FIRST REGULAR NATIONAL REPORT ON THE IMPLEMENTATION OF THE CARTAGENA PROTOCOL ON BIOSAFETY

Origin of report

Party:	Syrian Arab Republic
Contact officer for report	
Name and title of contact officer:	- **Eng. Imad Hassoun** / National Focal Point of CBP Deputy Minister of Local Administration and Environment **- Eng. Belal Alhayek** / - National Focal Point of BCH - Contact person of Article (17) - Chief of Biosafety Division
Mailing address:	Mazraa-Damascus-Syria General Commission for Environmental Affairs B.o.x 3773
Telephone:	+963 11 4465905
Fax:	+963 11 4461079
E-mail:	bilalalhayk@yahoo.com imadhassoun51@yahoo.co.uk
Submission	
Signature of officer responsible for submitting report:	
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Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report:

National Focal Point of CBP in Ministry of Local Administration and Environment in Syrian Arab Republic Eng, Imad Hassoun the Deputy Minster invited the governmental and non governmental agencies which are related to Biosafety and Biotechnology, this agencies are determined in the National Biosafety Framework as following :

1- **Atomic Energy Commission.**
2- **Ministry of Agriculture and Agrarian Reform (General Commission for Agricultural Scientific Researches).**
3- **Ministry of Health.**
4- **General Commission for Biotechnology.**
5- **Ministry of Trade and Economy.**

6- Non governmental Societies as (Syrian Society for conservation of wild).

Then they nominated Eng. Belal Alhayek, National Focal Point of BCH collaborating with Dr. Akram EIssa Darwich (Director of Biodiversity and Protected Areas)in the General Commission for Environmental Affairs) to prepare and to complete the National Report under supervisor Eng. Imad Hassoun (National Focal Point of CBP).

The meeting was held to discuss the contribution of governmental agencies in Biosafety and Biotechnology, a preliminary draft was prepared and discussed during a special meeting day.
The information which was brought by the partners was included in the draft. The draft was put in final form and translated into English to be signed and sent to the secretariat of CBD.

Obligations for provision of information to the Biosafety Clearing-House

1. Several articles of the Protocol require that information be provided to the Biosafety Clearing-House (see the list below). For your Government, if there are cases where relevant information exists but has not been provided to the Biosafety Clearing-House (BCH), describe any obstacles or impediments encountered regarding provision of that information (note: To answer this question, please check the BCH to determine the current status of your country's information submissions relative to the list of required information below. If you do not have access to the BCH, contact the Secretariat for a summary):

2. Please provide an overview of information that is required to be provided to the Biosafety Clearing-House:

Type of information	*Information exists and is being provided to the Biosafety Clearing-House*	*Information exists but is not yet provided to the Biosafety Clearing-House*	*Information does not exist /not applicable*
a) Existing national legislation, regulations and guidelines for implementing the Protocol, as well as information required by Parties for the advance informed agreement procedure (Article 20.3(a))	X		
b) National laws, regulations and guidelines applicable to the import of LMOs intended for direct use as food or feed, or for processing (Article 11.5);		X	

c) Bilateral, multilateral and regional agreements and arrangements (Articles 14.2, 20.3(b), and 24.1);	X		
d) Contact details for competent national authorities (Articles 19.2 and 19.3), national focal points (Articles 19.1 and 19.3), and emergency contacts (Article 17.2 and 17.3(e));	X		
e) In cases of multiple competent national authorities, responsibilities for each (Articles 19.2 and 19.3);	X- **Ministry of Local Administration & Environment (General Commission for Environmental Affairs) is the National Competent Authority for the Biosafety Protocol, and the National Biosafety Framework consists of from :** **1 - Ministry of Local Administration & Environment (General Commission for Environmental Affairs) if the LMOs are released to the Environment and used to solve the environmental problems.** **2- Ministry of Health, if the**		

	LMOs are used for pharmaceutical uses. **3- Ministry of Agriculture and Agrarian Reform, if the LMOs are used for feed and planting.** **4- Atomic Energy Commission, if the LMOs are used for food , processing.** **5- General Commission of Biotechnology is responsible for Biotechnology Researches.** **All the requests are sent as a copy to the BCH.**		
f) Reports submitted by the Parties on the operation of the Protocol (Article 20.3(e));	X		
g) Occurrence of unintentional transboundary movements that are likely to have significant adverse effects on biological diversity (Article 17.1);			X

Type of information	*Information exists and is being provided to the Biosafety Clearing-House*	*Information exists but is not yet provided to the Biosafety Clearing-House*	*Information does not exist /not applicable*
h) Illegal transboundary movements of LMOs (Article 25.3);			X
i) Final decisions regarding the importation or release of LMOs (i.e. approval or prohibition, any conditions, requests for further information, extensions granted, reasons for decision) (Articles 10.3 and 20.3(d));		X	
j) Information on the application of domestic regulations to specific imports of LMOs (Article 14.4);			X
k) Final decisions regarding the domestic use of LMOs that may be subject to transboundary movement for direct use as food or feed, or for processing (Article 11.1);			X- under development
l) Final decisions regarding the import of LMOs intended for direct use as food or feed, or for processing that are taken under domestic regulatory frameworks (Article 11.4) or in accordance with annex III (Article 11.6) (requirement of Article 20.3(d))			X- under development
m) Declarations regarding the framework to be used for LMOs intended for direct use as food or feed, or for processing (Article 11.6)	X		
n) Review and change of decisions regarding intentional transboundary movements of LMOs (Article 12.1);			
o) LMOs granted exemption status by each Party (Article 13.1)			X- under development
p) Cases where intentional transboundary movement may take place at the same time as the movement is notified to the Party of import (Article 13.1);			X
q) Summaries of risk assessments or environmental reviews of LMOs generated by regulatory processes and relevant information regarding products thereof (Article 20.3(c)).			X

Article 2 – General provisions

3. Has your country introduced the necessary legal, administrative and other measures for implementation of the Protocol? (Article 2.1)	
a) full domestic regulatory framework in place (please give details below)	X
b) some measures introduced (please give details below)	X
c) no measures yet taken	

4. Please provide further details about your response to the above question, as well as description of your country's experiences and progress in implementing Article 2, including any obstacles or impediments encountered:

The mechanism to deal the applicants of importing and exporting of LMOs as following :

The secretariat of requests submission (in General Commission for Environmental Affairs)

Is sending it to the specialist Ministry which is send it to institutional Biosafety committee, after studying the requests the specialist Ministry send it to national Biosafety committee which is studying and evaluating the probably risks .

