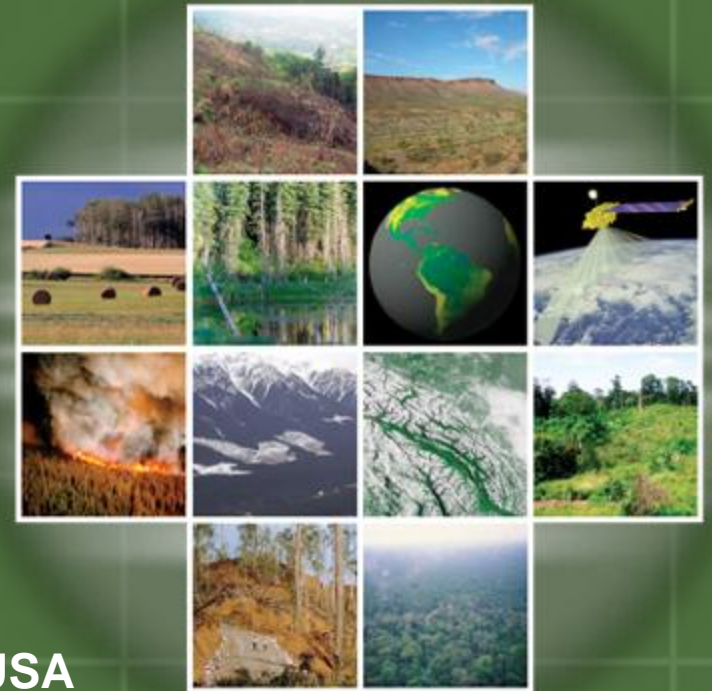


GOFC-GOLD

Global Observation of Forest and Land Cover Dynamics



Overview of GOFC-GOLD Regional Networks



Dr. Olga N. Krankina

College of Forestry, Oregon State University, USA
GOFC-GOLD Regional Networks Coordinator

with contributions from members of GOFC-GOLD
Regional Networks and ExCom.



What is GOFC-GOLD

- A coordinated international effort to ensure a systematic and continuous program of space-based and on-the-ground observations of forest and land cover
- A network of participants implementing coordinated research, demonstration and operational projects
- A vision to share data, information and knowledge to inform decision making and address user needs



