COPUOS 49th Session

Symposium
SPACE AND FORESTS

June 12th, 2006

Conference Room III
Building C
Vienna International Centre

The Agenda

Moderator: L. Beckel, Austria

16:00 **Opening remarks by the Moderator**

16:10 **Global Forest Monitoring,**
A. Branthomme, Food and Agriculture Organization of the United Nations (FAO)

16:30 **Global TREES Project: Using space applications for monitoring Forests**,
A. Belward, European Commission

16:50 **Applications of Remote Sensing Data in Forestry**,
E. Csató, Hungary

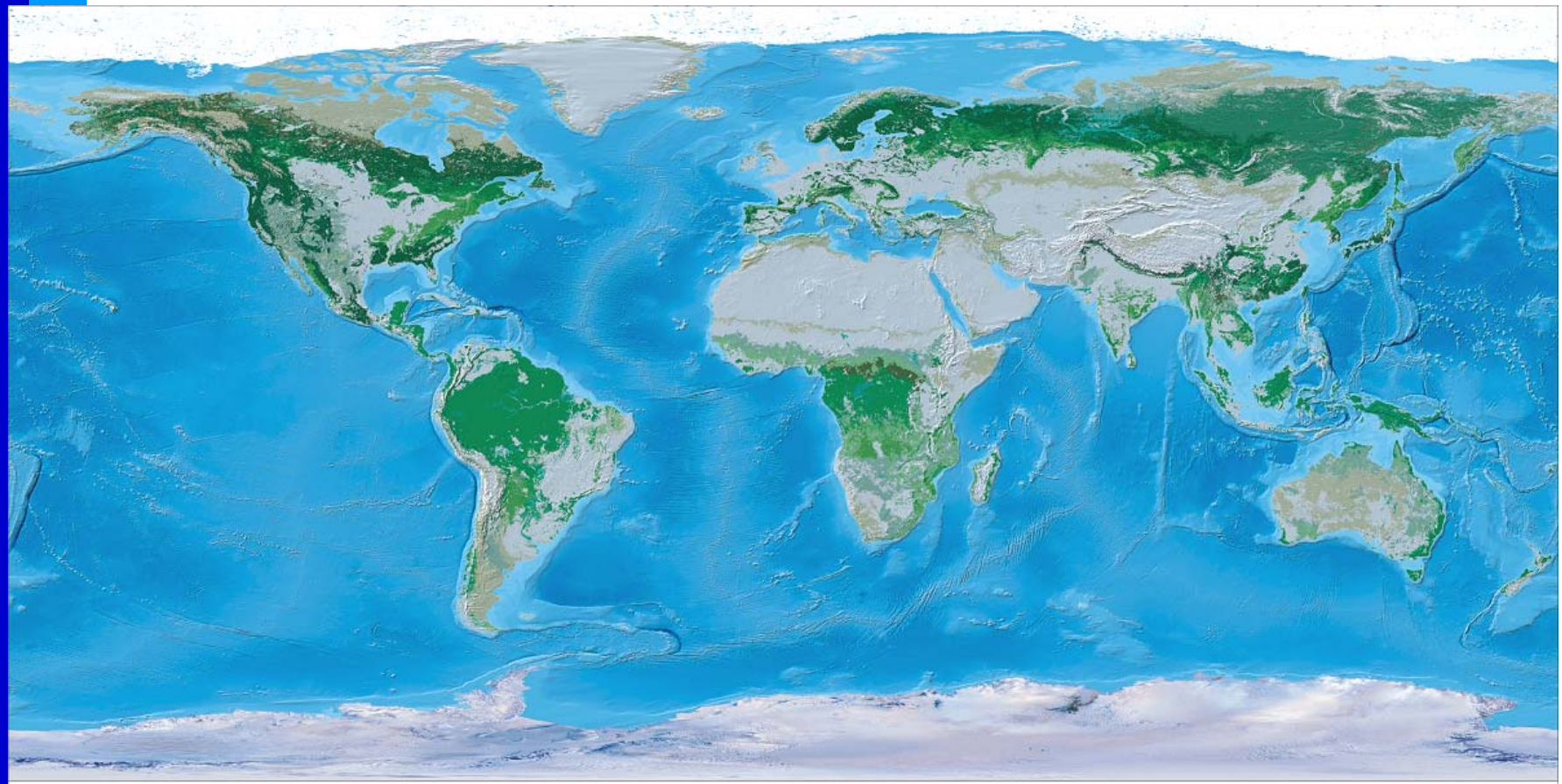
17:10 **Space Technology for Monitoring and Managing Forests in Nigeria**,
A. Salami, Nigeria

