

# GOFC-GOLD

Global Observation of Forest and Land Cover Dynamics



## CARIN – Central Asian Regional Information Network

### Introduction and activities

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# The Caucasus and Central Asia



# CARIN Introduction and activities

- 5 countries of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) and 3 countries of the South Caucasus (Armenia, Azerbaijan, Georgia)
- The area exceeding 4 million sq.km (about 3 % of the Earth's dry land)
- Population of about 75 million, more than 40% in rural area and 70% of poor reside in rural area
- In 2007-2011 agricultural production in all countries except Georgia was growing. However, no country has yet reached a volume of agricultural production of 1990.
- Agricultural future of the countries is both of regional and global importance



# CARIN Introduction and activities

2002-2005 TEMPUS DESPES 22124 project “Development of Study Programmes in the Area of Environmental Sciences at three Uzbek Universities”.

6 Training workshops were provided with 154 participants from 29 institutions. In 2003 EcoGIS Regional Training and Research Center established with joint efforts of Wageningen University and TIIM, MAWR, NPSC, UNESCO, IWMI

2003-2006 TEMPUS EWASIA 23172 project “Development of International MSc Programme on Environment and Water Resources Management in Central Asia”

2004-2007 Double Degree MS program on Geoinformation Science signed between Wageningen University and TIIM. First participants from Uzbekistan, Turkmenistan, Afghanistan

2005 -2009 TEMPUS TEAM IB JEP 25204-2004 Training on Environmental Assessment and Monitoring Project Activities list. From 5 September 2005 till March 2009. 34 training workshops and conferences were provided with 1564 participants



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# CARIN Introduction and activities

2009 Joint NASA LCLUC Science Team Meeting and GOFC-GOLD/NERIN, NEESPI, MAIRS Workshop Monitoring land cover, land use and fire in agricultural and semi-arid regions of Northern Eurasia September 15-19, 2009 (Training Sessions September 20-21) National Center of Space Research and Technologies, National Space Agency, Almaty, KAZAKHSTAN



2010 March 22-24. Kunming “The 1st MAIRS workshop on Coupled Human-Environment Systems in Dryland” Kunming City, Yunnan Province, China



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# CARIN Introduction and activities

2010 May 17-24. GOFC- GOLD Regional Network Data Initiative - Asia workshop in USGS EDC and SDSU and OSU

2010 July 12-13 Establishing meeting of CASCADE – Central Asian and South Caucasus Consortium of Agricultural Universities for Development

2010 July 13-14 RAIS workshop on Regional Agricultural Information System under Information and Communications Management (ICM) activities with support of GFAR-Secretariat/FAO, CIARD (The Coherence in Information for Agricultural Research for Development) and AgroWeb Network, Post GCARD 2010 Needs Assessment for ICM in ARD in CAC Region)

2010 October 31–November 3, Workshop GOFC-GOLD Central Asia Regional Network (CARIN) Follow-Up Workshop for GOFC-GOLD Data Initiative–Asia and Network Planning Meeting, Training Centre of Interstate Commission for Water Coordination, (TC ICWC) of Central Asia, Tashkent, Uzbekistan

## GOFC-GOLD Regional Network Data Initiative – Asia Workshop

- Two regional networks: CARIN and SEARRIN (6 representatives)
- Training over 3 weeks at USGS EDC and SDSU or OSU in May 2010
  - EDC set an all-time record for Landsat downloads in a single day at 8000 scenes
  - E.g., Kazakhstan archive: >14 thousand images for 483 scene positions (1972-2010)



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**INTERNATIONAL CONFERENCE**  
**Environmental Protection and Current Issues (Science and Practice)**  
**devoted to the World Environment Day**  
*on June 3-4, 2013*

The Ministry of Agriculture and Water Resources, the State Committee for Nature Protection, Environmental Movement of Uzbekistan, European Union ERASMUS MUNDUS CASIA projects, AGRINATURA, CASCADE - Central Asia and South Caucasus Consortium for Development, CARIN, PIU CGIAR - ICARDA and TIIM