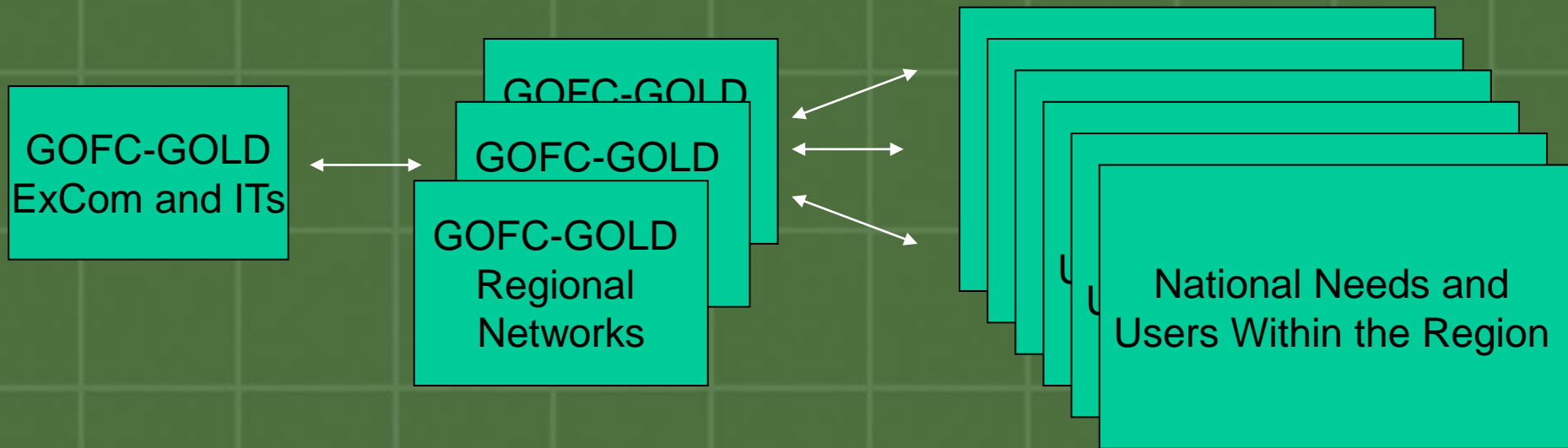
Organizational Structure

- Executive committee
 - Tony Janetos, Chair (John Townshend former Chair)
- Two implementation teams
 - Land Cover Characteristics and Change (M. Herold and C. Woodcock)
 - Fire Monitoring and Mapping (J. Goldhammer and C. Justice)
- Working groups
 - Biomass Monitoring
 - Reducing Emissions from Deforestation and Forest Degradation (REDD)
 - Other
- Regional networks
 - Coordinators: Olga Krankina and Anja Hoffman (fire)



Regional Networks

a critical component of GOFC-GOLD
connecting ExCom, Implementation Teams, and Working
Groups with data users in the regions



Role of Regional Networks in GOFC-GOLD

- **Formulate regional requirements**
 - Observations (measurements)
 - Derived products and their accuracy
 - Distribution systems
- **Evaluate the utility of global Land Cover and Fire products for regional use**
- **Facilitate regional use of remotely sensed data and products**
 - Establish regional data dissemination nodes
 - Encourage standardization and harmonization of regional products
 - Outreach workshops with regional practitioners and decision makers
 - Coordinate regional capacity building and training of users
- **Promote technology transfer and collaborations within countries and regions**