The National Biosafety Committee is advising in accepting or rejection and then it is returned the requests to the specialist ministry which accept or reject the requests depending on the view the national Biosafety committee.

Finally the requests are sent to The secretariat of requests submission which is send it to ministry of Trade and Economy and to the applicants.

May be we will make some modification in This mechanism by Biosafety law which will be in to force next year.

Monitoring and executing: Ministry of Agriculture and Agrarian Reform must be inform the Ministry of Local Administration & Environment (General Commission for Environmental Affairs) about the requests of importing and exporting and in acceptance cases of release the LMOs into the environment with all information about this releasing upon 15 days.

- **Ministry of Local Administration & Environment (General Commission for Environmental Affairs) has the monitoring rule and studying the impacts of LMOs on the Environment , Biodiversity.**
- **We prepared the guidelines of using the LMOs and the requirements of protection in the laboratories .**

We are preparing the Biosafety law now in Syria

Articles 7 to 10 and 12: The advance informed agreement procedure

See question 1 regarding provision of information to the Biosafety Clearing-House.

5. Were you a Party of import during this reporting period?	
a) yes	
b) no	X

6. Were you a Party of export during this reporting period?	
a) yes	
b) no	X
7. Is there a legal requirement for the accuracy of information provided by exporters 1/ under the jurisdiction of your country? (Article 8.2)	
a) yes	
b) not yet, but under development	X
c) no	
d) not applicable – not a Party of export	
8. If you were a Party of export during this reporting period, did you request any Party of import to review a decision it had made under Article 10 on the grounds specified in Article 12.2?	
a) yes (please give details below)	
b) not yet, but under development	
c) no	X
d) not applicable – not a Party of export	
9. Did your country take decisions regarding import under domestic regulatory frameworks as allowed by Article 9.2(c).	
a) yes	
b) no	
c) not applicable – no decisions taken during the reporting period	X
10. If your country has been a Party of export of LMOs intended for release into the environment during the reporting period, please describe your experiences and progress in implementing Articles 7 to 10 and 12, including any obstacles or impediments encountered:	
Our country is not exported party for LMOs which will release to the environment.	
11. If your country has taken decisions on import of LMOs intended for release into the environment during the reporting period, please describe your experiences and progress in implementing Articles 7 to 10 and 12, including any obstacles or impediments encountered:	
We have systems and legislations to transportation and using the LMOs, but their implementation still exclusive on researches not on the implementation monitoring system in the boundary side centres or shopping. We are in position to establish monitoring system on LMOs, and we are now in preparing status of Biosafety law.	

Article 11 – Procedure for living modified organisms intended for direct use as food or feed, or for processing

See question 1 regarding provision of information to the Biosafety Clearing-House.

1/ The use of terms in the questions follows the meanings accorded to them under Article 3 of the Protocol.

12. Is there a legal requirement for the accuracy of information provided by the applicant with respect to the domestic use of a living modified organism that may be subject to transboundary movement for direct use as food or feed, or for processing? (Article 11.2)	
a) yes	X
b) not yet, but under development	
c) no	
d) not applicable (please give details below)	
13. Has your country indicated its needs for financial and technical assistance and capacity-building in respect of living modified organisms intended for direct use as food or feed, or for processing? (Article 11.9)	
a) yes (please give details below)	X
b) no	
c) not relevant	
14. Did your country take decisions regarding import under domestic regulatory frameworks as allowed by Article 11.4?	
a) yes	X- under development
b) no	
c) not applicable – no decisions taken during the reporting period	
15. If your country has been a Party of export of LMOs intended for direct use for food or feed, or for processing, during the reporting period, please describe your experiences and progress in implementing Article 11, including any obstacles or impediments encountered:	
Our country is not exported party for LMOs which will use to food, feed, or processing.	
16. If your country has been a Party of import of LMOs intended for direct use for food or feed, or for processing, during the reporting period, please describe your experiences and progress in implementing Article 11, including any obstacles or impediments encountered:	
Our country is not imported party for LMOs which will use to food, feed, or processing.	

Article 13 – Simplified procedure

See question 1 regarding provision of information to the Biosafety Clearing-House.

17. Have you applied the simplified procedure during the reporting period?	
a) yes	
b) no	X
18. If your country has used the simplified procedure during the reporting period, or if you have been unable to do so for some reason, please describe your experiences in implementing Article 13, including any obstacles or impediments encountered:	
Not found	

Article 14 – Bilateral, regional and multilateral agreements and arrangements

See question 1 regarding provision of information to the Biosafety Clearing-House.

19. Has your country entered into any bilateral, regional or multilateral agreements or arrangements?	
a) yes	X
b) no	

20. If your country has entered into bilateral, regional or multilateral agreements or arrangements, or if you have been unable to do so for some reason, describe your experiences in implementing Article 14 during the reporting period, including any obstacles or impediments encountered:

Look at to the following tables which document on the bilateral and multi agreements between our country and our neighbours.

