

Eighth International Conference on Development of Drylands

**Human and Nature – Working Together
for Sustainable Development in Dry Lands**

Program

Sponsored by

ALRC (JAPAN), CAREERI (CHINA), ICARDA,
IDR (USA), NSFC (CHINA), UNESCO and UNU

February 25-28, 2006
Beijing, China



UNITED NATIONS
UNIVERSITY

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in the Dry Areas (ICARDA)**

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Eighth International Conference on Dryland Development

25-28 February 2006, Beijing, China

Program

Friday: 24 February 2006

- 08:00-22:00 Registration
- 19:00-20:00 Meeting of International Commission for Dryland Development (ICDD) Executive
- 20:00-22:00 Dinner of ICDD Executive, International & Local Organizing Committee

Saturday: 25 February 2006

- 08:00-09:00 Registration (continued)
- 09:00-10:00 **Opening Ceremony**

Chairman: Prof Dr. Adel El-Beltagy, President, ICDD and Director General, ICARDA

Chief Guest: Prof Dr. Li Jiayang, Vice President, CAS

Welcome Remarks:

- Prof Dr. Adel El-Beltagy, Director General, ICARDA
- Prof Dr. Hans Van Ginkel, Rector, UNU, Tokyo, Japan
- Dr Nouruddin Mona, FAO Res. Rep. for China, DRP Korea & Mongolia
- Prof Dr. Stephen G. Wells, Director General, DRI, USA
- Prof Dr. Wang Tao, Director General, CAREERI, China

Message from the Chair of the CGIAR

Inaugural Address: Prof Dr. Li Jiayang, Vice President of CAS

- 10:00-11:00 Group Photo & Coffee Break

11:00-12:30 Plenary Session 1

Chairperson: Dr Margaret Catley-Carlson, Chair ICARDA Board & GWP

1. **Future challenges to the sustainable use of natural resources in the dry areas-** *Adel El-Beltagy*
2. **The future dimensions of drylands in the implementation of the UNCCD -** *Franklin Moore*
3. **Sustainable development for fragile ecosystems -** *Adli Bishaye*
4. **Progress in aeolian desertification in China -** *Wang Tao*

- 12:30-14:00 Lunch

14:00-15:30 **Plenary Session 2**

Chairman: Prof. Dr. Wang Tao, Director General, CAREERI

1. **The role of traditional hydro-technology in dryland development: Karez, Qanat and Foggara-** *Iwao Kobori*
2. **The use of spatial data for integrated agricultural planning and management** - *Ayman Abou Hadid*
3. ***Jatropha curcas* L., an excellent source of renewable energy in the dry areas** - *Mohan C. Saxena*
4. **Scientific bases of increasing efficiency of rainfed lands of Kyrgyzstan** - *Djamine Akimaliev*

15:30-16:00 Coffee Break

16:00-18:30 **Concurrent Session 1**

Theme 1.1: Soil and water conservation and degradation

Chairman: Dr Abbas Keshavarz

1. **Water management using drainage water and its impact on irrigated rice in the Delta region of Egypt-** *W.H. Abou El Hassan, Y. Kitamura, K. Hasegawa, S. L. Yang and H. Solomon*
2. **Desertification controlled by fluvial, aeolian and playa interactions** – *Nasser Arzani*
3. **Floodwater effect on infiltration rate of a floodwater spreading system in Moosian, Iran** - *Saeed Nasb Boroomand, Hossain Charkhabi and Ayoub Pirani*
4. **Wind erosion and performance of the wind erosion prediction system (WEPS)** - *Guanglong Feng, and Brenton Sharratt*
5. **The combined impacts of soil cultivation and crop residue on C and N kinetics in a semi-arid soil** - *Fayez Raiesi Gahrooei*
6. **Characteristics and classification of degraded wind deposited gypsiferous saline- alkali soils in eastern part of Isfahan, Iran** - *J. Givi*

Theme 2.1: Dust-storm process

Chairman: Dr Edward L. Skidmore

1. **Vorticity influence upon dust storm generation in Inner Mongolia and northern China** - *H. Choi and Y. H. Zhang*
2. **High concentrations of PM₁₀, PM_{2.5} associated with atmospheric boundary layer in Seoul city during yellow sand event** - *H. Choi and Y. H. Zhang*
3. **Assessing wind erosion vertical dust fluxes: direct measures vs. models** - *G. Fratini, M. Martinelli, M. Santini and R. Valentini*
4. **Dust storm process and its interactions with climate** - *Yuan Gao*
5. **Dust sandstorm dynamics analysis in northern China** - *M. Pasqui et al.*
(To be presented by Guarnieri, Francesca)
6. **Statistical law of particles ejected from the surface in steady state saltation** - *Li Hong He¹, Jian Jun Wu², Xiao Jing Zheng³*