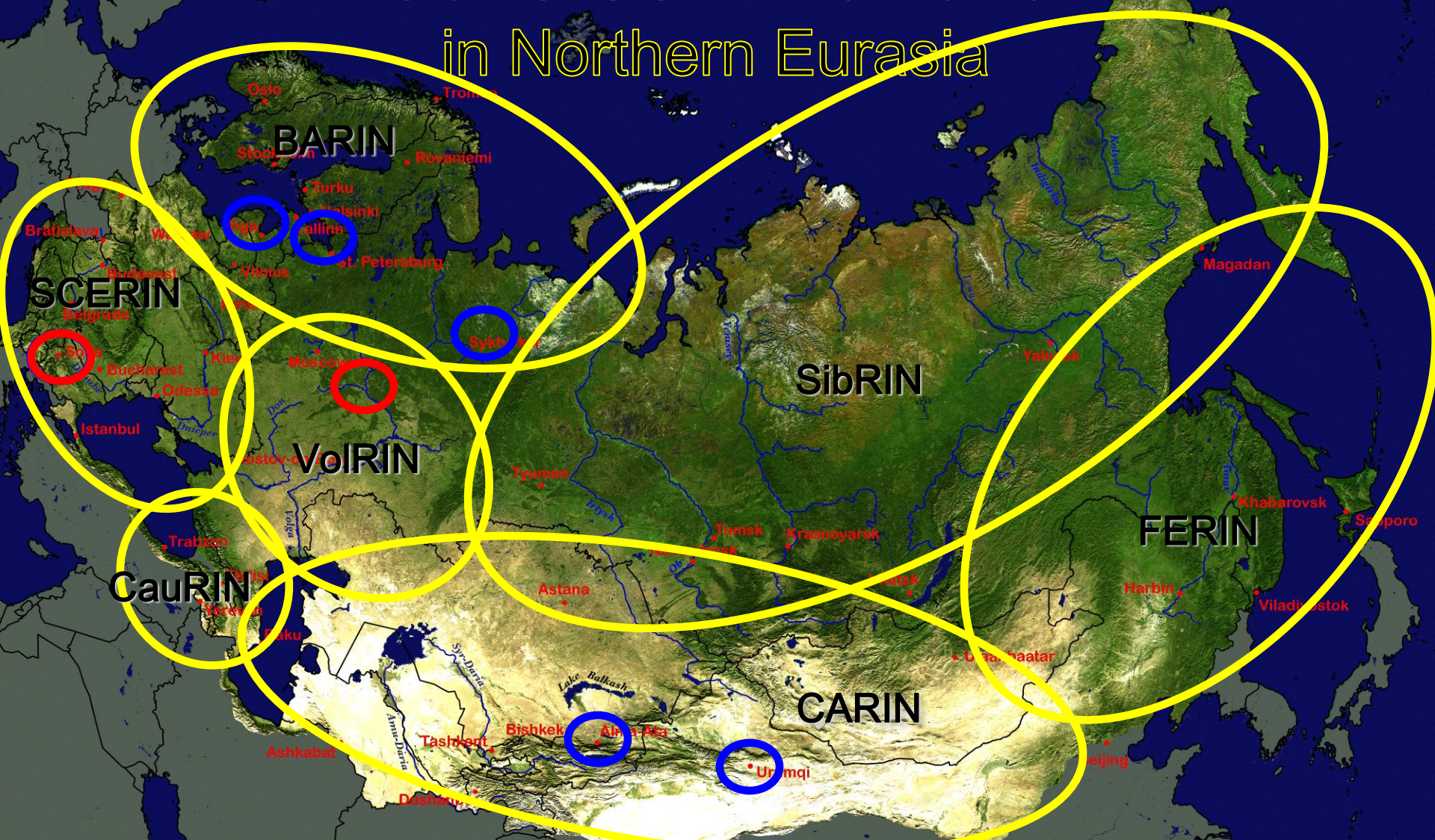


Regional Networks

1. RedLatiF – Latin America - Alberto Setzer
2. SAFNET – Southern Africa – Navashni / Philip Frost
3. Miombo - Southern Africa – Natasha Ribeiro/Dominick Kwesha
4. OSFAC - Central Africa – Landing Mane
5. WARN – West Africa – Vincent von Vordzogbe
6. SEARRIN - South East Asia – ?
7. NERIN – Northern Eurasia – Olga Krankina
8. CARIN – Central Asia - Nadija Muratova
9. SCERIN – South-Central Europe - Jana Albrechtova, Petya Campbell et al



GOFC-GOLD Networks in Northern Eurasia



MODIS 1-km true color composite: August 20-28 2004.
Shaded relief adjustment using SRTM GTOPO30 elevation data.
Produced by Mutlu Ozdogan, NASA GSFC

NERIN Workshops

- Boreal Forest Workshop -Novosibirsk, Russia, August 2000
- Regional workshop for Western Russia-Fennoscandia -- St. Petersburg, Russia, June 2001
- Northern Eurasia Earth Science Partnership Initiative (NEESPI) workshops -- Suzdal', April 2003; Yalta, September 2003
- “Observational Data in Support of NEESPI”, St. Petersburg, Feb. 23-26, 2004
- “Observations of land cover and needs of research projects in Northern



- **Volga Workshop, June 17 – 22, 2012, Yoshkar-Ola**



GOFC-GOLD

RedLatif MEETING

October 29th and 30th, 2012



Armando Rodriguez (Bolivia)
Carlos Pinto (Bolivia)

Federico Gonzalez (Spain)

Gerardo Lopez (Portugal)

† Sergio Opazo (Chile)

Alberto Setzer (Brazil)

Ivan Csiszar (USA)

Hector del Valle (Argentina)

Jesus Anaya (Colombia)

Isabel Cruz (Mexico)

Eva Majias (Cuba)

Lilia Manzo (Mexico)

Paula Blanco (Argentina)

Fabiano Morelli (Brazil)

Isabel Manta (Peru)

Eliana Henriquez (Chile)

Carolina Tapia (Ecuador)

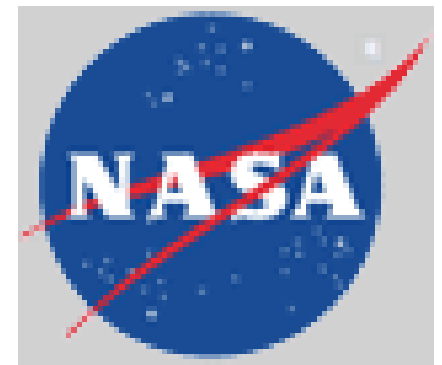
Network Activities

- Regional Workshops are the main activity
- GOFC-GOLD Regional Network Data Initiative
 - Landsat Data Archive at USGS is free!
 - Access is difficult in regions with inadequate internet access
 - Disseminate Landsat data
 - Provide training in use of remotely sensed data
 - 3 Data Initiative workshops in USA
 - Africa Pilot Workshop (2009)
 - Data Initiative - Asia (2010)
 - Data Initiative-3 (Africa, SE Asia, S. America) – April-May 2012
 - Data Initiative 4 – planned for 2014
- START International supports workshops, training and network participation in meetings of Implementation Teams and Working Groups
- Network Projects