Topics	Collaborators	Notes
Tritimed project: Exploiting the wheat genome to optimize water use in Mediterranean Ecosystems	EU funding: - UK: Rothamsted Research, - Univ of Bologna: Italy, - Barcelona Univ.Spain, - INRAT: Tunisia, - INRA: Morocco, - GCSAR & ICARDA: Syria	4- Years project. In progress. Started in Sept. 2004
Improvement os olive oil quality and table olive varities (including: Molecular characterization of olive varieties in Syria in cooperation with Italy)	GCSAR- Italy	Project is in progress
Supporting Establishment and development of National Program in Agricultural Biotechnology at GCSAR, Syria in Cooperation with Republic of Belarus.	Republic of Belarus, GCSAR 2006	- under discussion-
Strengthening the national capacities in the field of biosafety in Syria	Project Proposal submitted to FAO	under evaluation
Improving the isolated microspore culture efficiency of some barley genotypes to produce green doubled haploids	ICARDA-GCSAR	In progress
Exchange of information concerning technologies of common interest: molecular genetics, biocomputation, genetic sequencing, genomics; - Definition of a "target-crop", possibly wheat or cotton.	SOUTH AMERICAN COUNTRIES- Syria (MAAR-GCSAR)	The workshop of Technical and Scientific cooperation between South American and Arab countries held in Fortaleza - Brazil during 29/9/-1/10/2004 and the South American-Arab Summit, May 2005 represented by the Prime Minister of Syria
Development of National capacities in the field of biotechnology and genetic engineering in Syria	JICA-Japan and GCSAR	Submitted for evaluation

Capacity Building**: **Infrastructure/ Equipment donation (Photo documentation Imager, Spectrophotometer, Electroporator, Vortex Minishaker, labtop computer.(received) - Hybridization oven, Vacuum Oven, Roto-Shaker, Rotilabo-R-Mini centrifuge	AvH- GCSAR	Donation by AvH in 2004 And approval of other equipment donation in 2006
PCR, Polyacrylamide gel electrophoresis equipment with power supply	Syngenta- GCSAR	Donation in 2004
Capacity Building: - Evaluation of the hrpN gene for increasing resistance to fire blight in transgenic apple. - Transfer of a *prp1-1* promoter expressing *uidA* to M26 apple rootstock.	IDB- Cornell University, NYSAES, USA- GCSAR	Post-Doc Scholarship by IDB on 1997-1998
Capacity Building: *Agrobacterium*- mediated transformation of apple (*Malus x domestica* Borkh.) cv. Golden Delicious using g2ps1 gene from *Gerbera hybrida* (*Asteraceae*) for improved fungal and insect resistance.	AvH- Hannover Univ, LG Molecular genetic Department- GCSAR	Post-Doc Fellowship by AvH at Hannover University, Germany 2001-2003
Development of a genetic transformation system for the improvement of breeding lines of lentil (*Lens culinaris* Medik) from Syria.	DAAD- Hannover Univ, LG Molecular genetic Department- GCSAR	MSc degree Scholarship by DAAD 2000-2002
Improvement of Chickpea (*Cicer arietinum* L) through Genetic Transformation.	IDB- Hannover Univ, LG Molecular genetic Department- GCSAR	Ph.D Scholarship by IDB on 2003-2005
In vitro Micropropagation of some important cherry rootstocks in Syria.	Aleppo Univ., Faculty of Agriculture, GCSAR	MSc degree 2001
In vitro microtuberization of some important varieties of potato.	Damascus Univ., Faculty of Agriculture, GCSAR	MSc degree 2004
In vitro micropropagation of some important apple rootstocks in Syria	Aleppo Univ, Faculty of Agriculture, GCSAR	MSc degree 2006
Multiplication of some cherry cvs. and Prunus rootstocks by plant tissue culture techniques	Aleppo Univ., Faculty of Agriculture, GCSAR	Ph. D degree 2006
In vitro propagation of Juglans regia	Aleppo Univ., Faculty of Agriculture, GCSAR	MSc degree/ in progress
Molecular characterization and micropropagation of Rosa *Damascena & R*	Tishreen Univ., Faculty of Agriculture, GCSAR	MSc degree/ in progress

Canina		
Agrobacterium-mediated transformation of apple (*Malus x domestica* Borkh.) cv. Golden Delicious and rootstock MM1111 with g2ps1 gene from *Gerbera hybrida* (Asteraceae) for improved fungal resistance	Aleppo Univ., Faculty of Agriculture, GCSAR	MSc degree Start March 2006
Detection of viroid and phytoplasma Diseases of stone and pome fruits using Molecular methods.	Damascus Univ., Faculty of Agriculture, GCSAR	Ph.D degree/ under discussion To start 2006
Molecular Characterization and *In vitro* propagation of Some Hawthorn Species (*Crataegus* sp.) in Damascus Countryside.	Tishreen University, Faculty of Agriculture, GCSAR	MSc degree/ in progress
Detection of Genetically Modified Organisms (GMOs) in foods and seeds	INRA-France	Approved not started yet
Production of improved varieties of wheat and barley by doubled haploids technique	GCSAR, GCBT (Syria) - INRA (FRANCE),	Approved
Tissue culture of potato, date palm, banana, and ornamentals. - production of elite potato tubers	GOSM (MAAR), Faculty of Agriculture, Aleppo University	In progress
Identification of virus pathogens in different plant species using diagnostic tools.	ICARDA, and SHLQ (MAAR) Faculty of Agriculture, Aleppo University	In progress
Biological control of cotton bollworms, olive moth, and suna pest of wheat, etc.	FAAU, CRA and ORD (MAAR), ICARDA, Faculty of Agriculture, Aleppo University	In progress
Genetic transformation of potato for virus resistance	Gottengen Univ, Germany, GCSAR, IDB, Kingdom Saudi Arabia)	IDB Scholarship for Ph.D degree in biotechnology / in progress (2004-2006).
Construction of transgenic tomato tolerant to the oxidative damage under environmental stress by introducing either Kat or SOD enzymes" .	Osaka Prefecture University, Osaka, Japan	Ph. D scholarship, in progress ,JICA, Japan, GCSAR
A study of the wild species of the subgenus Vicia supgenuf in south Syria / field and genetic characterization and evaluation of nutrition value	Damascus Univ., Faculty of Agriculture, GCSAR, IPGRI-CWANA	MSc degree
Molecular genetic and ecological studies for the genus Pisum in Syria and nutritional value evaluation.	Damascus Univ., Faculty of Agriculture, GCSAR, ICARDA	Ph.D in progress
Development of barley genotypes tolerant to drought using molecular marker techniques.	Damascus Univ., Faculty of Agriculture, GCSAR, ICARDA	For Ph.D degree / in progress

Biotechnology-related activities conducted / underway at SAEC in cooperation with national and

international research institutions and universities.