17:30 **Forest Area Monitoring in Thailand with the use of satellite imagery**
J. Wichawutipong, Thailand

17:50 **Discussion**
- identify ways in which developing countries can make use of space-based data and information to protect their forests
- recommend ways of expanding the use, in developing countries, of space-based data and information for forest management

18:00 **Conclusions**

Forests – The Global View



The Situation

Forests

30% (approx) of the Earth surface are covered by forests = 3 900 Mio. ha.
8 000 years before our time: forest coverage = 7 000 Mio. ha.
Greatest losses in 19th Century.
Since 1990 annual net-loss of natural forest approx. 9,4 Mio. ha, = 0,24% p.a.
Total amount of annual forest clearing approx. 14,0 Mio. ha.
minus re-forestation of 4,6 Mio. ha = 9,4 Mio. ha.

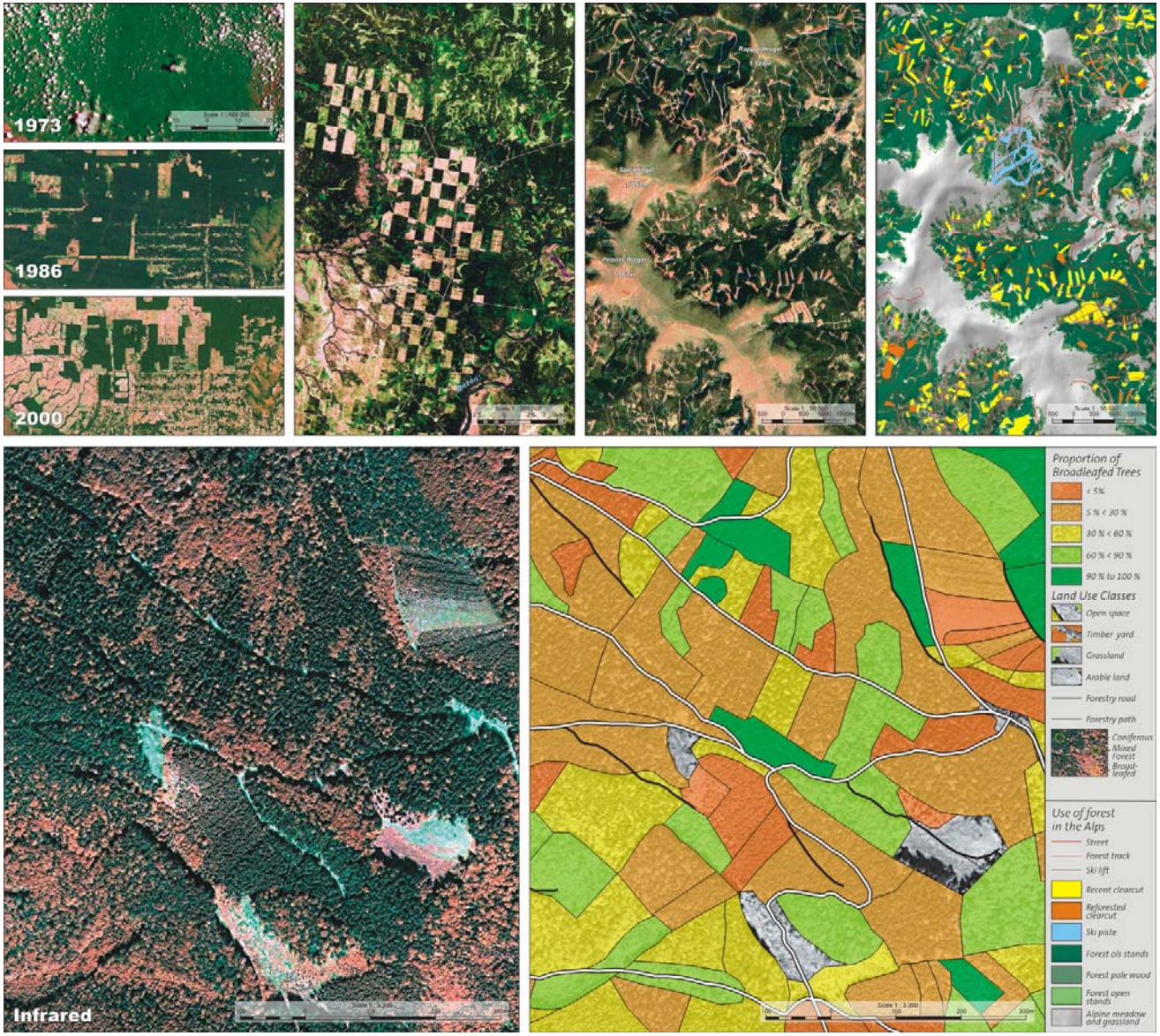
Loss of forests means: loss of bio-diversity, fragmentation and degradation,
change of local, meso- and global climate
Loss of forests caused by:

- expansion of agricultural land,
- overharvesting
- expanding shifting cultivation
- un-sustainable forest management
- infiltration and insertion of nonlocal animals and plants

Development of infrastructure

- road construction, hydropower plants,
- urbanisation
- mining
- forest fires
- environmental pollution, climate change

Forestry Patterns and Forest Management



Forest Functions and Threats

Forests are an essential source of life: they

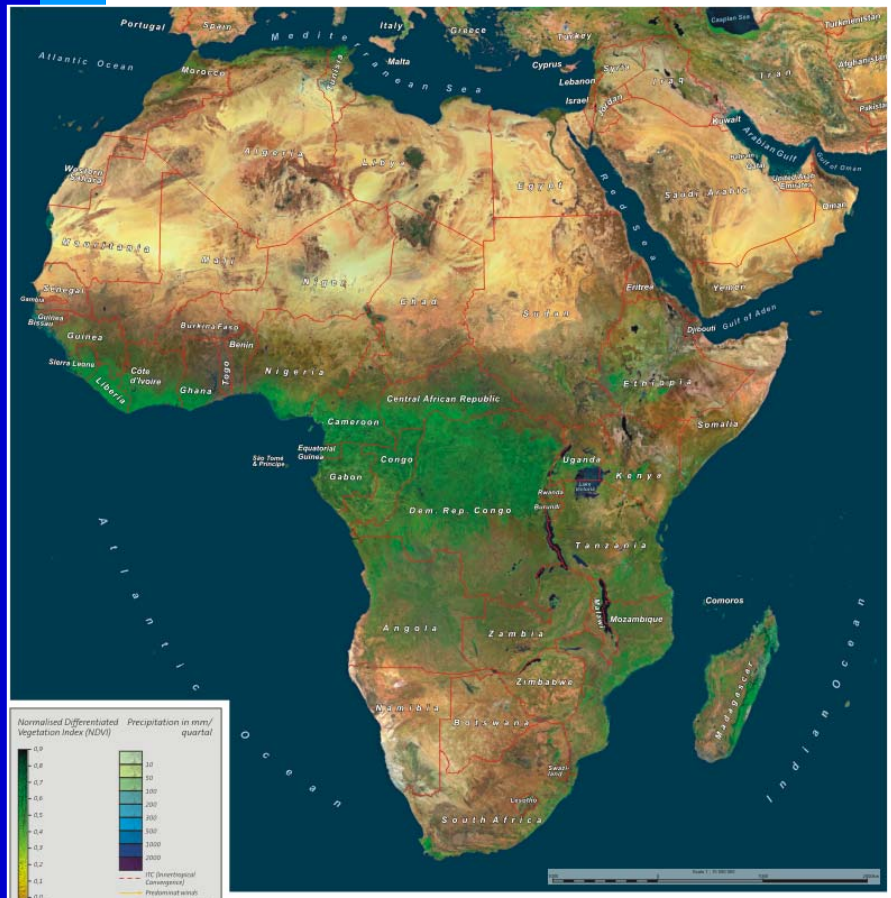
regulate the global and local climate,
store, clean and supply water,
host flora, fauna and consequently men,
are an important source of medical plants,
provide energy (heating, cooking) and food,
filter the air from manmade and natural pollution,
protect landscapes from natural risks: avalanches, erosion, mud flows,
prevent floods (retaining heavy rainfall, snow),
are areas for health, recreation, sports…

