LCLUC Training

Past and Future
Past Training Programs

• Urumqi 2007
• Fedorovskoe 2007
• Tomsk 2008
• Almaty, Kazakhstan, 2009
  – Thematic analysis of Landsat
  – Fire monitoring/management
  – Landcover validation
  – MODIS
  – Water mgt in arid regions
  – Geospatial applications in LCLUC in Central Asia
  – Rangeland remote sensing
Valmiera, Latvia Training Program 2010

Quantitative Research Methods in Human Dimensions of Environmental Change within Eastern Europe

• 3-day Training Workshop prior to Tartu meeting (Aug 21 – 23)
• Graduate students, advanced undergraduates, professors, professionals
  – Experience level mixed
  – Training focused on beginning graduate level
• Participants from
  – Latvia
  – Finland
  – Russia
  – Estonia
  – Ukraine
  – Czech
  – USA
  – Cameroon (US student)
Valmiera Training

- Lectures on theory and applications
- Research summaries, including local research
- Hands-on computer training with imagery and GIS
- Rainy canoe trip in Vidzeme Biosphere Reserve – with knowledgeable guide
Valmiera Training Topics

- Latvian landscape change
  - University of Latvia Geography faculty
- New approaches to landcover mapping, change monitoring, and human impacts
- Optical remote sensing basics, data, applications
- AVHRR, MODIS, VIIRS data and applications
- Landsat image preprocessing
- Classification schemes, classification accuracy assessment
- Supervised, unsupervised classification basics
- Hyperspectral overview
- MISR
- Geostationary satellite data processing & land surface applications
- Geospatial methodologies relating social/economic data to remote sensing data
- Spatial modeling of agricultural abandonment in FSU countries, using geoprocessing and numerical modeling
Student Feedback on Valmiera Training Session

Online survey results (17 out of 35 responded)

• 60% of students thought the level was perfect
  30% thought it was a bit too hard
  10% thought it was a bit too easy

• On a scale of 1 to 5, students thought topics were this useful (1=not useful, 5=very useful)
  – 1 (not useful): 0
  – 2: 12%
  – 3: 30%
  – 4: 47%
  – 5: 12%

• Balance between lectures and hands-on training
  – Half found it a good balance
  – Half wanted more hands-on training
Student Comments
Valmiera Training

- Additional topics students wrote they would like to have seen:
  - More computer practicals/tutorials
  - More about Landsat archive and data
  - Computer program training requests on the following packages:
    • Geomatica
    • Beam
    • GLP
    • Open source
  - Spectral unmixing
  - Hydrology applications of remote sensing
  - Cartography
  - More social science applications
  - Land abandonment

- Other comments
  - Most were simply very complimentary
  - One request for more of specific instructors
  - A suggestion to spend more time on each topic; slow things down; a bit too much work
  - Request for group work and more interaction among students
Future: LCLUC Training

• For whom?
  – Next generation of LCLUC scientists globally
  – Grad students (undergrads?), gov’t agencies, NGO’s, and private companies working on LCLUC issues
  – Others?

• Training, in addition to training received in:
  – Graduate degrees in varied fields
  – On-the-job training (gov’t agencies, NGO’s, private industry)
Future: LCLUC Training Ideas

• More training sessions
  – Timing/length?
    • Summers best for students and instructors?
  – Broad or specific training?
  – Frequency?
  – More hands-on computer training?
  – Level(s)/background assumed?
  – Topics?
Future: LCLUC Training Ideas

- Maintain updated reading lists for LCLUC sub-topics focused on training – textbooks, key journal articles, software manuals
- Development of (a) new LCLUC textbook(s)? Existing textbooks?
- Mentor program (inter-university)
- Student exchange/visiting student research programs
  - Programs would offer students from other universities a research training/internship experience (summertime or for a semester)
  - Programs would offer research labs extra student labor for processing, etc.
  - How would this be funded?
    - Student’s home department/university
    - Research lab/university hosting student
    - Fellowships
    - NASA/NSF grants
- Partnering with private industry for training
  - Scanex, software companies, etc.
  - Learn from their experience
    - Partnering for workshops and training costs