Topic/ Project title	Collaborators	Notes
Production of transgenic Bt sugarbeet	ICGEB, Egypt, SAEC	
Biosafety gene transfer	ICARDA, SAEC	
Garlic viruses	Damacus Univ, Faculty of Agri., SAEC	
Flowering in Cotton	GCSAR, SAEC	
Male sterility in insects	Aleppo Univ, Faculty of Agri, Deir Ezzor, SAEC	
Human genetic diseases	Pakistan, SAEC	

Biotechnology-related activities conducted/underway at the Ministry of High Education

Biotechnology-related activities conducted/underway at Tishreen University, faculty of Agriculture in cooperation with national and international research institutions and universities.

Topics	Collaborators	Notes
Development of DNA markers for Sitona resistance in *Lens.* using AFLP and RAPD techniques.	ICARDA- Faculty of Agriculture, Tishreen Univ.	Funded by the Arab Fund for Social and Economic Development , AFESD
Mapping Adaptation of Barley to Drought Environments, using STMS markers.	ICARDA- Faculty of Agriculture, Tishreen Univ.	Funded by the EU)
Estimation of the genetic diversity in *Pinus brutia* in Syria using RAPD and AFLP markers	ICARDA- Faculty of Agriculture, Tishreen Univ.	(funded by IPGRI)
See also at GCSAR collaboration with Tishreen Univ.		

Biotechnology-related activities conducted/underway at the Faculty of Agriculture, Aleppo University in cooperation with national and international research institutions and universities.

Topics	Collaborators	Notes
Identification of virus pathogens in different plant species using diagnostic tools	ICARDA, and SHLQ (MAAR)	___
Mapping QTLs associated to drought and disease stresses in durum wheat	ICARDA and Bologna Univ. (Italy)	New activity
Pathogen characterization of *Fusarium* spp. of durum common root rot disease	ICARDA	New activity
Development of polyclonal antibodies (antisera) as diagnostic tools for bacterial and viral pathogens in cereal and legume crops	ICARDA	___
Pathogen characterization using Isozyme tools	ICARDA	___
Nematode characterization using molecular genetic markers	ICARDA and INRA (France)	___
Bacterial characterization using molecular genetic markers	IRD (France)	New activity
Tissue culture of potato, date palm, banana, and ornamentals	GOSM (MAAR)	___
Tissue culture on some varieties of fruit trees	FAAU	___
Citric acid production using different strains of *Aspergillus nigr* through fermentation process	FAAU	___
Biological control of cotton bollworms, olive moth, and sunn pest of wheat, etc	FAAU, CRAand ORD (MAAR), and ICARDA	___

Biotechnology-related activities conducted / underway at Damascus University, Faculty of Agriculture in cooperation with national and international research institutions and universities.

Topics	Collaborators	Notes
Master of Science in Biotechnology \ TEMPUS	TEMPUS project CD-JEP-30018-2002\ AGRENA (France), Ghent University (Belgium), Germany, Damascus Univ., GCBT, GCSAR, Tishreen Univ, Aleppo Univ.	In progress
Identification of DNA markers for selection of disease resistance genes in Barley	Damascus Univ., ICARDA	Ph.D thesis

Biotechnology-related activities conducted / underway at GCBT in cooperation with

national and international research institutions and universities.

Topics	Collaborators	Notes
Establishment of General Commission of Biotechnology	GCBT, Indian Government	Already established and active

Cooperation programs related to biotechnology of ICARDA with Regional and International Organizations.

Topics	Collaborators	Notes
-Joint workshops, conferences and training, - Exchange of germplasm. - Cooperation in providing technical backstopping and training requested by the National Components of the GEF/UNDP project on Conservation and Sustainable Use of Dryland Agrobiodiversity in Jordan, Lebanon, Palestinian Authority and Syria.	ACSAD - ICARDA	
- Joint training courses and information exchange - ICARDA participates in the Collaborative Molecular Biotechnology Integrating Network (COMBINE) coordinated by CIHEAM Mediterranean Agronomic Institute of Chania. - ICARDA is participating in a project on mapping adaptation of barley to drought environments, coordinated by CIHEAM. - CIHEAM, ICARDA and FAO-RNE are co-conveners of a Network on Drought Management for the Near East, Mediterranean and Central Asia (NEMEDCA Drought Network).	CIHEAM - ICARDA	
ICARDA and CIMMYT jointly coordinate a durum wheat research network encompassing WANA and southern Europe.	CIMMYT - ICARDA	
- ICARDA and FAO are co-sponsors of AARINENA. - ICARDA participates in FAO's AGLINET cooperative library network, AGRIS and CARIS. - ICARDA participates in the FAO/CIHEAM Cooperative Research Network on Sheep and Goats, Genetic Resources Sub-Network. - ICARDA cooperates with the FAO Commission on Plant Genetic Resources. - FAO-RNE, ICARDA and CIHEAM are co-conveners of a Network on Drought Management for the Near East, Mediterranean and Central Asia (NEMEDCA Drought Network). - Joint training courses, workshops, publications and exchange of information including biotechnology	FAO - ICARDA	
- ICARDA and ICRISAT cooperate in a joint kabuli chickpea improvement program.	ICRISAT- ICARDA	

