

ICARDA's Research Portfolio

On 1 January 2005, ICARDA implemented a realigned research portfolio which consolidated its 19 research projects into six Mega-Projects (MPs). The new portfolio was designed to be a coherent poverty-focused program to address the key problems of the dry areas, optimize synergy in research, and bring to bear on the Center's collective knowledge, expertise and resources in the most effective and efficient way. The MPs are well aligned with the System Priorities for CGIAR Research 2005-2015, and seek to contribute to the UN Millennium Development Goals related to agriculture.

With a multitude of cross-linkages and interactions, the six Mega-Projects are:

Mega-Project 1: Management of scarce water resources and mitigation of drought in dry areas

Mega-Project 2: Integrated gene management: conservation, enhancement and sustainable use of agrobiodiversity in dry areas

Mega-Project 3: Improved land management to combat desertification

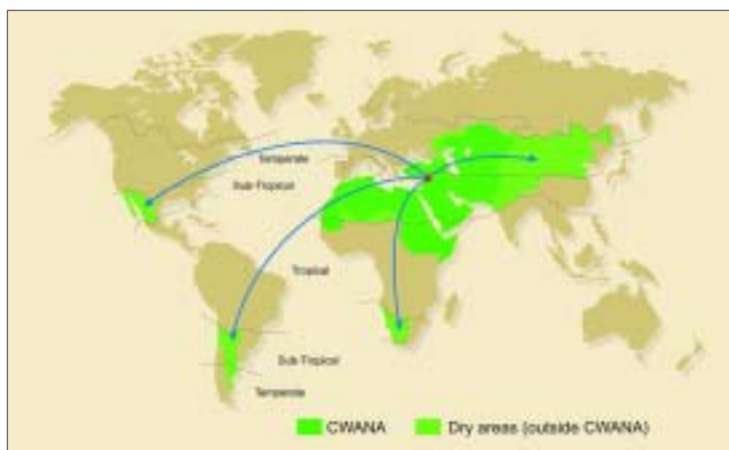
Mega-Project 4: Diversification and sustainable improvement of crop and livestock production systems in dry areas

Mega-Project 5: Poverty and livelihood analysis and impact assessment in dry areas

Mega-Project 6: Knowledge management and dissemination for sustainable development in dry areas

The portfolio also includes an ecoregional program entitled "Collaborative Research Program for Sustainable Agricultural Development in Central Asia and the Caucasus," for which ICARDA is the convening Center.

At the same time, a separate Geographic Information Systems Unit (GISU) was established. GISU superseded the former project on "Agroecological Characterization for Agricultural Research, Crop Management and Development Planning." The specific mandate of GISU is to address ICARDA's growing needs for spatial database development and analysis, and to deliver mapping products, resource databases, methodologies of spatial analysis and agroecological characterization, training, and web portals for knowledge dissemination. In carrying out these activities, GISU is closely linked with MP-1 and MP-3.



The global eco-geographic mandate of ICARDA

The eco-geographic mandate of ICARDA covers the dry areas in developing countries globally. The dry areas are characterized by low, unpredictable rainfall, drought, desertification, and acute water scarcity. Environmental resource degradation and human poverty are severe. As a result, rural to urban, as well as international migration is widespread, threatening social, political and economic stability.

The Millennium Ecosystem Assessment Report, published last year, reveals that, globally, desertification threatens over 41% of the earth's terrestrial surface. But it is in these dryland areas that about 2.1 billion people live, about one-third of the global population. Of these dry areas, the Central and West Asia and North Africa (CWANA) region, which includes 35 countries, accounts for the major proportion, about 1.7 billion hectares of land. ICARDA's work therefore focuses on the CWANA region and uses it as the platform to reach other parts of the world to address the problems of dry area agriculture.

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MP-1 incorporates research on drought preparedness and mitigation through the optimal management of water resources and use of adapted crops and crop varieties (linking with MP-2 and GISU) and appropriate cropping patterns (linking with MP-4). Greater emphasis is given to the dissemination of improved options through integrated and multidisciplinary research (linking with MP-6) and the use of participatory research approaches at the community level at selected benchmark sites (linking with MP-3 on land management). Research on policies and institutions in the project links closely with MP-5.

MP-2 links with MP-1 on water management and drought through genetic research on drought tolerance. Research on genetic enhancement of feed legumes contributes to the integrated crop/livestock production systems research in MP-4. Activities on Integrated Pest Management within MP-2 also link with crop-

ping systems research in MP-4. MP-2 links with MP-5 in research targeting and adoption/ impact assessment.

MP-3 has close links with the Center's GIS Unit in the assessment of land degradation. With respect to rangelands, MP-3 focuses on land and vegetation management while MP-4 adds the essential dimension of the management of small ruminants that graze the rangelands and the development of diversification options in degraded areas. Policy and institutional issues, key to combating land degradation, are addressed in collaboration with MP-5.

MP-4 conducts water-use efficiency work in agronomy and protected agriculture in collaboration with MP-1. Forage legumes and cereal and pulse straws from MP-2 breeding/ selection programs are evaluated for nutritive value in the small ruminant program. Improving rangeland productivity through use of supplements such as feed blocks is carried out in collabo-

ration with MP-3. There is extensive interaction with MP-5, which provides socio-economic input.

MP-5 is integrated with all Mega-Projects and eco-regional programs and contributes to the implementation of socio-economic and policy research, and in adoption and impact studies.

MP-6 is linked with all Mega-Projects in promoting technological, institutional, and policy options for sustainable development.

The new portfolio ensures continuity of previous research activities while accommodating new approaches and new research avenues. These include: improved income generation from high-value crops and by adding value to staple crop and livestock products; rehabilitating agricultural research in conflict or post-conflict situations; and closer alignment of agricultural research with mainstream development programs through research for development applications.

Key Features of ICARDA's Research Stations

ICARDA operates two experimental station sites in Syria, including the main research station at Tel Hadya, near Aleppo, and two sites in Lebanon. These sites represent a variety of agroclimatic conditions, typical of those found in the CWANA region.

ICARDA and the Lebanese Agricultural Research Institute (LARI) now share the use of the sites in Lebanon. ICARDA uses these sites for commodity research trials in winter, and for off-season advance of breeding material and for rust screening in cereals in summer.

ICARDA Sites in Syria and Lebanon

Sites	Latitude	Longitude	Approx. elevation (m)	Area (ha)	Total precipitation (mm)	
					2005/06 season	Long-term average
Syria						
Tel Hadya	36.01° N	36.56° E	284	948	290.3	347.7 (28 seasons)
Breda	35.56° N	37.10° E	300	95	236.9	272.7 (26 seasons)
Lebanon						
Terbol	33.49° N	35.59° E	890	23	488.6	537.4 (26 seasons)
Kfardane	34.01° N	36.03° E	1080	11	437.9	459.2 (12 seasons)