Theme 3.1: Range management

Chairman: Dr. James Tiedeman

1. **Assessing some *Atriplex lentiformis* effects on soil characteristics and vegetation cover in planted land** - *F. Honardoust, M.M. Adhami, N. Biroodan and A. Chamany*
2. **Comparison of different range utilization methods and their effect on range condition** - *A. Ariapour, M. R. Chaichi, A. Torkneghad, F. Amiri and M. Nassaji*
3. **Physical land evaluation for extensive grazing using GIS, in a watershed of Khorasan, Iran** - *Shamsollah Ayoubi*
4. **Landscape function analysis (LFA): A new method for rangeland ecosystem function assessment** - *G. Ghanbarian and K. Naseri*
5. **A number of ecological propositions and their implications for rangeland management in drylands** - *Gholam Ali Heshmati and Victor R. Squires*
6. **Daily transpiration rates of *Festuca ovina* and *Agropyron intermedium* rangeland species** - *S.H.R. Sadeghi and N. Rahimzadeh*

Theme 6.1: Stress physiology

Chairman: Prof Dr. Shinobu Inanaga

1. Effects of defoliation and water stress on the growth of determinate and indeterminate soybean cultivars - P. An, X. J. Li, N. W. Zhu, T. Inoue, J. Abe and S. Inanaga
2. Leaf water potential and photosynthesis in water stressed seedlings of *Robinia pseudoacacia* and *Quercus liaotungensis* - Sheng Du, Norikazu Yamanaka, Fukuju Yamamoto, Ruilian Han, Zongsuo Liang, and Qingchun Hou
3. Effect of genotype variability on nitrate uptake and assimilation of wheat cultivars - Hodratollah Fathi and Mohammad Amin Asoodar
4. The effects of drought stress and harvest time on seed vigor and germination of wheat cultivar in Khuzestan province - M. H. Gharineh, A. Bakhshandeh and K. Ghassemi-Golezani
5. Genetic variation of stem reserve utilization for grain filling in bread wheat genotypes for rainfed conditions of Iran - Reza Haghpars, R. Rajabi, R. Mohammadi, M. Aghaee-Sarbarzeh, N. Bahrami, A. Daryaei
6. Drought tolerance indices in chickpea and their related traits - Adel Jahangiri, M. Aghaee-Sarbarzeh and R. Haghpars

Theme 9.1: Sustainable development

Chairman: Dr. Mohammad El-Mourid

1. Implementation of the approaches UNCCD through local area development to combat desertification in district Tharparkar, Pakistan - Tanveer Arif
2. Twenty-five years' experience of research in dryland areas in Morocco - Mohamed El Gharous
3. Simulation of critical scale of oasis maintenance and development in the arid areas of north-west China - Yan-hong Gao, Guodong Cheng and Shi-hua Lu
4. Desertification process and driving model in Minqin Oasis, Gansu Province - Zhihai Gao, Zengyuan Li, Huaidong Wei and Feng Ding
5. Developing a science of desert living – towards a new understanding for livelihood - Murray McGregor and Mark Stafford Smith
6. An ecosystems approach for sustainable management of dryland environments - Gemma Shepherd

Theme 10.1: Application of new technologies & crop improvement

Chairman: Dr Theib Y. Oweis

1. Economic evaluation of drip (tape) irrigation method in wheat compared to surface irrigation in water-limited areas - A. Torknezhad and M. Aghaee-Sarbarzeh
2. Effect of different tillage and rotation on crop performance - M. A. Asoodar, A. R. Barzegar and A. R. Eftekhari
3. Influence of supplementary irrigation and variety on yield and some agronomic characters of rapeseed and mustard under rainfed conditions in northern Syria - Akhtar Beg, Mustafa Pala and Theib Oweis
4. Effect of drought stress on quality and quantity of yield, yield components and relative water content in rapeseed (*Brassica napus* L.) cultivars - AliReza Daneshmand, Amir Hoessein Shirani-Rad, Farokh Darvish, Mohammad Reza Ardakani, Ghasem Zarei and Farshad Ghooshchi
5. Crop water productivity a strategy for sustainable development in drylands - H. Dehghanisanij, M. N. Moghaddam and H. Anyoji
6. Long-term effects of fertilizer and water availability on cereal yield and soil chemical properties in Northwest China - Tinglu Fan, B.A. Stewart, William A. Payne, Yong Wang, and Junjie Luo