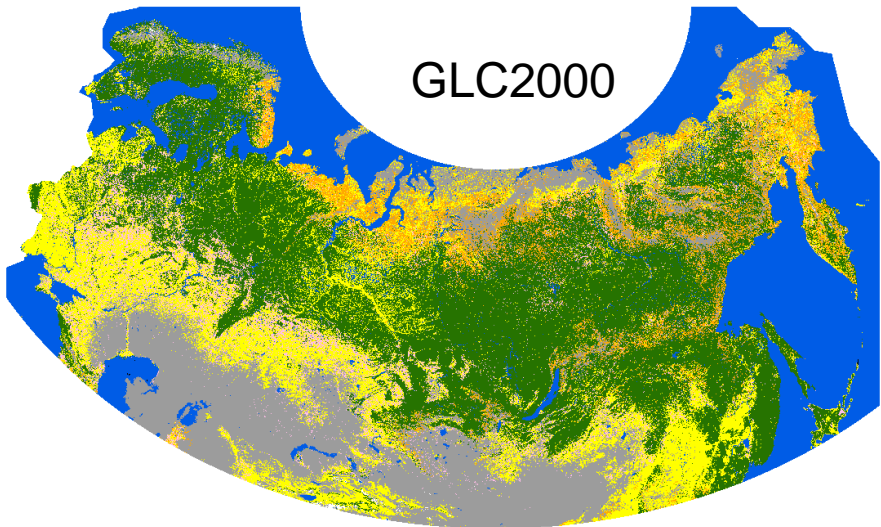


NEELDA

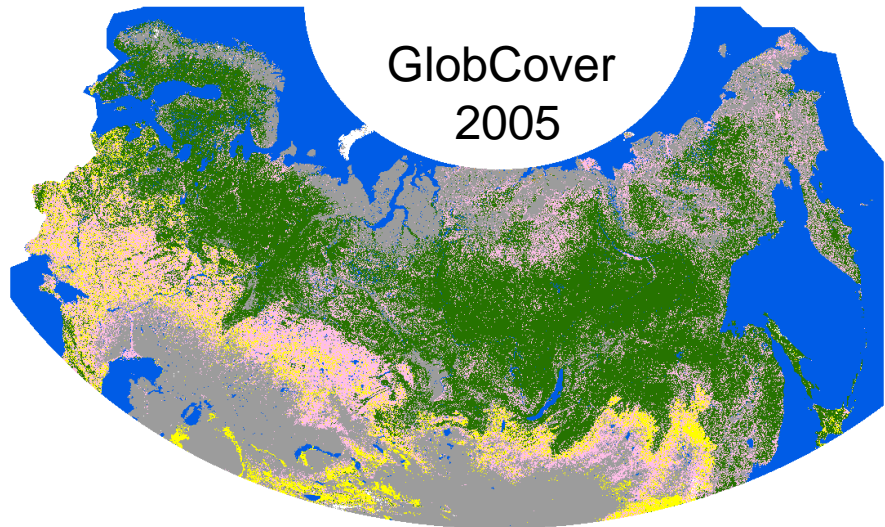
(Northern Eurasia Landcover Dynamics Analysis)