- ICARDA and ICRISAT collaborate in the Cereal and Legumes Asia Network (CLAN).			
- Collaboration in policy and property rights research in CWANA through a joint staff appointment. - ICARDA is participating in the Agricultural Science and Technology Indicators (ASTI) Initiative, led by IFPRI and ISNAR. - ICARDA is participating in the Challenge Program on Biofortified Crops for Improved Human Nutrition, led by IFPRI and CIAT	IFPRI- ICARDA		
- ICARDA hosts and services the IPGRI Regional Office for Central and West Asia and North Africa (IPGRI-CWANA). - ICARDA participates with other CG Centers in the Systemwide Genetic Resources Program, coordinated by IPGRI, in both plant and animal genetic resources. - ICARDA collaborates with IPGRI in two sub-regional networks on genetic resources (WANANET and CATN/PGR). - ICARDA is developing a global inventory of barley genetic resources within the framework of linking SINGER to crop networks. - IPGRI-CWANA is a partner with ICARDA in providing technical backstopping and training requested by the National Components of the GEF/UNDP project on Conservation and Sustainable Use of Dryland Agrobiodiversity in Jordan, Lebanon, Palestinian Authority and Syria.	IPGRI- ICARDA		
- ICARDA and ISNAR are co-sponsors of AARINENA. - ISNAR participates in the CGIAR Collaborative Research Program for Sustainable Agricultural Development in Central Asia and the Caucasus, coordinated by ICARDA. - ICARDA is participating in the Agricultural Science and Technology Indicators (ASTI) Initiative led by ISNAR and IFPRI.	ISNAR - ICARDA		
- Development and conservation of plant genetic resources in the Central Asian Republics. - Bread wheat landrace eco-geographic diversity studies.	Australian Winter Cereals Collection, Tamworth- ICARDA		
- International collaboration in barley research. Joint training of a PhD student.	University of Adelaide, CRC for Molecular Plant Breeding, Waite Campus- ICARDA		
Development of ESTs using wild barley from ICARDA.	Centre for Plant Conservation Genetics, Southern Cross University- ICARDA		
- Development and conservation of plant genetic resources in the Central Asian Republics. - Preservation of the pulse and cereal genetic resources of the Vavilov Institute.	CLIMA- ICARDA		
- Durum wheat improvement. - Chickpea improvement. - Identification of legume viruses and selection of legume germplasm for virus disease resistance. - Host resistance, epidemiology and integrated management	NSW Agriculture, Tamworth Centre for Crop Improvement, Australia- ICARDA		

of faba bean, chickpea and lentil diseases.			
- Genetic improvement of resistance to Ascochyta blight and Anthracnose in Lentil. - Evaluation of chickpea for Ascochyta blight resistance. - Evaluation of chickpea germplasm and their wild relatives.	University of Saskatchewan, Saskatoon, Australia- ICARDA		
- Genetic mapping in barley.	Denmark Risø National Lab., Plant Biology and Biogeochemistry Department- ICARDA		
Production of doubled haploids in bread wheat and barley.	Université de Paris-Sud, Labo Morphogenese Vegetale Experimentale- ICARDA		
- QTL analysis in barley.	University of Bonn-Germany, ICARDA		
Development and use of DNA molecular markers for indirect selection in chickpea.	University of Frankfurt am Main- ICARDA		
Establishment of barley transformation system.	University of Hamburg- ICARDA		
Development of transformation protocols for chickpea and lentil.	University of Hannover		
Diversity of storage proteins in durum wheat.	University of Tuscia, Viterbo., Italy - ICARDA		
Evaluation and documentation of durum wheat genetic resources	University of Tuscia, Viterbo; Germplasm Institute, Bari; ENEA (Italian Research Agency for New Technologies, Energy and the Env.). Rome- ICARDA		
Comparative genomics and cDNA microarray technology for the identification of drought and cold inducible genes in model plants.	JIRCAS- ICARDA		
Collaboration in molecular characterization of wheat wild relatives.	Kyoto University- ICARDA		
Establishment of barley transformation system.	Russian Institute of Agricultural Biotechnology, Moscow- ICARDA		
- Genetic resources exchange, joint collection missions and collaboration in genetic resources evaluation and documentation. - Bread wheat eco-geographic diversity studies.	The N.I. Vavilov All-Russian Scientific Research Institute of Plant Genetic Resources (VIR) - ICARDA		
- Durum grain quality.	University of Cordoba, Spain- ICARDA		
Use of microsatellite markers to characterize barley genetic resources of WANA.	Scottish Crop Research Institute, UK- ICARDA		
Biodiversity of wheat wild relatives.	University of California, Riverside, USA- ICARDA		
- Developing chickpea cultivars with resistance to Ascochyta	University of		

blight. - Study of genetic diversity in natural populations of Aegilops tauschii.	California, Davis, USA- ICARDA	
Use of molecular markers for genome mapping and marker-assisted selection for stress resistance in durum wheat. - Spatial variability in lentil trials.	Cornell University-ICARDA	
Development of EST markers in wheat and lentils.	- DuPont Agric. Biotechnology, USA-ICARDA	
QTL estimation for disease data.	North Carolina State University, Department of Statistical Genetics, USA- ICARDA	
-Molecular mapping of barley within the North America Barley Genome Mapping project. - Identification of molecular markers associated with resistance to diseases of barley.	Oregon State University, USA-ICARDA	
Adaptation to drought and temperature stress in barley using molecular markers.	Texas Tech University, Plant Molecular Genetics Lab., ICARDA	
Development of functional genomics and single nucleotide polymorphism platforms for cereals and legumes.	TIGR, USA-ICARDA	
Biological diversity, cultural and economic value of medicinal, herbal and aromatic plants in southern Tunisia.	USDA/ARS-ICARDA	
Development of bread wheat cultivars facilitated by microsatellite DNA markers.	USDA/ARS Beltsville Agricultural Research Center, Beltsville, Maryland- ICARDA	
- Gene mapping of economic traits to allow marker assisted selection in chickpea. - Exploitation of existing genetic resources of food legumes. - Inheritance and mapping of winter-hardiness genes in lentil for use in marker-assisted selection.	USDA/ARS Grain Legume Genetics and Physiology Research, Pullman, Washington-ICARDA	
- Conservation of temperate food, pasture and forage legume biodiversity. - Conservation and collection of plant genetic resources in Central Asia and the Caucasus.	USDA/ARS Western Regional Plant Introduction Station, Pullman, Washington-ICARDA	
Identification of virus pathogens in different plant species using diagnostic tools	ICARDA, and SHLQ (MAAR)	
Mapping QTLs associated to drought and disease stresses in durum wheat	ICARDA and Bologna Univ. (Italy)	
Pathogen characterization of *Fusarium* spp. of durum common root rot disease	ICARDA-Aleppo Univ.	
Development of polyclonal antibodies (antisera) as diagnostic tools for bacterial and viral pathogens in cereal and legume crops	ICARDA- Aleppo Univ.	
Pathogen characterization using Isozyme tools	ICARDA- Aleppo Univ.	
Nematode characterization using molecular genetic markers	ICARDA and INRA (France)	
Biological control of cotton bollworms, olive moth, and sunn	FAAU, CRD and	

pest of wheat, etc	ORD (MAAR), and ICARDA	
Development of doubled haploids in Durum and bread wheat and barley	ICARDA, Settat (Morocco), Wad Medani (Sudan),	
Gene Transfer technology / Establishment of a lentil transformation system	AGERI (Egypt), ICARDA	