19:00-21:00 Dinner Reception

Sunday: 26 February 2006

09:00-10:30 Plenary Session 3

Chairman: Prof. Dr. Adel El-Beltagy

1. **Living with desert: 'CWANA-Plus' partnership** - *Hans Van Ginkel*
2. **Agricultural water consumption management in Iran considering aridity and drought incidences** - *Abbas Keshavarz*
3. **Development of dryland China from historical view** - *Chen Fahu*
4. **Desertification and its control in India** - *Prakash Narayan*

10:30-11:00 Coffee Break

11:00-12:30 Concurrent Session 2

Theme 1.2: Soil and water conservation and degradation

Chairman: Dr. Mikelis Soulimanov

1. **Adaptability and ecological effect of the plantation tree species in leanness limestone mountainous areas of Jiang Xi province** - *Xiao-min GUO, et al.*
2. **Identification of indicators of salinization processes in Luohui irrigation scheme, China: Part of research to prevent salinization**- *H. Solomon et al.*
3. **Water vapor movement in salinized soils** - *Hidetoshi Mochizuki, I. Sakaguchi and S. Inanaga*
4. **Field observation of runoff characteristic within a gully in an ocher plateau**
- *Osamu HINOKIDANI, Hiroshi YASUDA and Zhang Xingchang*
5. **The image of the desert in Chinese literature: The legend of Wang Chao-chan** - *Kyoko Hori*
6. **Study on the groundwater and its chemical characteristics in Badain Jaran desert region** - *Wei Liu, Wang Tao, Zhang Weimin and Wang Wanfu*

Theme 2.2: Dust-storm process

Chairman: Dr Victor R. Squires

1. **Dynamics of wind erosion in the Xilin River Basin, Inner Mongolia –**
C. Hoffmann, R. Funk, R. Wieland and Y. Li
2. **The climatic characteristics of sandstorm in the Hexi corridor** - *Hao JIANG, Xiaoqing GAO and Tao WANG*
3. **Linkages between sand transport, surface roughness, and dust generation-new approach to difficult problem** - *Nicholas Lancaster*
4. **Integration of the advanced remote sensing technologies to investigate the dust and sand storm source areas** - *D. Bach et al. (to be presented by P. Scalas)*
5. **A study on threshold wind velocity of particles on slope** - *Feng SHI and Ning HUANG*
6. **Research and programs that lessen likelihood of dust bowl reoccurrence** - *Edward L. Skidmore*

Theme 3.2: Range management

Chairman: Dr Ahmed Sidahmed

1. **Rangeland degradation related to social and ecological characteristics of 50 communities in the Syrian steppe** - *James Tiedeman, C. Dutilly-Diane, N. Batikha, F. Ghassali, Elias Khoudary, G. Arab, and C. Saint-Macary*
2. **Effective environmental factors in distribution of vegetation types in Voshnavah of Qom Province (Iran)** - *Hamid Toranjzar, M. Jafari and H. Azarnivand*
3. **Investigation of range condition and range condition trend at protected and unprotected rangeland in semiarid region** - *H.R. Naseri, H. Azarnivand, K. Saedi and M. Abedi*
4. **Role of Salsola in grazing cycle of livestock from ranges of dry regions** - *Zoheir Ashrafi Yaghobi and Mehdi Ghanj Khanlo*

Theme 6.2: Stress physiology

Chairman: Prof. Atsushi Tsunekawa

1. Effects of different nitrogen levels on yield and yield components of wheat cultivars under rainfed and well-watered conditions- *Somayeh Salimi and Y. Emam*
2. Photosynthetic characteristics of desert plants *Haloxylon ammodendron* and *Calligonum mongolicum* - *Peixi Su and Qiaodi Yan*
3. Effect of soil matric potential on waxy corn (*Zea mays* L. *sinensis* Kulesh) growth and water use in salt soil in arid areas - *Yanping Jiao, Yaohu Kang, Shuqin Wan and Wei Liu*
4. Sodium uptake pathways in a salt-accumulating halophyte- *S. M. Wang and T. J. Flowers*
5. Drought tolerance and micro-structure of stomata in woody species in loess plateau - *F. Yamamoto, S. Du, N. Yamanaka, K. Otsuki, Z. Xue, S. Wang and Q. Hou*
6. The impact of irrigation water quality on water uptake by citrus trees - *ShengLi Yang, Y. Kitamura, H. Solomon, K. Otagaki and W.H. Abou El-Hassan*

