

**Summary Report of the
LADA Project Training Workshop for Asian Countries**

China LADA Project Team

May 2, 2011

China has been both one of six pilot countries and the Asia regional training center of the LADA (land degradation assessment in drylands) project. Regional training as a component the LADA capacity building has been an important dissemination channel of LADA theories and methodologies. According to the overall workplan of LADA and the Chinese LADA project plan, the FAO LADA project and the Chinese LADA project team jointly conducted the LADA Asian regional training workshop during April 11-16, 2011.

I. GENERAL CONDITION OF THE TRAINING WORKSHOP

Time: April 11- 16, 2011

Venue: Beijing and Wongniute Banner of Inner Mongolia, P.R China

Organization of the workshop: the workshop was jointly organized by the National Bureau for Combating Desertification of China State forestry Administration (SFA) and FAO and co-organized by SFA Academy of Forest Survey, Planning and Inventory.

Workshop participants: the participants were from Chinese Ministry of Foreign Affairs, SFA; representatives of FAO, UNEP and UNCCD; 12 representatives from 11 Asian countries; trainers of the China LADA project team. 40 persons in total (refer to Attachment I).

II. CONDUCTION OF THE TRAINING

According to the training plan, trainers of the workshop introduced systematically the LADA objectives, tasks, concepts, methods and application. With national assessment and local assessment as focal points, the assessment methods and tools were illustrated in detail. With the field study tour, demonstration and practice of the local degradation assessment was carried out to allow the trainees full understanding and knowledge of the LADA methodologies.

1. Introduction of LADA outcomes

Mr. Biancalani Riccardo the FAO LADA project expert introduced the LADA implementation in regard with the LADA project background, concepts and the global-national-local level accomplishment and capacity building of land degradation assessment.

In year 2000 and as required by UNCCD, the GEF launched the global Land Degradation Assessment in Drylands Project (GLADA), with the period from 2004 to 2006 for LADA PDF-B experiment of LADA methods and tools and the time from 2006 to 2010 for the launch and implementation of LADA project inclusive of the global level assessment and pilot work in the six pilot countries. Through project execution for six years, the LADA project has accomplished its designated tasks as follows.

- ① Tool and method studies for land degradation assessment which has included the land degradation assessment guidelines, the manual and the database software;
- ② Conduction of the land degradation assessment which has included the land degradation assessment of the global level, the 6 pilot countries and the local levels;
- ③ Capacity building. Over 100 persons of the pilot countries have attended training and more than

forty countries have attended regional training.

The implementation of the project has proved that LADA as a science/technology supported, user demand oriented tool for land degradation assessment is capable of assessment and monitoring of land degradation and impacts and can offer support for land use planning, sustainable land management policy making of the global, national and local levels.

Professor Yang Weixi the coordinator of China LADA project introduced the accomplishments of China LADA project. China has completed GLADA validation of the Chinese part, the systematic land use mapping, the national land degradation assessment, the local land degradation assessments in six demonstration districts, the Chinese arid areas sustainable land management best models report, and the LADA project training and capacity building. The execution of LADA project in China has been both the demonstrative application LADA methods in the country and a process of verifying and improving the LADA methodologies. The LADA project has promoted the understanding and absorption of international concepts and methods by the Chinese desertification monitoring team with strengthened desertification monitoring capacity building. By this means, the LADA project has played a positive role in improving the Chinese desertification monitoring by upgrading its systematic analysis capability in land degradation pressure, status and response. At the same time, the project has expanded the international exchanges and international influence of Chinese desertification technology and experience.

In addition, the Chinese colleagues introduced the general condition of China in desertification and sandification monitoring as well as the sustainable land management best practices report that was completed by the China LADA project team.

2. Introductory speeches of the Asian trainees

The participants from Kazakhstan, Kyrgyzstan, Lebanon, Uzbekistan, Tajikistan, Pakistani, Bhutan, Filipina, Cambodia, Thailand, Bangladesh and Iran introduced respectively their national conditions of the nature, socioeconomics, land use and land degradation by analyzing the state, driving force and impact of land degradation and by briefing the policies concerning land degradation legality, organization as well as the land degradation combating project and sustainable land management measures.