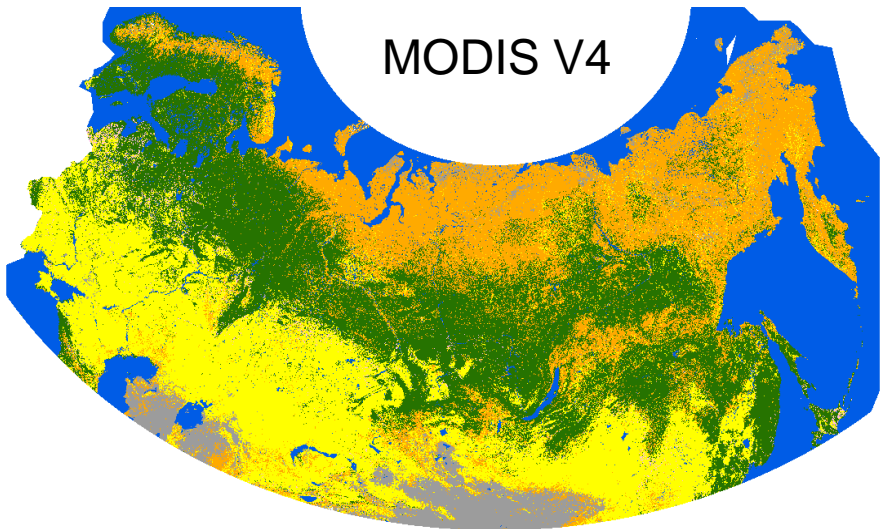
GLC2000



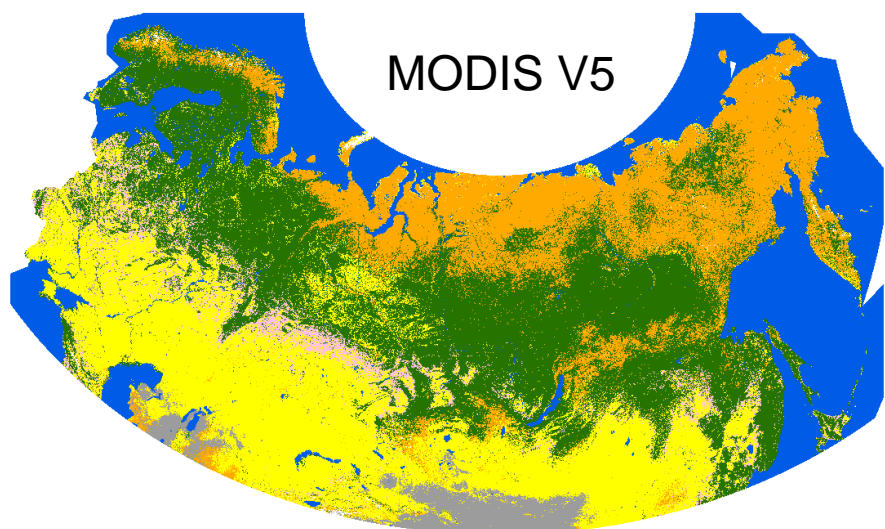
GlobCover
2005



MODIS V4



MODIS V5



Tree



Shrub



Herbaceous



Mosaic



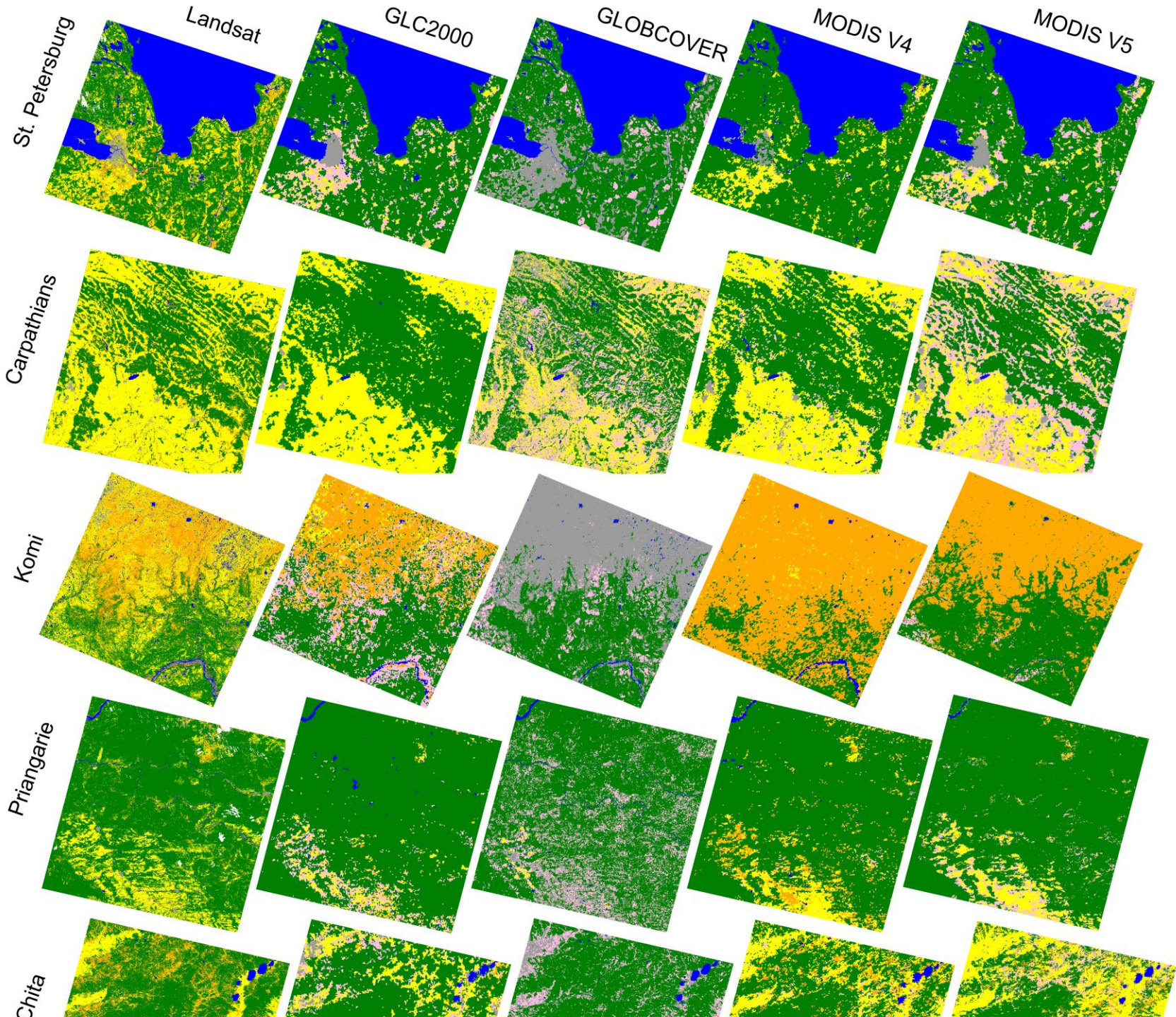
Bare



Ice



Water



Overview

St. Petersburg

Carpathians

Komi

Chita

Priangare

Kazakhstan

Amur

Vasyugan

Sikhote-Alin

Mongolia

Yoshkar Ola

Global Land Cover

To identify specific needs and possibilities for improved mapping of land cover across boreal and temperate Northern Eurasia, we compared the performance of recent land-cover products derived from different sensors: MODIS (MODIS IGBP Land Cover Collection 4 and 5), SPOT VEGETATION (GLC-2000) and MERIS (GLOBCOVER).



What are the differences and similarities between global datasets?

We examined the level of agreement among these data sets across the entire region. On a qualitative level, the assessment of general patterns indicates the highest degree of disagreement in transitional zones at the northern and southern fringes of boreal forest, in mountainous regions, and in areas of extensive wetlands, agricultural development, and urban land use. The quantitative analysis measured the level of disagreement between land-cover classes aggregated according to dominant life form type of vegetation (trees, shrubs, herbaceous, bare land, and permanent snow/ice).

What is the accuracy of global maps at NELDA test sites?

Validation of global datasets was performed with higher resolution, Landsat-based land cover maps from [NELDA test sites](#). Fractional land cover was calculated for coarse resolution pixel and used to construct fractional error matrices. Most errors were associated with "mixed" coarse-resolution pixels (i.e. those having nearly equal percentage of multiple class types), while errors in "pure" (single class) pixels were low. In addition to actual differences in land-cover classifications, other sources of discrepancy among these land cover products include class definitions, map projections, and spatial resolution.

Dominant Live Form Types

Differences in class definitions and legends between maps are a major difficulty for comparing global land

What is next?

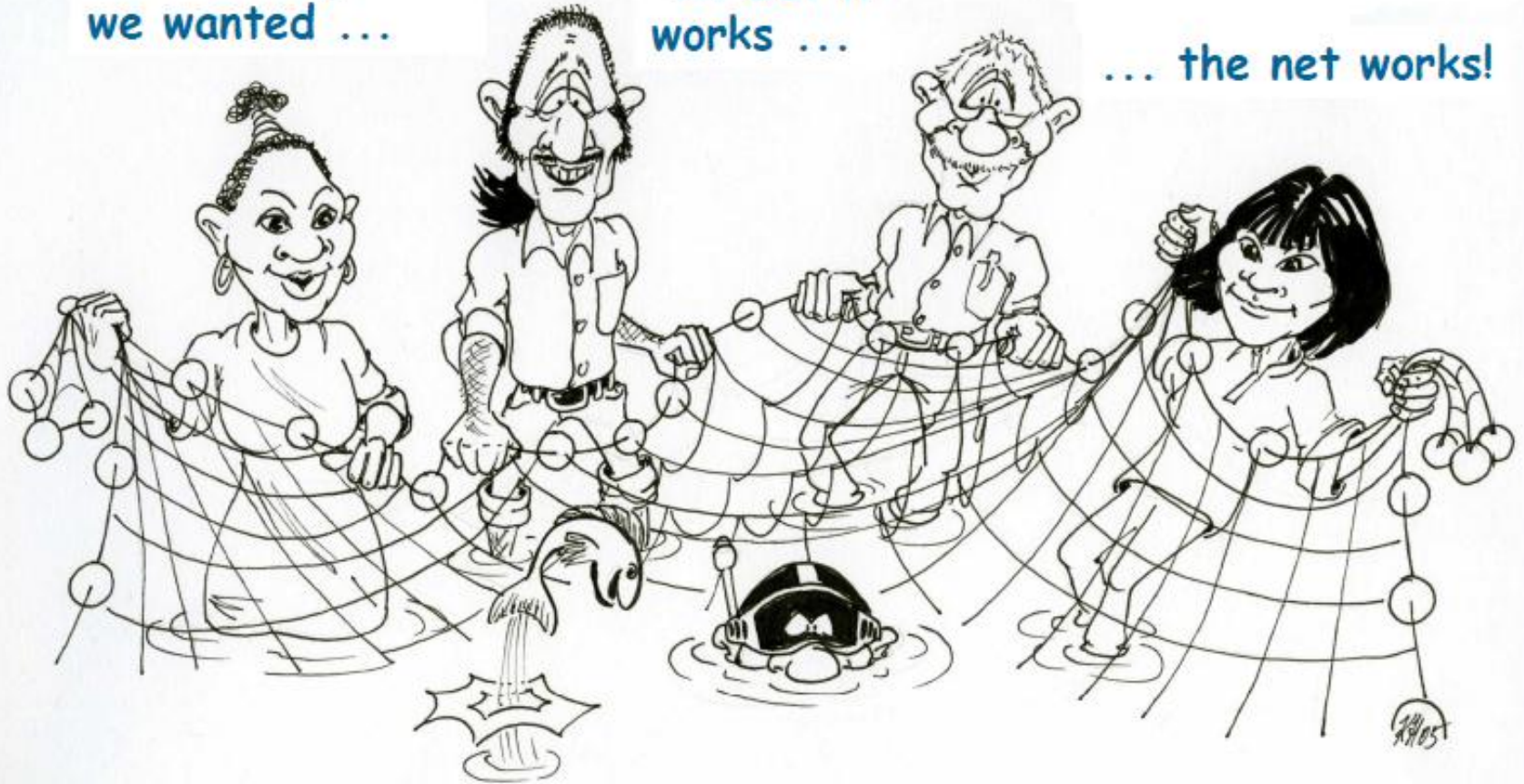
- Regional Network workshop proposed for 2013
 - SAFNET; MIOMBO; SCERIN; CARIN
- New Network in South Asia?
 - Day 3 – Friday Jan 12th
 - 3:30 – 5:00 Discussion
 - Brief comments from each panelist on meeting results, priorities for regional collaboration in research and training, establishing a regional network, ideas for future steps
 - Open discussion
- Regional networks need committed individuals and institutions who can lead activities of the regional network
- Inter-Network meeting at GOFC-GOLD Land Cover Symposium, Netherlands, April 15-19, 2013
 - Strategic plan for future network activities and support

Networks

Not exactly what
we wanted ...

... but it
works ...

... the net works!



Cartoon: K. Herweg



GOFC-GOLD

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<http://www.fao.org/gtos/gofc-gold/index.html>

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