Articles 15 and 16 – Risk assessment and risk management

21. If you were a Party of import during this reporting period, were risk assessments carried out for all decisions taken under Article 10? (Article 15.2)	
a) yes	
b) no (please clarify below)	X
c) not a Party of import / no decisions taken under Article 10	
22. If yes to question 21, did you require the exporter to carry out the risk assessment?	
a) yes – in all cases	
b) yes – in some cases (please specify the number and give further details below)	
c) no	X
d) not a Party of import / no decisions taken under Article 10	
23. If you took a decision under Article 10 during the reporting period, did you require the notifier to bear the cost of the risk assessment? (Article 15.3)	
a) yes – in all cases	
b) yes – in some cases (please specify the number and give further details below)	
c) no	
d) not a Party of import / no decisions taken under Article 10	
24. Has your country established and maintained appropriate mechanisms, measures and strategies to regulate, manage and control risks identified in the risk assessment provisions of the Protocol? (Article 16.1)	
a) yes – fully established	
b) not yet, but under development or partially established (please give further details below)	X
c) no	
25. Has your country adopted appropriate measures to prevent unintentional transboundary movements of living modified organisms? (Article 16.3)	
a) yes – fully adopted	
b) not yet, but under development or partially adopted (please give further details below)	X

c) no	
26. Does your country endeavour to ensure that any living modified organism, whether imported or locally developed, undergoes an appropriate period of observation commensurate with its life-cycle or generation time before it is put to its intended use? (Article 16.4)	
a) yes – in all cases	X
b) yes – in some cases (please give further details below)	
c) no (please give further details below)	
d) not applicable (please give further details below)	
27. Has your country cooperated with others for the purposes specified in Article 16.5?	
a) yes (please give further details below)	
b) no (please give further details below)	
28. Please provide further details about your responses to the above questions, as well as description of your country's experiences and progress in implementing Articles 15 and 16, including any obstacles or impediments encountered:	

21.(b) , 22 (a) :No, but we take in our consideration the risk assessment system in the Biosafety law.

24 (b) :The National Biosafety committee was published the Biosafety guidelines in English & Arabic, with acceptance of prime minister NO. 1538/M/93 date 27 February 2001.

The Biosafety guidelines were developed depending on global and national systems and legislations.

The Biosafety guidelines were secured that the environment is saved from the impacts of the LMOs and the participants researchers are saved also. All of this are secured from the research status to the marketing.

The Biosafety Guidelines are containing the instruments about the laboratory work, greenhouse, field and the recommendations in the release of the LMOs to the Environment status.

The core aim of Biosafety guidelines is to insure that the production and using the LMOs will be in the suitable place and form without bad impacts on the environment and human health.

25 (b) : This is take in our consideration in the Biosafety Law.

27 (a , b): Look at to the bilateral and multi agreements above.

Article 17 – Unintentional transboundary movements and emergency measures

See question 1 regarding provision of information to the Biosafety Clearing-House.

29. During the reporting period, if there were any occurrences under your jurisdiction that led, or could have led, to an unintentional transboundary movement of a living modified organism that had, or could have had, significant adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health in such States, did you immediately consult the affected or potentially affected States for the purposes specified in Article 17.4?	
a) yes – all relevant States immediately	
b) yes – partially consulted, or consultations were delayed (please clarify below)	
c) no – did not consult immediately (please clarify below)	
d) not applicable (no such occurrences)	X
30. Please provide further details about your response to the above question, as well as description of your country's experiences in implementing Article 17, including any obstacles or impediments encountered:	

Article 18 – Handling, transport, packaging and identification

31. Has your country taken measures to require that living modified organisms that are subject to transboundary movement within the scope of the Protocol are handled, packaged and transported under conditions of safety, taking into account relevant international rules and standards? (Article 18.1)	
a) yes (please give details below)	X
b) not yet, but under development	
c) no	
d) not applicable (please clarify below)	
32. Has your country taken measures to require that documentation accompanying living modified organisms for direct use as food or feed, or for processing, clearly identifies that they 'may contain' living modified organisms and are not intended for intentional introduction into the environment, as well as a contact point for information? (Article 18.2(a))	
a) yes	X
b) not yet, but under development	
c) no	
33. Has your country taken measures to require that documentation accompanying living modified organisms that are destined for contained use clearly identifies them as living modified organisms and specifies any requirements for the safe handling, storage, transport and use, the contact point for further information, including the name and address of the individual and institution to whom the living modified organisms are consigned? (Article 18.2(b))	
a) yes	X
b) not yet, but under development	
c) no	

34. Has your country adopted measures to require that documentation accompanying living modified organisms that are intended for intentional introduction into the environment of the Party of import and any other living modified organisms within the scope of the Protocol, clearly identifies them as living modified organisms; specifies the identity and relevant traits and/or characteristics, any requirements for the safe handling, storage, transport and use, the contact point for further information and, as appropriate, the name and address of the importer and exporter; and contains a declaration that the movement is in conformity with the requirements of this Protocol applicable to the exporter? (Article 18.2(c))	
a) yes	X
b) not yet, but under development	
c) no	

35. Please provide further details about your responses to the above questions, as well as a description of your country's experiences and progress in implementing Article 18, including any obstacles or impediments encountered:

31-32-33(a): Any manipulated product that is to be moved, imported and/or released must have the following information clearly and correctly affixed to the container or package, on a label that must be visible externally.