The participants of these countries also introduced their basic conditions of land degradation and desertification monitoring. It turned out that all the countries have carried out to different extent the assessment and monitoring of land degradation and desertification. Some countries carried out mapping with remote sensing and GIS technology for nationwide land use and land degradation and for establishment of land degradation assessment management system. All these laid foundation for LADA project conduction in these countries.

3. Introduction of the LADA theories and methods

3.1 LADA theories, methods and tools

Mr. Riccardo Biancalani the FAO LADA project expert explained the LADA project innovation features, theories, methods, tools and logical framework. The major features of the methods of land degradation assessment of LADA are as the follows.

--- Integration. LADA carried out land degradation assessment and the impacts with integrated consideration to such factors as the land use, ecosystem, nature, socioeconomics and local people livelihood.

--- Multiple levels. LADA carried out global, national and local land degradation assessment and took the three levels as one system.

--- Multi-user demand. LADA attempted to meet the stakeholder demands of various levels and to use expert experience to meet the needs of land use policy making.

The LADA assessment methods contain the following innovations.

Firstly, LADA put forward a brand-new concept of land degradation: land degradation is the drop of capability of land over a period of time in offering to the land beneficiaries the ecosystem products and services. This concept supports land degradation assessment conducted on basis of the ecosystem service function, time changes and land users' appraisalment.

Secondly, LADA put forward the concept of the land use system and used the land use system to link up the global, national and local land degradation assessment levels for integrated analysis.

Thirdly, LADA put forward the DPSIR theory, the RADAR diagram (global), ecosystem service, the livelihood assessment (local) theories for land degradation analysis and assessment.

Fourthly, LADA put forward the logical framework of land degradation assessment, i.e., identification of the problem → utilization of existing information → data analysis → data addition → model analysis (using expert knowledge) → outcomes for the users as needed.

Fifthly, LADA developed the GLADA system, the land use system mapping manual, the LADA / QM manual and the local assessment manual.

3.2 Assessment of the global level

LADA developed the online global land degradation assessment system (GLADIS), with established global land use system of 39 attribute databases of soil, water resource, population etc. as well as assessment methods and indicators of biomass, water resources, soil, biodiversity, socioeconomic conditions etc for global land degradation assessment.

GLADIS is mainly to describe global land resources, carry out mapping of global land degradation, analyze the "hot spot" and "bright spot", and probe into causes or driving forces of land degradation to offer technical services for the international organizations such as UNCCD and to offer data for national sustainable assessment.

3.3 National level land degradation assessment

The Chinese LADA project team using the experience and practices of the national assessment as evidences introduced its national level methods and theories of land degradation assessment. The goal of national assessment is ascertain the nationwide land degradation types, scope, severity and trends; analyze the impact and driving forces of land degradation, assess the impact and the effects of the sustainable land management measures and make recommendations regarding land degradation combating measures and policies according to the assessment results.

The first step of the national level land degradation assessment is to establish the national land use system. The land use system takes land cover, protected areas distribution, livestock density, farmland irrigation, urban distribution map as basic data and soil, climate zones, altitudes data as attribute data (the land cover is of basic data and each country can select other basic data that are suitable for its national condition). With the stipulated methods and steps the national land use mapping was conducted. The land use system integrated the ecosystem, natural, socioeconomic and land use attributes so covering both neural and social management attributes. The land use system is the basic unit for defining the land degradation driving force, impacts as well as sustainable land management and for land degradation and sustainable land management mapping.

The national assessment needs to set up the assessment indicator system with the assessment indicators based on the LADA indicator database. According to the realities of land degradation, each country selects the best suitable indicator system for national assessment.