**Venue: Tashkent Institute of Irrigation and Melioration, Tashkent, Uzbekistan**



# NASA LCLUC Program, GOFC-GOLD workshop and training course, Tashkent Institute of Irrigation and Melioration, EcoGIS

Venue: Tashkent Institute of Irrigation and Melioration, Tashkent, Uzbekistan

**November 11-15, 2013**





# Training Workshop



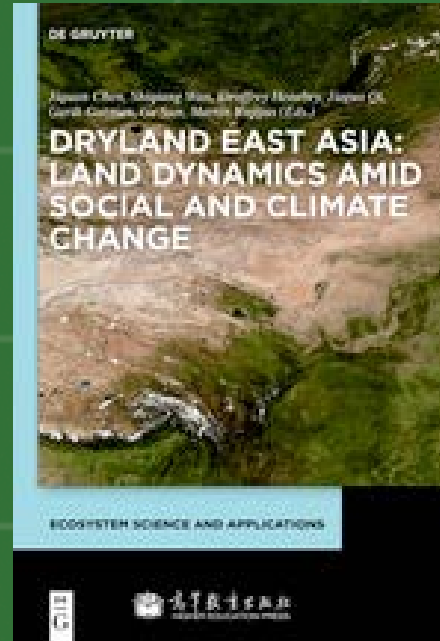
# So, over the past ~10 years

- Regional Activities:
  - 9/2007: Urumqi (NASA/MAIRS/NEESPI)
  - 10/2007: Tashkent (NATO/MAIRS/ NEESPI)
  - 10/2009: Almaty (NASA/MAIRS/NEESPI)
  - 1/2012: Coimbatore (NASA/MAIRS)
  - 11/2013: Tashkent (NASA/MAIRS/NEESPI)
  - 6/2014: Ulaanbaatar (NASA/NEESPI/MAIRS?)
- Publications
  - Books (2)
  - Special journal issues (3?)
- NASA LCLUC funded ~ 18 projects in the region



# NASA-MAIRS: Tangible Products

- A special issue in Frontiers of Earth Science (2012) based on Urumqi and Almaty presentations
- A book in De Gruyter (Sep 2013) – Dryland East Asia, based on workshop in Kaifeng, China



De Gruyter  
publisher: Sep 2013  
Eds. Chen, Wan, Henebry,  
Qi, Gutman, Sun, Kappas



Volume 6, Issue 2,  
June 2012  
<http://link.springer.com/journal/11707/6/2/page/1>



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**In Progress**



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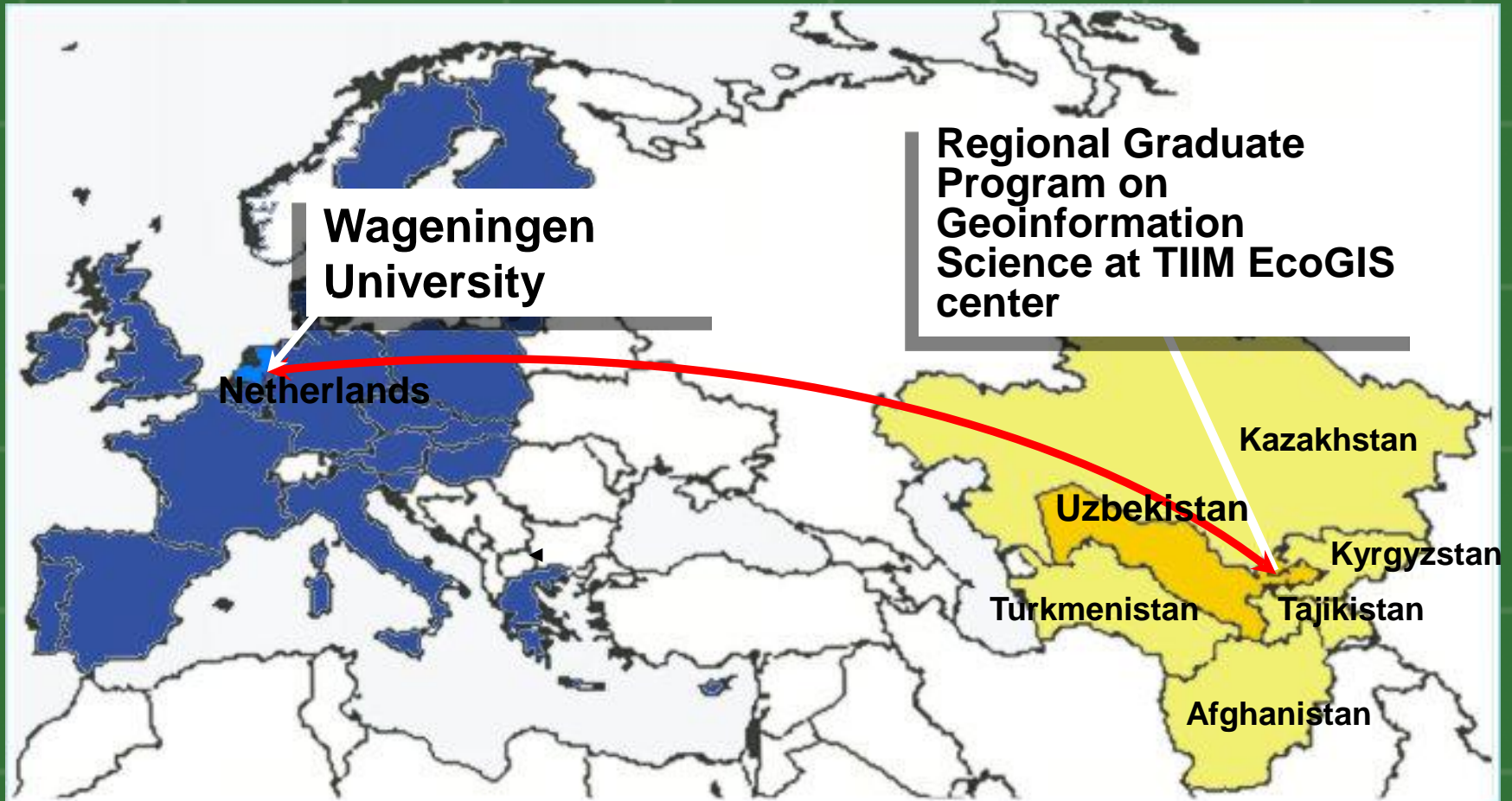
# CARIN Introduction and activities