Theme 9.2: Sustainable development

Chairperson: Dr Gemma Shepherd

1. Alternative futures analysis of desertification: Implications for China- *David Mouat, Wang Tao, Scott Bassett and Judith Lancaster*
2. Innovative cross-disciplinary approach to impact assessment of climate change on agricultural production system in arid areas - *Tsugihiko Watanabe, Takanori Naganao, and Takashi Kume*
3. How risk influences the adoption of new technologies by farmers in low rainfall areas of North Africa - *V. Alary, A. Nefzaoui and, M. El Mourid*
4. The role of urban and rural women in sustainable energy development in Iran - *Fazel Amiri and M.R. Chaichi*
5. The role of indigenous range-use organs in range improvement activities in arid and semiarid regions - *Fazel Amiri and M.R. Chaichi²*
6. The coupling mechanism between the urbanization and eco-environment in water-resource constrained west China: A case study on Hexi corridor - *Biao QIAO and Chuang-Lin FANG*

Theme 10.2: Application of new technologies & crop improvement

Chairman: Dr. Ali Abd EL Moneim

1. Phenotypic stability in chickpea genotypes using nonparametric methods under rainfed conditions - *Ezatolah Farshadfar and R. Mohammadi*
2. The role of improved production technology in wheat self-sufficiency - *Abdolali Ghaffari, M. Pala and H. Ketata*
3. The characteristics of water status in *Populus euphratica* at foreland of oases on Taklamkan desert - *Xiang-Yi LI, Li-Sha Lin, Xi-Ming ZHANG and Fan-Jiang ZENG*
4. Study on rainfed wheat nutrient requirement in dry seasons on farmers' fields - *Akbar Haghighati Maleki*
5. Evaluation of bread wheat genotypes for drought tolerance under rainfed conditions - *Reza Mohammadi, R. Haghparast and M. Aghaee*
6. Empowering rural communities for better management of collective rangelands in desert - from concept to implementation - *Ali Nefzaoui, Véronique Alary and Mohamed El-Mourid*

12:00-14:00 Lunch Break

Theme 1.3: Soil and water conservation and degradation*Chairman: Dr Pratap Narain*

1. Desertification and its control in Erdos region - Rong LÜ
2. Chloride as a tracer and climatic change during the last 2000 years recorded from unsaturated zone of Badain Jaran desert - J. Z. Ma and W. M. Edmunds
3. Vegetation cover change during 1981 to 2001 in Northwest China - Mingguo Ma and Wang Xuemei
4. Regionalization of land surface heat fluxes and evaporation - Y.M.Ma et al.
5. Investigation on soil erosion using geomorphology and EPM model
- Mohsen Maleki, Hassan Ahmadi and Marzieh Mosayyebi
6. Effects of (*Formica cunicularia*) on revegetated desert ecosystem in the Tengger Desert, Northern China - Ying-Wu Chen, et al.

Theme 2.3: Dust-storm process*Chairman: Prof. Dr Tao Wang*

1. Dust and sandstorms in NE Asia: a trans-boundary environmental problem- Victor R. Squires
2. Experimental dust production: salination bombardment efficiency on erodible soil surfaces
- Wanquan Ta
3. An integrated approach to combat dust sand storms in Northern China - M. G. Cremonini et al. (to be presented by L. Torriano)
4. Circulation dynamical structure in course of dust storm occurrence over the north China - Ke-li Wang, Tao Wang, Xiao-ye Zhang and Hao Jiang
5. Quantitative prediction of Asian dust storms using an Integrated dust storm prediction system - Linna Zhao, Meiyang Jiao and Jingjing Lu
6. Ground-surface conditions for sand-dust event occurrence and soil conservation of Aibi Lake region in Xinjiang, China - Yibing QIAN, Zhaoning WU, Liyun ZHANG and Yusufuaili

Theme 4.1: Forage and livestock production*Co-Chairmen: Drs. M. Abd El-Moneim and A. Larbi*

1. Pasture and forage legume improvement for food security in the dry areas of Central and West Asia - M. Abd El-Moneim and A. Larbi
2. Some aspects of forage quality assessment - H. Arzani
3. Feed legume strategies for improved crop-livestock production in the dry areas of Central and West Asia and North Africa - Asamoah Larbi and A.M. Abd El-Moneim
4. Forage potential of leguminous and non-leguminous fodder shrubs in the dry areas of West Asia - A. Larbi, J. Tiedeman and A. Khatib
5. Investigation on effects of phenological stages and species on forage quality of rangeland grazing by Fashandy breed sheep - Marzieh Mosayyebi, H. Arzani and A. Nikkhah
6. Adaptable system of arid fodder production - Tolibjon Hudaykylovich Mukimov, F. Normurodov and M. Nasyrov