Establishment of the national land degradation assessment team and collection and utilization of the existing data and information were carried out. The LADA/QM Manual methods and steps are to be followed. With the assessment unit and expert experience, the five aspects of expert information, land use system changes, land degradation assessment, sustainable land management and expert suggestions are to be assessed for establishment of QM assessment database and information system. According to the DPSIR framework, the current condition/trends, pressure and direct driving force of land degradation of the country as well as of impacts of land degradation on the ecosystem and people's livelihood were analyzed. Meanwhile, recommendations of sustainable land management measures were proposed and policy recommendations regarding land degradation prevention and control put forward for the country.

3.4 Assessment of the local level

With the LADA local assessment manual and the local assessment practices of the demonstration district, the China LADA project team introduced the methods and theories of local assessment in detail on the overall methodologies and the specific themes of vegetation, soil, erosion, water resource, socioeconomic survey. In addition, a two-day-long site demonstration and practice was organized in Chifeng city of Wongniute Banner of Inner Mongolia where site lectures, household visits, group practice and summary discussion/analysis were carried out.

The objective of local assessment is to establish the baseline of local land degradation

assessment, verify with the assessment results the "hot spot" and "bright spot" of the global level and national level and analyze the local LD driving force, pressure, trends and impact. Consequently, the sustainable land management measures for land degradation should be put forward and policies of local land use and sustainable land management be recommended based on the assessment results.

The features and major aspects of the local assessment method are as follows:

- ①The local assessment should survey and assess the land degradation and sustainable land management of the study area and make comparative analysis between them.
- ②The local survey and assessment should adopt integrated method by soliciting opinions from local land users, utilize both the existing data as well as actual field measurements for inter-verification and supplementation.
- ③Participation. The local land degradation assessment requires whole-process participation of the local land users, local experts and managers to analyze the inter-relation between land degradation and local livelihood as well as the impact of land degradation on the ecosystem services and function.
- ④The local land degradation assessment attaches high attention to the impacts of land use and human activities on land degradation as well as the impacts of policies, laws and mechanism of land management etc. on land degradation.

The methods and steps of local assessment include the study area selection and basic features analysis, land resource/land degradation survey, livelihood survey and the local land degradation report drafting etc.

- ① The study area selection. The representative areas of the land use system, land degradation, ecosystem and land use are taken as the geographical assessment areas (GAA). The representative area in GAA is identified as the study area in which the sample points are selected for detailed assessment of land resource and land degradation.
- ②Study area survey. By study area sample line reconnaissance, exchanges with local land stakeholders, rapid assessment and detailed surveys of erosion (macroscopic assessment), land resources (vegetation, soil and water resources) surveys, local livelihood survey, the site information is collected.
- ③Analysis and assessment. The local assessment uses DPSIR, ecosystem service function and livelihood assessment theories for land degradation assessment of the study area by analyzing the local land degradation status, driving forces, pressure impact to put forward response measures.
- ④Report writing. The writing of the local assessment report should accord with the DPSIR

framework and with policy recommendations.

Field practice:

According to requirements of the local degradation assessment manual, a two-day-long field practice was organized in Wulanaodu demonstration plot of Wongniute Banner of Inner Mongolia for the practice of local assessment methods, inclusive of the study area selection, local community interview, sample line reconnaissance, soil erosion survey, soils, vegetation, water resource survey, household visit with livelihood survey. The 12 workshop participants by two groups used site surveyed basic information for DPSIR local land degradation analysis with formed group practice reports which have been satisfactorily completed.

4. LADA future actions

The FAO LADA project team introduced the future actions of LADA in terms of the global, regional and national levels. The action of global level is mainly to establish the global platform of the land sustainable management of land degradation so that exchanges of data and experiences between countries can be achieved and partnership relations and capacity building be accomplished; The GLADIS and WOCAT tools should be upgraded and transformed to offer services to international organizations such as UNCCD, UNFCCC and GEF. The LADA actions of regional level include mainly the land degradation assessment /land sustainable management practice capacity building, establishment of the regional training network and development of the decision-making supporting tools for sustainable land management. At the national level LADA will establish baselines for land degradation and droughts (DLDD) monitoring and sustainable land management to serve policy making of land degradation assessment, remove the dissemination bottleneck of sustainable land management technologies and socioeconomic policies, determine the priorities national investment and programs, establish national action plans and conduct local land degradation assessment. Each country needs to apply for country oriented GEF financial aid for developing LADA future actions including the LADA global and national project activities.

The officials of UNCCD introduced UNCCD assessment impact indicators as well as ways for LADA to participate in UNCCD assessment indicator assessment.

III. THE ACCOMPLISHMENTS OF THE TRAINING WORKSHOP

The training workshop for six days achieved the following results.

1. The training participants attained general recognition of LADA methods

Through the training, the trainees got acquainted with the LADA theories, methods, tools and the assessment manual as well as the overall framework of LADA project, the global-national-local assessment correlation as well as the core concepts and the key innovative features.

2. The training participants had a primary grasp of the national and local assessment methods

The focal points of the training workshop were to introduce the national and local assessment theories, methods and tools to the trainees. Through training and exchanges, the trainees got to understand the key content and steps of national assessment including systematic mapping of land use, national assessment indicator selection, the LADA/QM manual application, the establishment of national assessment results information system as well as writing of national assessment report.

Through introduction lectures and site practices, the trainees has learnt preliminarily the survey and analysis methods of local assessment including the selection of study area, basic information data analysis, listening to local stakeholders, sample line selection with reconnaissance, land resource (vegetation, soil and water resource) surveys, livelihood survey. They also acquired preliminarily how to use the DPSIR framework, the ecosystem service framework and the livelihood framework for analysis and assessment of survey results.

3. The workshop contributed to promoting the LADA project

The natural and socioeconomic conditions as well as the land degradation of Asian countries vary significantly and each country has developed land degradation and desertification monitoring to certain extent. During the training and exchanges, the trainees on behalf of their countries put forward new requirements for the methods of LADA. They hope that LADA could keep improving itself by offering more support on land degradation assessment to their homelands

4. The workshop contributed to LADA future actions

Training has been one component of LADA capacity building and key means of LADA method and tool dissemination. Through the training the Asian countries acquired preliminarily the tools and methods of LADA and at the same time came to know the framework orientation and main components of LADA II project, which has laid foundation for LADA project conduction in Asian countries.

IV. THE SUGGESTIONS

1. Training time

LADA project has been fruitful in methodologies and concepts so their coverage and depth can not be fully covered by the training of six days. Therefore, it is necessary to prolong the training duration.

2. Training methods

Considering the immensely varied geography of the Asian region in regard to ecosystem (climate, landform, vegetation etc.) and the discrepancies in types and severity of land degradation, there is potential to carry out training by regional classification of South Asia and Southeast Asia, middle

and western Asia etc. for improved results.

3. Training content

As far as the introduced condition of the workshop participation countries, all these countries have developed land degradation and desertification monitoring. But the monitoring capability (including personnel, technology etc.) have been different. It is necessary to carry out training demand survey before the training and identify the most needed methods and aspects of land degradation assessment for improved training targeting.

4. Suggestions from the trainees

The participatory trainees of the workshop highly affirmed the training organization and conduction of the training. They meanwhile put forward the following improvement suggestions: extending the training time, explaining in further detail the steps of LADA methods, strengthening the discussion concerning socioeconomic and livelihood impact analysis framework. They also hope that the LADA indicator system and the GLADIS system can be open to the countries to serve the cooperation of the indicator system and data updating etc.

Attachments:

1. List of the participants
2. The workshop programe

First name	Family name	Nationality	Organization/ position	Tel/fax	Email
Antonios	Youssef	Lebanese	Ministry of Agriculture/Technical Expert	Tel/FAX:961-1-849645 Mobile:961-70-	antonioyoussef@hotmail.com
Azhar	Yeszhanova	Kazakhstan	Institute of Geography of the Ministry of Education and Science of the Republic of Kazakhstan/Head of the Department of Geomorphology	77272916691/ 77272918102	azhare@rambler.ru
Natella	Rakhmatova	Uzbekistan	Senior Researcher, Department of Environment Pollution Investigation and Forecasts, Hydrometeorological Research	99871-2360758	uzhymet@meteo.uz
Iftikhar	Abbas	Pakistani	Sustainable Land Management Project, Ministry of Environment, Government of Pakistan/ GIS Specialist	92-51-2602467 and 92-51-2602468/92-51-2602469	iftikhar.abbas@slmp.org.pk
Omer	Raja Muhammad	Pakistani	Provincial Project Coordinator	923007617819/ 924299214210	raja_muhammad_omer@hotmail.com
Karma	Dorji	Bhutanese	National Soil Services Centre/ Program Director	9752351037/9752351038	kddorji@gmail.com

Leo	Reramar	Filipino	Senior, Agriculturist, Bureau of Soils and Water Management	(+632)-920-4318	retamarleo@yahoo.com.ph
Sovuthy	Pheav	cambodia	Director of Department of Agricultural Land Resources Management, Ministry of Agriculture, Forestry and Fisheries.	Mobile: (855-12) 613 355	sovuthypheav@yahoo.com
Aniruth	Potichan	Thai	Land Development Department/Senior Soil Surveyor (Director, Soil Correlation Section)	+662 5791938/ +662 5791938	potichan_ani@hotmail.com
Mohammed Shafiul	Chowdhury	Bangladesh	Conservator of Forest, Department of Forest, Ministry of Environment and Forest	Tel:8801819323000	cfctgbfd@gmail.com
Hossein	Badripour	IRANIAN	Forest, Rangeland and Watershed Management Organization (FRWO), Head of Rangeland Improvement and Development Working Group,	Tel: +98 21 22446528 Fax: +98 21 22488468 Cell Phone: +98 912	Badripour@yahoo.com
Syaiful	Anwar	Indonesia	Deputy Director for Watershed Management	62215730110 (tel.) 62215731839	Syaifula09@gmail.com

List Chinese Participants

Name	Organization	Email
LIU Tuo	Director General, National Bureau to Combat Desertification, State Forestry National Focal Point of UNCCD	cciccd@forestry.gov.cn
XU Qing	Deputy Director General, National Bureau to Combat Desertification, SFA	xuqing@forestry.gov.cn
WANG Xiaolin	Deputy Division Director, Climate Change Office, Dept. of Law and Treaty,	
ZHANG Yuxing	Chief Engineer, Forest Inventory and Planning Institute, SFA	mrqzyx@sina.com
TU Zhifang	Chief Engineer, National Bureau to Combat Desertification, SFA	Tzf8825@sina.com
YANG Weixi	China LADA Coordinator	yang500628@263.net
JIA Xiaoxia	Deputy Division Director, National Bureau to Combat Desertification, SFA	jiaxiaoxia@forestry.gov.cn
PENG Jiping	Deputy Division Director, National Bureau to Combat Desertification, SFA	pengjiping@sina.com
LI Siyao	Project Assistant, National Bureau to Combat Desertification, SFA	lisyao.ids@gmail.com
ZHANG Kebin	Professor, Beijing Forestry University	ctccd@126.com
NIE Lishui	Professor, Beijing Forestry University	nielishui@sohu.com
LI Xuehua	Doctor, Institute of Applied Ecology,	lixuehua@iae.ac.cn