- **General nature and quantity of the contents.**
- **Country and/or place where the product was collected, developed, manufactured, cultivated or reproduced.**
- **Name and address (including telephone and fax numbers) of the carrier and of the sender.**
- **Name, address (including telephone and fax numbers) of the consignee.**
- **Number of the plant health certificate for release and/or import.**
- **Production date, validity, and lot number.**

34 (a): No person or institution shall release into the environment any GMO without the prior approval of the Syrian National Biosafety Committee (SNBC). However, approval by the SNBC does not in any way exempt the project proponent from complying with any rules, regulations or requirements of other government regulatory authorities. It is the sole responsibility of the project proponent to determine if the proposed genetic engineering work and /or planned release requires any permit, license or approval of such regulatory authorities, and to obtain the same if required. A plant health certificate, issued by the Syrian Ministry of Agriculture and Agrarian Reform (SMAAR), is required for the release into the environment and/or importation of transgenic products into the Syrian Arab Republic. Ministry of Environment must be informed of all planned releases of GMOs.

The Syrian National Biosafety Committee (SNBC) must be notified of any country-wide movement.

Article 19 – Competent national authorities and national focal points

See question 1 regarding provision of information to the Biosafety Clearing-House.

Article 20 – Information-sharing and the Biosafety Clearing-House

See question 1 regarding provision of information to the Biosafety Clearing-House.

36. In addition to the response to question 1, please describe any further details regarding your country's experiences and progress in implementing Article 20, including any obstacles or impediments encountered:
At the local level, we are working to insure that all the governmental , non governmental agencies and the public submit the monthly sheet which contains all the Biosafety and Biotechnology information in the world.

Article 21 – Confidential information

37. Does your country have procedures to protect confidential information received under the Protocol and that protect the confidentiality of such information in a manner no less favourable than its treatment of confidential information in connection with domestically produced living modified organisms? (Article 21.3)	
a) yes	
b) not yet, but under development	X
c) no	
38. If you were a Party of import during this reporting period, did you permit any notifier to identify information submitted under the procedures of the Protocol or required by the Party of import as part of the advance informed agreement procedure that was to be treated as confidential? (Article 21.1)	
a) yes	
If yes, please give number of cases	
b) no	
c) not applicable – not a Party of import / no such requests received	X
39. If you answered yes to the previous question, please provide information on your experience including description of any impediments or difficulties encountered:	
40. If you were a Party of export during this reporting period, please describe any impediments or difficulties encountered by you, or by exporters under your jurisdiction if information is available, in the implementation of the requirements of Article 21:	

Article 22 – Capacity-building

41. If a developed country Party, during this reporting period has your country cooperated in the development and/or strengthening of human resources and institutional capacities in biosafety for the purposes of the effective implementation of the Protocol in developing country Parties, in particular the least developed and small island developing States among them, and in Parties with economies in transition?	
a) yes (please give details below)	X
b) no	
c) not applicable – not a developed country Party	
42. If yes to question 41, how has such cooperation taken place:	
Look at to the bilateral and multi agreements above. Question No.20	
43. If a developing country Party, or Party with an economy in transition, during this reporting period has your country contributed to the development and/or strengthening of human resources and institutional capacities in biosafety for the purposes of the effective implementation of the Protocol in another developing country Party or Party with an economy in transition?	
a) yes (please give details below)	
b) no	X
c) not applicable – not a developing country Party	
44. If yes to question 43, how has such cooperation taken place:	
Look at to the bilateral and multi agreements above. Question No.20	
45. If a developing country Party or a Party with an economy in transition, have you benefited from cooperation for technical and scientific training in the proper and safe management of biotechnology to the extent that it is required for biosafety?	
a) yes – capacity-building needs fully met (please give details below)	
b) yes – capacity-building needs partially met (please give details below)	X
c) no – capacity-building needs remain unmet (please give details below)	
d) no – we have no unmet capacity-building needs in this area	
e) not applicable – not a developing country Party or a Party with an economy in transition	
46. If a developing country Party or a Party with an economy in transition, have you benefited from cooperation for technical and scientific training in the use of risk assessment and risk management for biosafety?	
a) yes – capacity-building needs fully met (please give details below)	
b) yes – capacity-building needs partially met (please give details below)	
c) no – capacity-building needs remain unmet (please give details below)	X
d) no – we have no unmet capacity-building needs in this area	
e) not applicable – not a developing country Party or a Party with an economy in transition	

47. If a developing country Party or a Party with an economy in transition, have you benefited from cooperation for technical and scientific training for enhancement of technological and institutional capacities in biosafety?	
a) yes – capacity-building needs fully met (please give details below)	
b) yes – capacity-building needs partially met (please give details below)	
c) no – capacity-building needs remain unmet (please give details below)	X
d) no – we have no unmet capacity-building needs in this area	
e) not applicable – not a developing country Party or a Party with an economy in transition	

48. Please provide further details about your responses to the above questions, as well as description of your country's experiences and progress in implementing Article 22, including any obstacles or impediments encountered:

i.Human capacity needs:

1. Syria needs experts in scientific fields related to risk analysis of GMOs and with sufficient knowledge on methods of risk analysis. There is a number experts in the Atomic Energy Commission, universities, and General Commission of Scientific Agricultural Research, in different fields of biology and agriculture. However, a few of them have experience in risk assessment and management. This lack of expertise can be overcome by extensive training some of those scientists in the field of risk analysis inside and outside the country. Also, we can use expertise from developed and developed countries (such as India and South Africa).
2. There is an urgent need in Syria for experts in short and long term monitoring of the impact of genetically modified organisms on the environment and human health.
3. There is also a need for socio economic experts to conduct studies on the impact of GMOs and their products on small farmers and indigenous communities.

Risk communication is an important component in the risk analysis process. It is necessary to have experts in this field so that people can be informed with risks in scientific and easy to manner so that the public can understand the information of the risk without becoming emotionally involved

Regional cooperation about risk assessment:

Syria shares natural borders with Turkey, Iraq, Lebanon, Palestine, Jordan, and Saudi Arabia. This necessitate cooperation in biosafety and risk analysis issues. In this regard we suggest the following:

1- Establishing a committee from the above mentioned countries that meets on regular basis to review ongoing activities in every country with regard to GMO release especially those with potential impact on human health and the environment and ways to avoid or minimize these impacts.

2- Harmonization between biosafety guidelines in these countries in line with international agreements and especially with Cartagena Protocol on Biosafety.