Theme 5.1: Biodiversity and Ethnobotany*Co-Chairmen: Drs Ahmed Amri and Yu-Huan WU*

1. Agrobiodiversity conservation and the livelihoods of local communities in the dry areas of West Asia - Ahmed Amri, Kamil Shideed, Ahmed Mazid and Jan Valkoun
2. Plant diversity, environmental adaptations and balanced management of central Asian deserts - Clanton C. Black, Ts. Tsendekhuu, Shagjjav Oyungerel, Pavel Voronin and Kristina Toderich
3. Ethnobotanical studies on medicinal plants of Ziarat region in Golestan province in Iran
- M. Mazandarani
4. Bryophytes in Qilian Mt. and adjacent areas - Yu-Huan WU, Guo-Dong Chen and Chien Gao
5. Land use and biodiversity conservation in the agro-pastoral interlocked land in Inner Mongolia - Xueyong Zhao, Honglie Sun, Halin Zhao and Tonghui Zhang

Theme 6.3: Stress physiology

Chairman: Prof Ayman Abou-Hadid

1. Estimation of evapotranspiration from maize crop combining sap flow, and weighing lysimeter data - *Taheri Adel Zeggaf, H. Anyoji and H. Yasuda*
2. Adaptation of *Sophora moorcroftiana* (Benth.) Baker to Yarlung Zangbo River Valley environments in middle Tibet - *Wenzhi Zhao*
3. Effect of water stress, plant density and ethephon on growth and yield of maize (*Zea mays* L.) - *Avat Shekoofa and Y. Emam*
4. The effects of drought stress on physiological characteristics of forage pearl millet - *Shaharyar Sasani, A. Ahmadi and M.R. Jahansooz*
5. Study on some physiological characters in tolerant and sensitive barley varieties under stress and non-stress conditions - *Ibrahim Roohi, A. Siosemardeh, H. Ketata, Y. Ansarii and M. Roustaii*
6. Effects of water stress in germination and vegetative growth stages, some pure lines of wheat under different water levels - *Esmail Nabizadeh, H. Heidari Sharifabad, E Majidi Heravan and G. Nourmohammadi*
7. Water deficit stress effect at vegetative growth and reproductive stages of soybean genotypes - *Jahanfar Daneshian, Amir Hossein Shirani Rad, and S. Shakiba Shahmoradi*

Theme 9.3: Sustainable development

Chairman: Dr Tidiane Ngaido

1. The quantitative relationship between urbanization and water resources utilization in the Hexi Corridor - *Bao Chao and Fang Chuanglin*
2. Optimizing the environment law to combat desertification; A case study of Gansu Province, Peoples Republic of China - *Qun Du*
3. Livestock production strategies as related to community characteristics: the case of Syrian Badia - *Celine Dutilly-Diane et al.*
4. Study on the threshold of urban urbanization with the restraint of water resource in arid area of Northwest China - *Chuang-lin FANG, Yichun XIE² and Biao QIAO*
5. Lay environmental perceptions and their policy implications for mitigating desertification in Minqin County, Gansu Province - *H. F. Lee*
6. Water quality in courtyard rainwater cistern systems in rural area of Gansu Province of northwest China - *Xiao-Yan Li and, Lian-You Liu*

Theme 10.3: Application of new technologies & crop improvement

Chairman: Dr Ali Nefzaoui

1. Effect of zinc and boron nutrition on the productivity of finger millet and groundnut based cropping system in dryland conditions - *M.A. Shankar, H.K. Mohan Kumar, G.N. Gajanana and Jakanur Ramappa*
2. ICARDA 's emerging experience in institutionalizing knowledge management and dissemination - *Ahmed E. Sidahmed*
3. Crop rotations in dryland agriculture of Central Asia: research achievements and challenges - *M. Suleimenov, K. Akshalov, Z. Kaskarbayev, L. Martynova, R. Medeubayev, and M. Pala*
4. Deficit irrigation for improving water productivity of wheat in northwest Iran - *Ali Reza Tavakoli and Theib Oweis*
5. Supplemental irrigation for improving water productivity of wheat in northwest Iran - *Ali Reza Tavakoli and Theib Oweis*
6. Drip (tape) irrigation can reduce the risk in crop production in water-limited environments - *A. Torknezhad and M.Aghaee-Sarbarzeh*

15:30-16:00 Coffee Break

Theme 1.4: Soil and water conservation and degradation*Chairman: Prof Dr. Adli Bishaye*

1. Global overview of desertification: Perspective from the Millennium Ecosystem Assessment - *Zafar Adeel*
2. Detection of soil evaporation and plant transpiration by 3-temperature model (3T model) - *Guo Yu Qiu*
3. Opportunities for producing more food with less water in dry areas - *Theib Y. Oweis*
4. Integration of land degradation management plan and land use planning in Gorgan semi-arid plain in Iran - *M. Ownegh*
5. Chloride dynamics as signature indicator of salinity in dryland regions after deforestation - *V. Rasiah^{1,2}, I. Webb, A.L. Cogle¹ and H Anyoji²*
6. The relationship between climate change condition and the forms of chemical compounds of nutrient elements in dry steppe soils of Mongolia - *Baatar Ravjaa*

Theme 7.1: Renewable energy*Chairman: Dr Ahmed T. Moustfa*

1. An experimental study on water-making system using natural energy in Tottori Sand Dune - *T. Hayashi, W. Liu, Y. Hara, K. Nojima, K. Tagawa, K. Tanaka*
2. Sustainable energy carrier production from biomass in drylands - *Yongfeng Li, Nanqi Ren and Lijie Hu*
3. Windmill, the only viable option for Thar - *Ali Akbar Rahimo*
4. Fermentative hydrogen production from sugar crops in dryland by mixed culture - *Nanqi Ren, Yongfeng Li and Lijie Hu*
5. Potential renewable energy sources in Indian Thar desert - *Pratap Narain, P.C. Pande, P.B.L. Chaurasia and J.C. Tewari*

Theme 8.1: Indigenous/traditional knowledge*Chairman: Prof Dr. Elnour A. Elsiddig*

1. The role of indigenous knowledge in sustainable development of natural resources - *M. R. Chaichi, F. Amiri and A. Atrakchali*
2. Traditional Syrian water management - *Adriana de Miranda*
3. The role of indigenous knowledge in the livelihood activities of rural communities in Sudan - *Elnour Abdalla Elsiddig*
4. Sustainable water resources management in central drylands of Iran: Traditional knowledge or modern technologies - *M. Hossein Mobin*
5. Water harvesting methods in arid regions of Iran - *Marjan Shafi Zadeh*
6. Indigenous agricultural knowledge in rainfed rice-based farming systems: means to sustainable agriculture - *Ranjay K. Singh*

Theme 9.4: Sustainable development*Chairman: Dr Nouredin Mona*

1. Impact of dust and sand storms on the economy and the environment in Northeast Asia - *Qi Lu, Sen Wang, Victor Squires, and Youlin Yang*
2. Factors affecting adoption behavior regarding soil conservation technologies in Zarrin Gol, Iran - *Mohammad Reza Mahboobi*
3. Impact of improving access to off farm employment opportunities on alleviation of grassland degradation and rural poverty - *Minjun Shi and Qiaoyun Zhang*
4. Improving rural livelihood in Afghanistan through the promotion of sustainable production technologies for high value crops - *Ahmed T. Moustafa et al.*

5. **Range management options and transaction costs amongst pastoral households in West Asia and North Africa** - *Tidiane Ngaido, A. Nefzaoui, F. Awawdeh, M. Elloumi and K. Abu Soui*
6. **Evaluation of agricultural sustainability in rural village in the suburbs of Yanan City, Sanxi, China** - *Shunichiro Nishino*

Theme 10.4: Application of new technologies & crop improvement

Chairman: Dr Ali Nafzaoui

1. ***Gmelina arborea* and lemon grass based agroforestry system for sustainable development of degraded lands in Central India: an appraisal** - *S.D. Upadhyaya*
2. **Experimental results of forestation in typical desertification areas of West China with controlled-release film** - *Zhang Zengzhi and Ai Bo*
3. **Farming in the desert-advantage and limitation, the Israeli experience** - *Raanan Katzir*
4. **Safflower as a new crop in the dryland of Iran** - *Khoshnoud Alizadeh*
5. **Screening for wheat stem sawfly resistance and associated morphological traits under rainfed conditions of western Iran** - *Nowzar Bahrami, M.Aghaee-Sarbarzeh and R. Haghparast*
6. **Study of drought tolerance in spring-type canola (*Brassica napus*) cultivars** – *Rahmatollah Behmaram*