12: 00-13:30	Lunch (Room HEHUA, 3rd Floor)	
13:30-15:00	National Assessment ● National Assessment Methodologies and Case Analysis(QM) 1 WANG Junhou	SUN Tao (China LADA Team)
15:00-15:20	Tea Break	
15:20-17:30	● National Assessment Methodologies and Case Analysis(QM) (Cont.) WANG Junhou Discussion	
April 13		
08:30-09:10	National Assessment ● National Assessment Information System (GIS) ZAN Guosheng Discussion	JIA Xiaoxia (NBCD,SFA)
09:10-09:40	● UNCCD Impact Indicators and LADA Contribution ZHENG Rui	
09:40-10:10	General discussion on national assessment	
10:10-10:30	Tea Break	
10:30-10:45	Local Land Degradation Assessment ● Introductory Presentation Riccardo Biancalani	ZHENG Rui (UNCCD)
10:45-11:15	● Local Assessment Framework and Methodologies WANG Guosheng Discussion	
11:15-12:00	● Soil Visual Assessment NIE Lishui Discussion	
12:00-13:30	Lunch (Room HEHUA, 3rd Floor)	
13:30-15:00	Continue Local Land Degradation Assessment ● Soil Erosion Survey & Assessment ZHANG Kebin Discussion	WANG Junhou (China LADA Team)
15:00-15:20	● Water Resources Survey & Assessment ZHANG Kebin Discussion	
15:20-16:20	● Vegetation Survey SUN Jingmei Discussion	ZAN Guosheng (China LADA Team)
16:20-17:10	● Livelihood Survey LI Xuehua Discussion	
17:10-17:30	● Introduction of Field Trip Arrangements WANG Guosheng	
19:30	Departure off Hotel to Train Station	
21:00	Departure by train to Chifeng City	
April 14		
07:00	Arrival at Chifeng	
07:00-08:00	From Chifeng to Hotel of Wengniute Banner	
08: 00-09:30	Check In & Breakfast	
09:30-10:30	From Wengniute Banner to Ulan Aodu	

10:30-12:30	Field Demonstration of Local Assessment in Ulan Aodu Site <ul style="list-style-type: none"> ● Briefing status of Ulan Aodu site ● Stakeholders meeting ● Transect walk 	WANG Guosheng (China LADA Team)
12:30-13:30	Lunch (Packaged)	
13:30-17:30	Local Assessment Demonstration and Practices <ul style="list-style-type: none"> ● Locating transects and transects investigation (soil erosion survey and water resources survey, soil survey, vegetation survey) ZHANG Kebin, NIE Lishui, SUN Jingmei 	WANG Guosheng (China LADA Team)
18:30	Dinner in Hotel	
April 15		WANG Guosheng (China LADA Team)
08:30-12:00	Continue Field Demonstration and Practices in Ulan Aodu <ul style="list-style-type: none"> ● Interview for livelihood survey LI Xuehua 	
12:00-13:00	Lunch (Packaged)	
13:00-14:00	From Ulan Aodu to Wengniute Banner	Riccardo Biancalani (FAO)
14:00-14:30	Break	
	Summary of Field Work	
14:30-15:30	<ul style="list-style-type: none"> ● Group discussion of the field practices (60minutes) 	
15:30-16:00	<ul style="list-style-type: none"> ● Group reporting (30minutes) 	
16:00-16:30	Tea Break	
16:30-17:00	<ul style="list-style-type: none"> ● Summary Report (30minutes) Riccardo Biancalani 	
17:30-18:30	From Wengniute Banner to Chifeng	
18:30-19:30	Dinner	
19:30-20:00	Departure for Train Station	
21:00	Return to Beijing by Train (07:10 +1day Arrival at Beijing)	
April 16		JIA Xiaoxia (NBCD,SFA)
10:30-11:30	SLM Best Practices <ul style="list-style-type: none"> ● LADA-WOCAT Methodologies and Case Analysis Discussion PENG Jiping 	
12:00-13:30	Lunch (Room HEHUA, 3rd Floor)	
13:30-14:30	Desertification Assessment in China <ul style="list-style-type: none"> ● Desertification Monitoring in China Discussion TU Zhengfang 	Yuji Niino (FAO RAP-NRE)
14:30-14:45	The Way Forward <ul style="list-style-type: none"> ● Introduction to LADA 2 Discussion Riccardo Biancalani 	
14:45-15:10	Tea Break	
15:10-15:40	Summary and Closing <ul style="list-style-type: none"> ● Summary Report Riccardo Biancalani ● Closing Remarks XU Qing 	YANG Weixi (China LADA Coordinator)
April 17	Departure	