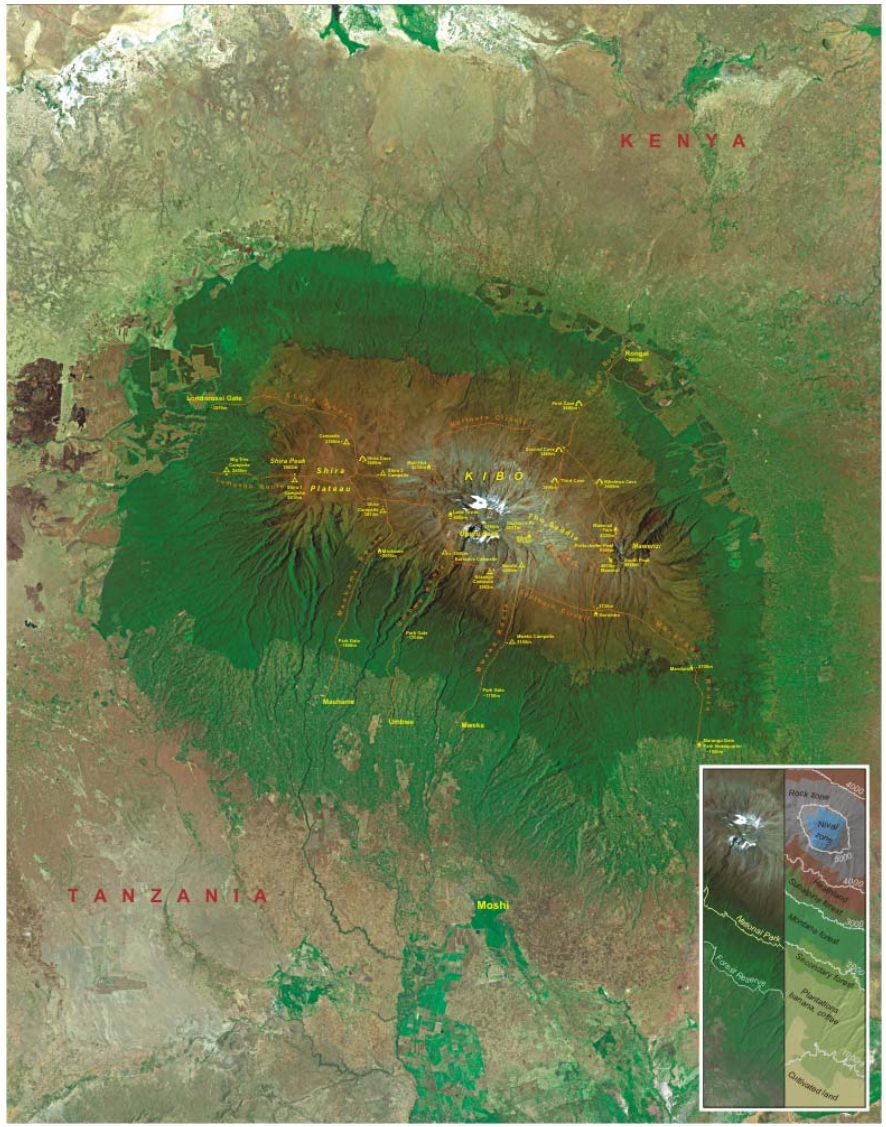
Forests are impacted and endangered by

natural disasters – rock falls, debris flows, storms, floods, desertification**..**