3- Unify efforts to study long term environmental effects by establish a common

center or distributing studies on regional institutes so that every body can participate in the efforts and share benefits.

As a conclusion it can be said that genetically modified plants have a number of benefits on the environment and biodiversity, and at the same time some potential risks which should be well understood and studied before such genetically modified plants are allowed in Syria.

Such plants or their products have not, officially entered the country, however, they're expected to enter in the next few years either through national institutes or importation or simply smuggling through the boarders from neighboring countries.

Biosafety in biotechnology research and applications and as well as risk analysis of the impact of GMOs on human health and the environment is the responsibility of both policy makers and scientists. This necessitates that all concerned institutes follow SNBC and international (Especially Cartagena Protocol) guidelines very carefully.

I- Infrastructure needs:

- The are is a lack of containment and confinement facilities for conducting environmental risk assessment in the institutes conducting genetic engineering work for environmental risk analysis studies. So there is a need to have suitable greenhouse and field containment facilities.
- Lack of appropriate facilities such as laboratories, including those appropriate for conducting relevant analyses and detection studies, especially for analyzing food for the presence of allergens or toxins.
- There is a need for detection laboratories at ports of entry.
- There is an urgent need for adequate access to internet to retrieve information to support risk assessments.

II- Other considerations

- Capacity building in public institutes in biotechnology and biosafety. That can be facilitated by:
  1. Evaluate available and needed capacity in human resources and the need for training.
  2. Provide necessary laboratory equipment.
  3. Promote cooperation with regional and international institutes in all fields of biotechnology and Biosafety.

Article 23 – Public awareness and participation

49. Does your country promote and facilitate public awareness, education and participation concerning the safe transfer, handling and use of living modified organisms in relation to the conservation and sustainable use of biological diversity, taking also into account risks to human health? (Article 23.1(a))	
a) yes – significant extent	
b) yes – limited extent	X
c) no	
50. If yes, do you cooperate with other States and international bodies?	
a) yes – significant extent	
b) yes – limited extent	X

c) no	
51. Does your country endeavour to ensure that public awareness and education encompass access to information on living modified organisms identified in accordance with the Protocol that may be imported? (Article 23.1(b))	
a) yes – fully	X
b) yes – limited extent	
c) no	
52. Does your country, in accordance with its respective laws and regulations, consult the public in the decision-making process regarding living modified organisms and make the results of such decisions available to the public? (Article 23.2)	
a) yes – fully	X
b) yes – limited extent	
c) no	
53. Has your country informed its public about the means of public access to the Biosafety Clearing-House? (Article 23.3)	
a) yes – fully	
b) yes – limited extent	X
c) no	
54. Please provide further details about your responses to the above questions, as well as description of your country's experiences and progress in implementing Article 23, including any obstacles or impediments encountered:	

Article 24 – Non-Parties

See question 1 regarding provision of information to the Biosafety Clearing-House**.**

55. Have there been any transboundary movements of living modified organisms between your country and a non-Party during the reporting period?	
a) yes	
b) no	
56. If there have been transboundary movements of living modified organisms between your country and a non-Party, please provide information on your experience, including description of any impediments or difficulties encountered:	

Article 25 – Illegal transboundary movements

See question 1 regarding provision of information to the Biosafety Clearing-House.

57. Has your country adopted appropriate domestic measures to prevent and penalize, as appropriate, transboundary movements of living modified organisms carried out in contravention of its domestic measures? (Article 25.1)	
a) yes	X
b) no	
58. Have there been any illegal transboundary movements of living modified organisms into your country during the reporting period?	
a) yes	
b) no	X
59. Please provide further details about your response to the above question, as well as description of your country's experiences in implementing Article 25, including any obstacles or impediments encountered:	

Article 26 – Socio-economic considerations

60. If during this reporting period your country has taken a decision on import, did it take into account socio-economic considerations arising from the impact of living modified organisms on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities? (Article 26.1)	
a) yes – significant extent	X
b) yes – limited extent	
c) no	
d) not a Party of import	
61. Has your country cooperated with other Parties on research and information exchange on any socio-economic impacts of living modified organisms, especially on indigenous and local communities? (Article 26.2)	
a) yes – significant extent	
b) yes – limited extent	X- Look at to the question No 20
c) no	
62. Please provide further details about your responses to the above questions, as well as description of your country's experiences and progress in implementing Article 26, including any obstacles or impediments encountered:	

Article 28 – Financial mechanism and resources

63. Please indicate if, during the reporting period, your Government made financial resources available to other Parties or received financial resources from other Parties or financial institutions, for the purposes of implementation of the Protocol.	
a) yes – made financial resources available to other Parties	

b) yes – received financial resources from other Parties or financial institutions	X
c) both	
d) neither	
64. Please provide further details about your response to the above question, as well as description of your country's experiences, including any obstacles or impediments encountered:	
We had financial support from GEF-UNEP to : Executing the Development of National Biosafety Framework Project. We are in position to have the financial support to execute the BCH Project	

Other information

65. Please use this box to provide any other information related to articles of the Protocol, questions in the reporting format, or other issues related to national implementation of the Protocol:

Competent national authorities are:

1- Ministry of Local Administration & Environment(General Commission for Environmental Affairs).

2- Atomic Energy Commission.

3- Ministry of Agriculture and Agrarian reform (General Commission for Agricultural Scientific Researches).

4- Ministry of Health.

5- General Commission for Biotechnology.

National focal points are:

- Eng. Imad Hassoun/ Deputy minister of Local Administration & Environment.

National focal point of CBP.

P.O.BOX 3773, Damascus –Syria

Tel/Fax: +963 11 4447608

Mob:+963 944 785350

E-mail:

imadh@gmx.net/
Imadhassoun51@yahoo.co.uk

- Eng. Belal Alhayek/ Chief of Biosafety Division

National Focal Point of BCH.

B.O.X 3773 Damascus –Syria

Tel/Fax: +963 11 4447608

Mob:+963 947 451588

E-mail: bilalalhayk@yahoo.com

Comments on reporting format

The wording of these questions is based on the Articles of the Protocol. Please provide information on any difficulties that you have encountered in interpreting the wording of these questions: