international agreements to which Morocco is party or for sanitary, phytosanitary or moral purposes • Progress has been made in harmonizing intellectual property legislation with the international agreements signed by Morocco. Several steps were taken by the Moroccan government on industrial property protection, including Law #17-97, enacted in 2000, Law #2-00 on copyright and related rights, and Decree #2-64-406 creating the Moroccan Copyright Bureau.
UPOV (Plant Breeders' Rights)	• Not yet a member of UPOV	• PVP law approved, but not yet put into practice • According to the US-Morocco Free Trade Agreement (FTA) Intellectual Property Provisions, Morocco made a commitment to ratify or accede to the UPOV Convention by 1 January 2006, as indicated in Article 15.2.2 of the Agreement
International Treaty on Plant Genetic Resources for Food and Agriculture	• Signed by the GOM 27 Mar. 2002 • Not Ratified yet	• The Ministry of Agriculture is the national focal point for the Treaty