20:00-22:00 **Poster Session 1**

Theme 1: Soil and water conservation and degradation

Theme 2: Dust-storm process

Theme 3: Range management

Monday: 27 February 2006

08:00-19:00 **Whole day field visit; choice of either of the following:**

1. Biotechnology Research
2. Geography and Resource Research
3. Remote Sensing and GIS
4. Forbidden City
5. Great Wall of China

20:00-22:00 **Poster Session 2**

Theme 4: Forage and livestock production

Theme 5: Biodiversity and Ethnobotany

Theme 6: Stress physiology

Theme 7: Renewable energy

Tuesday: 28 February 2006

09:30-10:30

Concurrent Session 5

Theme 1.5: Soil and water conservation and degradation

Chairman: Prof Dr Iwao Kobori

1. Evaluation of organic-based emulsions for stabilization of dryland soils in the southwestern United States - *David S. Shafer et al.*
2. The role of sustainable agricultural management in the prevention of land degradation in Iran - *Gholam Reza Tleghani, Gholam Reza Zehtabian and Farshad Amiraslani*
3. Combating desertification via an integrated approach - *R.J. Thomas and F. Turkelboom*
4. Two new simulation models for plant breeders and agronomists- theory and applications - *Ammar Wahbi and Elmar Stenitzer*
5. Effects of rainfall characteristics on infiltration and redistribution patterns in an arid shrub desert - *Xin-Ping Wang, Hong-Lang Xiao and, Xin-Rong Li*
6. Comparison of small-scale environment for 3-type biological crusts on dune surface - *Xueqin WANG, Tao WANG and Wanfu WANG*

Theme 9.5: Sustainable development

Chairman: Prof Dr. Dave Mouat

1. Sustainable development of desert communities: from pastoral to sedentary farming systems in northwest Egypt - *Abdul Bari Salkini and Naiem Moselhy*
2. Housing design performance affected by sand deposits in Sahara desert - *Mohammed F.I. Sherzad*
3. Detecting and monitoring impacts of ecological importance in semiarid rangelands - *Victor R. Squires*
4. Environmental law reform to control land degradation in the dryland region of Western China - *Wang Hong, Dr Du Qun, and Dr Ian Hannam*
5. Impact of dust and sand storms on the economy and the environment in Northeast Asia - *Lihua Zhou*
6. Experiences of sustainable management of marginal drylands in eight countries - *Zafar Adeel*
7. Community participation in watershed development and management in Madhya Pradesh, India - *R.N. Yadava, Raghuvanshi Ram, C. Padmakar and E. Peters*

Theme 10.5: Application of new technologies & crop improvement

Chairman: Dr Abdalali Ghaffari

1. Introducing and growing some fruiting columnar cacti in a new arid environment - *Ahmed A. ElObeidy*
2. Effect of water deficit and time of nitrogen application on yield and water productivity of rice (*Oryza sativa* L.) - *I. S. El-Refaei, A. T. Badawi, A.E. Abd El-Wahab and B. A. Zayed*
3. Effect of nitrogen on wheat grain yield under terminal drought stress - *Haider Faragi, A. Siadat, G. Fathi and M. A. Asoodar*
4. Application of municipal treated sewage through drip irrigation and effect on soil properties in semiarid region - *Alimorad Hassanli¹ and M. Javan²*
5. Effect of mistletoe on macronutrients of hornbeam and ironwood trees in Hyrcanian forest - *D. Kartoolinejad, F. Shayanmehr, S. M. Hosseini and S. K. Mirnia*
6. Breeding for cold tolerance in wheat and barley in cold dry areas in Iran - *S. Mahfoozi, D.B. Fowler, A.E. Limin and H. Ketata*

10:30-1100

Coffee Break

11:00-12:30

Concurrent Session 6

Theme 1.6: Soil and water conservation and degradation

Chairman: Dr Zafer Adeel

1. **Sand stabilization and microhabitat effect of shrub belts on the top of the Mogao Grottoes** - Wanfu Wang, Tao Wang, P. Lin and W. Zhang
2. **Wind erodibility of soil after fall tillage in a dryland wheat-fallow cropping system** - L.A. Wendling and B.S. Sharratt
3. **Profile distribution and density of soil organic and inorganic carbon in chestnut soil** - Lifang Yang, Guitong Li, A Qimei Lin and Baoguo Li
4. **Late quaternary palaeoclimate in the deserts of northwestern China** - Xiaoping YANG
5. **Effect of saline water management on rice production and soil improvements in salt accumulated rice field** - B.A. Zayed, W.H A. El Hassan, Y. Kitamura and S.M Shehata
6. **Terracing, an effective solution to the erosion problem and food deficiency in the hilly area of loess plateau** - D.W. Zhang, G. Cheng, S. Gao and S. Niu