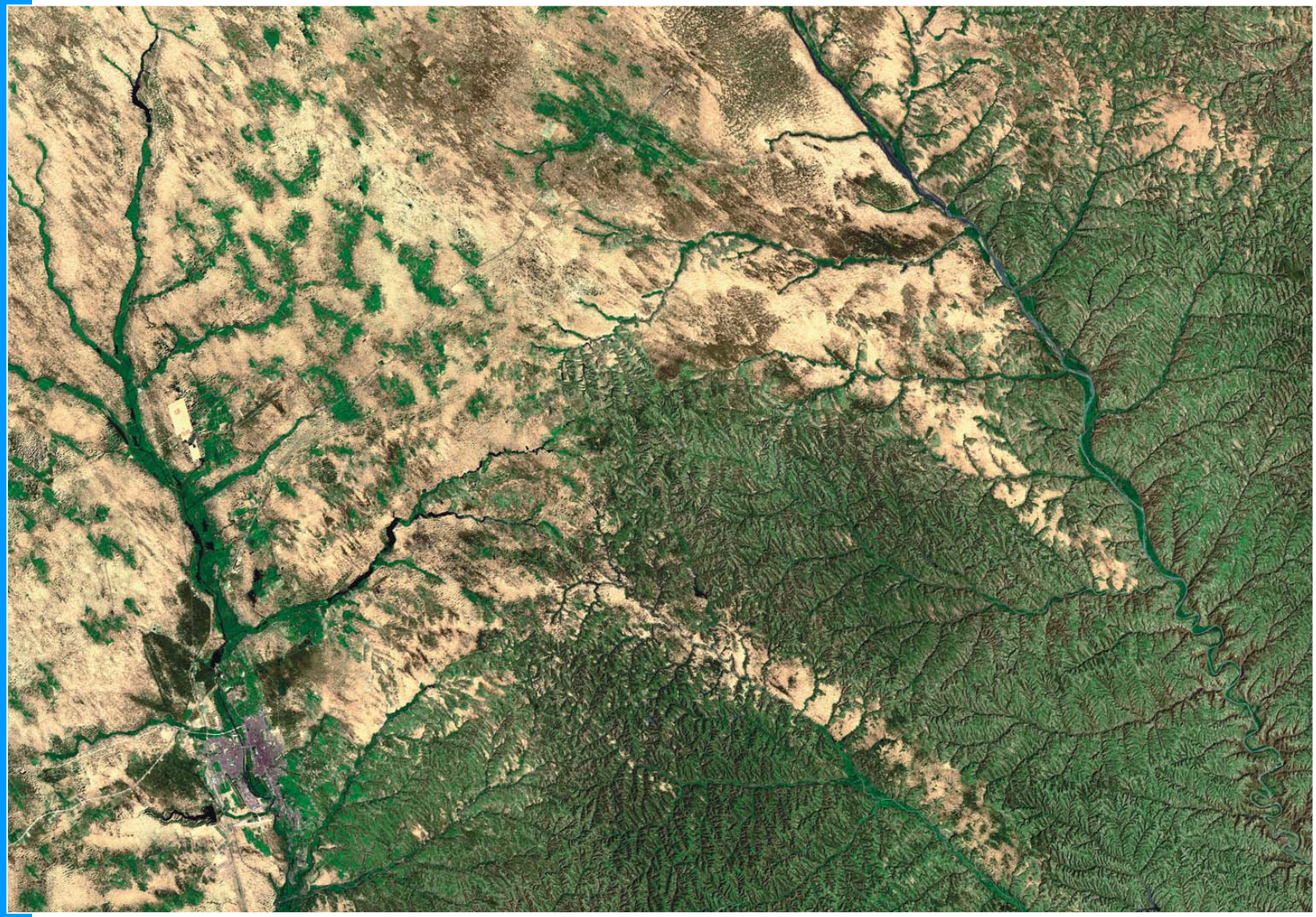
manmade disasters and activities: overharvesting, wrong harvesting techniques, change of land use, change of vegetation species,..

Forest and Climate - Africa

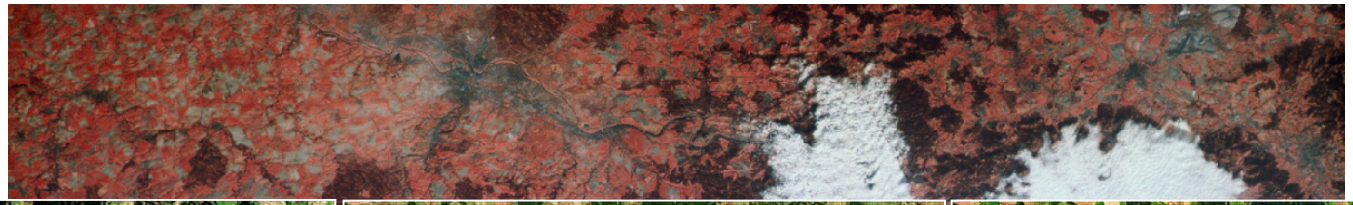




Afforestation in China, near Yulin



Industrial Impact: Smog and Forest Damages Ore Mountains



Space Technology for Forest Management

Forests require a sustainable management and protection:

adopted to the geopraphic region – its natural conditions

boreal forests –

temperate broad leaf-, deciduos-, coniferous forests -

temperate hardwood forests -

subtropical dry- and tropical rain forests …

Forests must be studied in their greater environment and not only tree-wise.

A holistic approach is requested.

Earth Observation from Space combined with

Forest Information Systems

provides the necessary knowledge and forms the basic instrument.