- 2010-2014 Erasmus Mundus Action 2 CASIA 1 “Project Central Asian Student International Academic exchange with EU” **101 CA – EU mobility**
- 2011-2015 Erasmus Mundus Action 2 CASIA 2 “Project Central Asian Student International Academic exchange with EU” **109 CA –EU mobility**
- 2011-2016 Erasmus Mundus Action 2 CASIA 2 “Project Central Asian Student International Academic exchange with EU” **134 CA –EU mobility**
- **Partners: EU Universities** Wageningen University (Netherlands), Universitat fur Bodenkultur (Austria), University of Hohenheim (Germany), Czech University of Life Sciences (Czech Republic), Slovak University of Agriculture (Slovak Republic,) The Swedish University of Agricultural Sciences (Sweden), Universidad de Granada (Spain)
- **CA Universities:** Kyrgyz State Technical University (Kyrgyzstan), Kyrgyz National Agrarian University after K.I. Skryabin (Kyrgyzstan), Samarkand State University (Uzbekistan), Karakalpak State University (Uzbekistan), Tashkent Institute of Irrigation and Melioration (Uzbekistan), National University of Uzbekistan (Uzbekistan), Namangan Engineering Pedagogical Institute (Uzbekistan), Khujand Polytechnic institute of Tajik Technical university (Tajikistan), Tajik Agrarian University (Tajikistan), Kazakh National Agrarian University (Kazakhstan), West-Kazakhstan Agrarian-Technical University after Zhangir Khan (Kazakhstan), Kostanay State University (Kazakhstan), Kyrgyz-Russian Slavic University (Kyrgyzstan),
- **Associates:** ARGINATURA, CASCADE, Ministry of Education and Science in Republic of Kazakhstan, Kazakhstan student alliance, Ministry of Agriculture and Water Resources of the Republic of Uzbekistan, Kamolot – Uzbekistan Youth Movement, Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan, Ministry of Education and Science of Kyrgyz Republic, IWMI.



# CARIN Introduction and activities

## MSc programme on Geoinformation Science in Tashkent



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# Also in Progress

# Future Earth in Northern and Central Asia?



**Fast Track Initiates and Cluster Activities  
February 2014**

**Proposed:**

Engaging Central Asian Agricultural Communities to Co-design and Co-produce Knowledge for Sustainable Land and Water Management in a Changing Climate



# FE in Central Asia?

- Group:
  - Alim Pulatov
  - Dennis Ojima
  - Jiaguo Qi
  - Marlene Laruelle
  - Martha Olcott
  - Pavel Groisman
  - Rik Leemans
  - Temirbek Bobushev
  - Zokir Allamuradov
- Core Projects
  - MAIRS (Ailikun)
  - GLP (H.Q. Huang & P Verburg)
  - GWSP (Charles Vorosmarty)
  - NEESPI (Pavel Groisman)

# FE in Central Asia?

- Linking to the local networks:
  - Farmer Associations and Councils of Uzbekistan
  - Water Users and Consumers Associations, Uzbekistan
  - Ministry of Agriculture and Water Resources, Uzbekistan
  - Department of Water Resources and Irrigation, Ministry of Agriculture and Irrigation, Kyrgyzstan.
  - Kyrgyz Research Institute of Irrigation, Kyrgyz Agrarian University
  - CASCADE /ICARDA – Central Asian and South Caucasus Consortium of Agricultural universities for Development / International Center for Agricultural Research in the Dry Areas
  - CACAARI – Central Asia and Caucasus Association of Agricultural Research Institutions
  - CARIN – Central Asia Regional Information Network
  - CAREN – Central Asia Research & Education Network

**Also in progress**



Transformation  
towards  
sustainability  
in  
Asian Drylands:  
Food, Water and  
Environments



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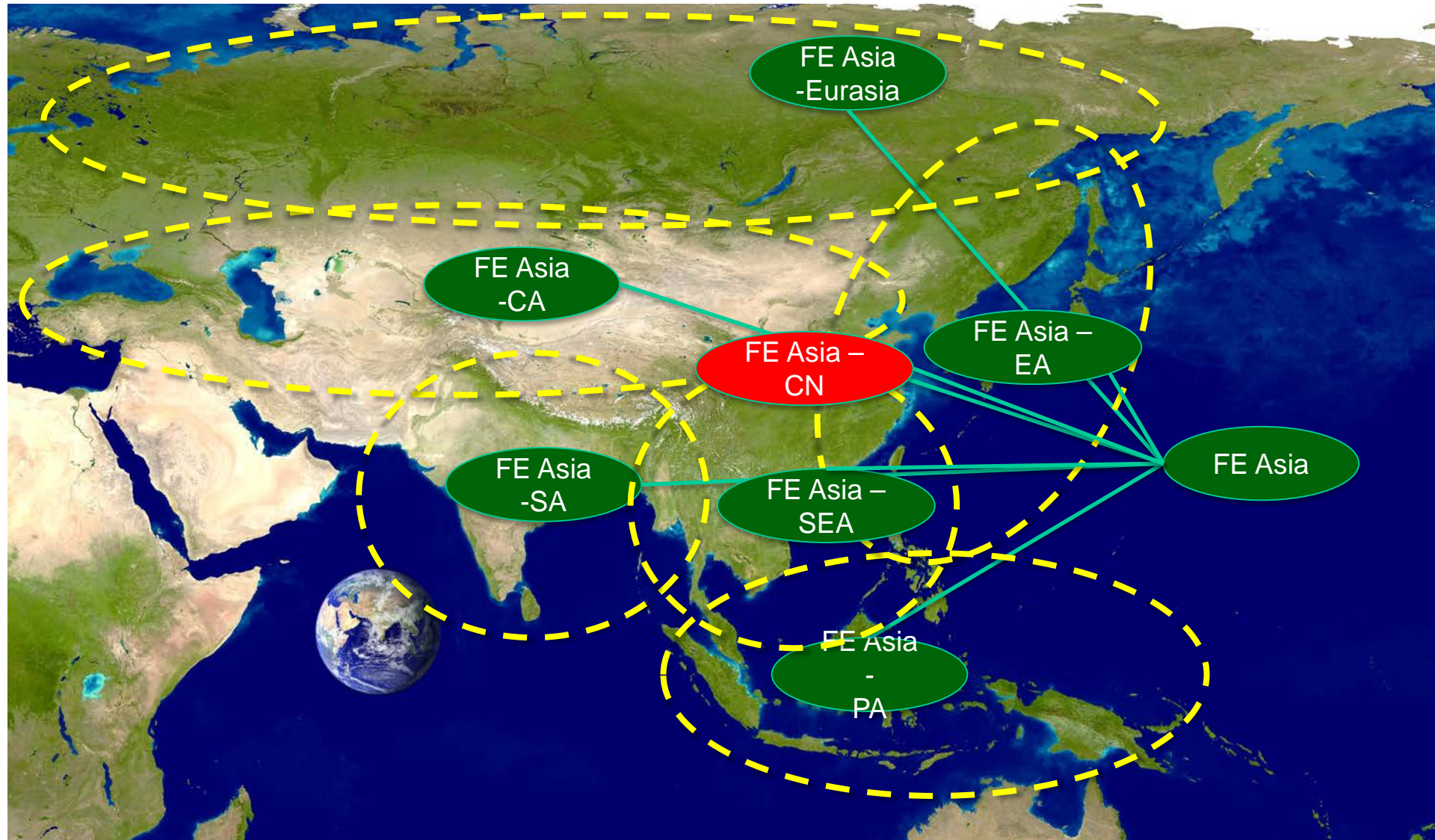
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# FE Asia Node of Nodes



# Next?

- Role in FE in Asia
  - Focus Groups:
    - Focusing on Transformation towards Sustainability
    - Capacity building
    - Stakeholder engagement
    - Enhance the social science component
- Role in NASA LCLUC
  - “Research” links between NASA’s LCLUC program to FE Asia
  - Promote regional participation in FE Asia through a) research engagement, b) joint regional capacity building, and c) program coordination
- “FE Asia – Central Asia Drylands” sub node



# Upcoming



**ISEO 2014**

**The 2<sup>nd</sup> International Symposium on Earth Observation  
for Arid and Semi-Arid Environments**

*Central Asia: Looking from Space*

**10-12 September 2014**

**Issyk-kul, Kyrgyzstan**

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- Special Issue: Manuscripts solicited; contribution encouraged
- Training workshop continues



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Thank you!

*If it is said that a paradise is to be seen in this world,  
then the paradise of this world is Samarkand*

quoted by 'Ata-Malik Juvaini (Boyle transl.)



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