Theme 10.6: Application of new technologies & crop improvement

Chairman: Dr Akhtar Beg

1. **Sararood-1, a newly released barley variety for cold and moderately cold rainfed conditions** - Korosh Nader-Mahmoudi, R. Haghparast, J.Ghobadi-Biegvand, A. Amiri and Y. Ansari-Maleki
2. **Prospects and progress of research on oilseed crops in drylands of Iran** - S.S.Pourdard and Akhtar Beg
3. **Adaptability and stability analysis of grain yield in advanced bread wheat lines in cold and moderate dryland areas of Iran** - M. Roustaii, E. Zadhehassan and H. Ketata
4. **Constraints and future prospects of food legume production in dryland condition in Iran** - S. H. Sabaghpour, H. Mostefayi, A. Gaffari, R.S. Malhotra, A. Sarker and H. Ketata
5. **Investigation on VAM fungi, phosphorus and drought stress effects on grain yield, phosphorus and water use efficiency in wheat** - A.H. Shirani Rad and J. Daneshian
6. **The effect of nitrogen on the yield of two wheat varieties under drought-stress conditions** - M. M. Tehrani and F. Moshiri

12:30-14:00 Lunch

14:00-15:30

Concurrent Session 7

Theme 10.7: Application of new technologies & crop improvement

Chairman: Dr Abdelbari Salkini

1. **Formulating provincial integrated ecosystem management strategies and action plans for land degradation control** - Weidong Zhang, Fengchun Zhang, Zhiming Niu and Douglas Malcolm
2. **Land desertification and eco-economic sustainable development in the irrigated areas downstream of the Yellow river** - Zhemin Zhou
3. **Important factors affecting suspended sediment yield in arid and semi-arid areas of Central Iran** - S.H.R. Sadeghi, M. Vafakhah and D.A. Najafi
4. **Study on the rainwater outflow of small basin in Loess Plateau** - Osamu Hinokitani, Jinbai Huang, Hiroshi Yasuda and, Xinchang Zhan

15:30-16:00 Coffee Break

16:00-17:00 **Plenary Session on Implementation of the Convention for Combating Desertification**

Panel Co-Chairs: Prof Dr. Adel El-Beltagy and Dr Franklin Moore

Panel Members:

- Dr. Zafar Adeel
- Acad. Djamin Akemaliev
- Dr Tanveer Arif,
- Prof Dr. Iwao Kobori
- Dr. Shinobu Inanaga
- Dr. Noureddin H. Mona
- Dr. Dave Mouat
- Prof Wang Tao

17:00-18:00 **Poster Session 3**

Theme 8: Indigenous/traditional knowledge and heritage

Theme 9: Sustainable development of oasis; desert communities and socioeconomic studies; and role of NGOs

Theme 10: Application of new technologies, technology transfer and crop improvement for dry areas

18:00-19:00 **Closing Ceremony**

Chairman: Prof Dr Adel El-Beltagy, President ICDD

Statement: Prof Dr. Hans van Ginkel, Rector, UNU

Statement: Prof Dr. Wang Tao, Director General, CAREERI, CAS, China

Statement on the Meeting of the Executive Committee of ICDD: Prof Dr. Gareth Wyn Jones, Secretary General, ICDD

Closing Statement: Prof Dr Adel El-Beltagy, President ICDD

Vote of Thanks: Prof Dr M. C. Saxena, Executive Secretary, ICDD

Program, 18 Feb 2006

Local Organizing Committee

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Prof. Dr. Li Jiayang, CAS Academician, Vice-President, Chinese Academy of Sciences (CAS)

Chairman

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Prof. Dr. Liu, Jian, Deputy Director of Bureau of Science and Technology for Resources and Environment, CAS

Prof. Li, Shijie, Deputy Director of Nanjing Institute of Geography and Limnology (NIGLAS), CAS

Prof. Cheng, Shengkui, Deputy Director of Institute of Geographic Sciences and Natural Resources Research (IGSNRR), CAS

Prof. Song, Changqing, Branch Chief, Department of Earth Sciences, NSFC

Prof. Zhao, Xinquan, Director of Northwest Institute of Plateau Biology (NIPB), CAS

Prof. Ding Yongjian, Deputy Director of Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI), CAS

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Prof. Xiao Honglang, Assistant Director of Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI), CAS

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