

# Strategic plans of Sam Ratulangi University to participate in low carbon emission initiatives

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# outline

- Sam Ratulangi University, an overview
- Academic Strength
- Researches in relation to climate change (past)
- Establishing Research Center of Mitigation and Adaptation of Climate Change
- Strategic plans to participate in low carbon initiatives (future)



US Dept of State Geographer  
Image Landsat  
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Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google earth

Tanggal pencitraan 10/4/2013 50 N 789051.60 m E 69054.19-m N ketinggian mata 14328.71 km

# SAM RATULANGI UNIVERSITY

- The main campus is located on 54 hectares around the coast of Manado Bay on the Sulawesi Sea.
- Number of students: just less than 18 thousands
- Not far from the campus of UNSRAT is the Bunaken National Marine Park, famous for its exotic coral reefs and rich marine life.



# Academic Strength

- School of Medicines ◊
- School of Public Health ◊
- School of Engineering ◊
- School of Agriculture ◊◊◊
- School of Animal Science ◊◊
- School of Fisheries and Marine Science ◊◊◊
- School of Basic Science ◊
- School of Economics ◊
- School of Laws ◊◊◊
- School of Social and Politics ◊◊
- School of Letters ◊



Degrees: Bachelor ◊ Master ◊◊ Doctoral ◊◊◊

- Faculty staffs (lecturers) of each school potential to do research on climate change, some graduated from leading national and international universities such as universities in Japan, Australia, UK and US.
- All schools have established collaboration programs with leading (national and international) universities and other institutions in terms of research, staf training, capacity building, international class, field schools, etc.



# Researches in relation to reduction of carbon emission (mitigation)

Faculty members and students (of engineering, agriculture, fisheries and marine science, and animal science) have carried out researches projects in relation to carbon reduction.

- Researches on of coastal & marine resources (mangroves, seagrasses, coral reefs); these led to establishment of mangrove researves, marine protected areas (MPA) - 3 MPAs in 1999 to be 32 in 2014; sponsored JICA, USAid, etc.
  - Research on forests led to establishment of 3 forest researves in North Sulawesi Province, in 2000 - 2005; biodiversity of forest, etc
  - Recently, several projects carried out by School of Engineering: water resource management; thermal comfort model in traditional house of Minahasa; sustainable concrete; etc
- Note: the many researches not focused on carbon reduction

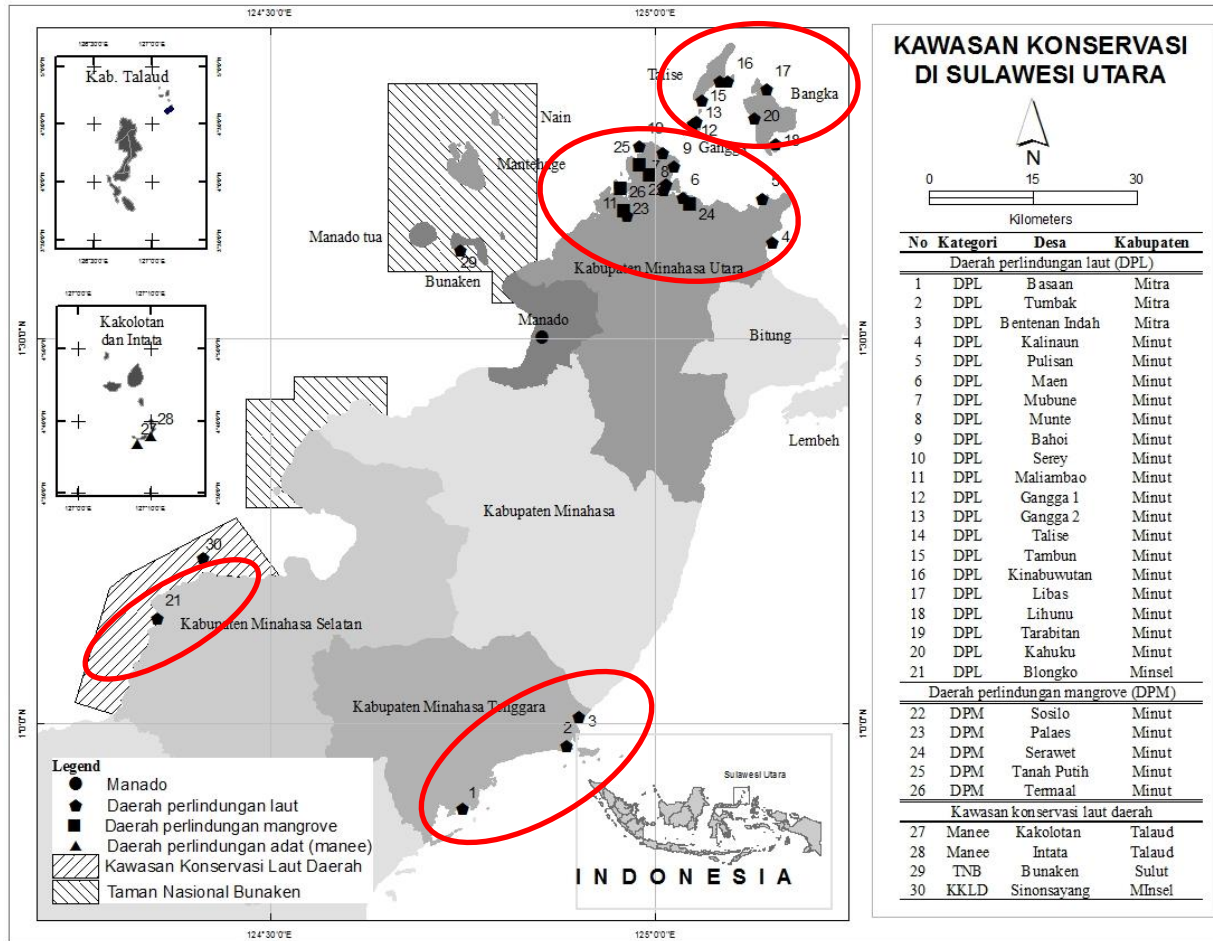




# Research projects on adaptation to climate change has been done for years

- Agriculture: new seeds (rice, vegetables) that can adapt to climate change;
- Aquaculture: new techniques to farm seaweeds, fishes; as alternative livelihood and poverty reduction strategies.
- Animal science; sustaining livestock production,
- Research project on public perception on compliance to Marine Protected Areas;
- Study on Malaria
- etc

# MPAs in North Sulawesi: conservation areas and research sites



# International and national conference or symposium related to climate change, such as

- Biodiversity and Integrated pest management (in cooperation with Texas A&M, Clemson University, Virginia Tech, USAid), May 2013;
- World coral reef conference (Ministry of Marine and Fisheries Affairs, June 2014;
- Indonesian carbon update (ICCC), Oct 2014;
- International Conference on Environmentally Friendly Civil Engineering Construction and Materials, Nov 2014.
- Etc



# Establishing A Research Center on Mitigation and Adaptation of Climate Change

Sam Ratulangi University (UNSRAT) is in a process to establish a Research Center on Mitigation and Adaptation of Climate Change;

Starting point: MOU between UNSRAT and the Indonesian National Council on Climate Change (*Dewan Nasional Perubahan Iklim*) was signed at the 3<sup>rd</sup> Indonesian Update in October of 2014.

## Goals of the center

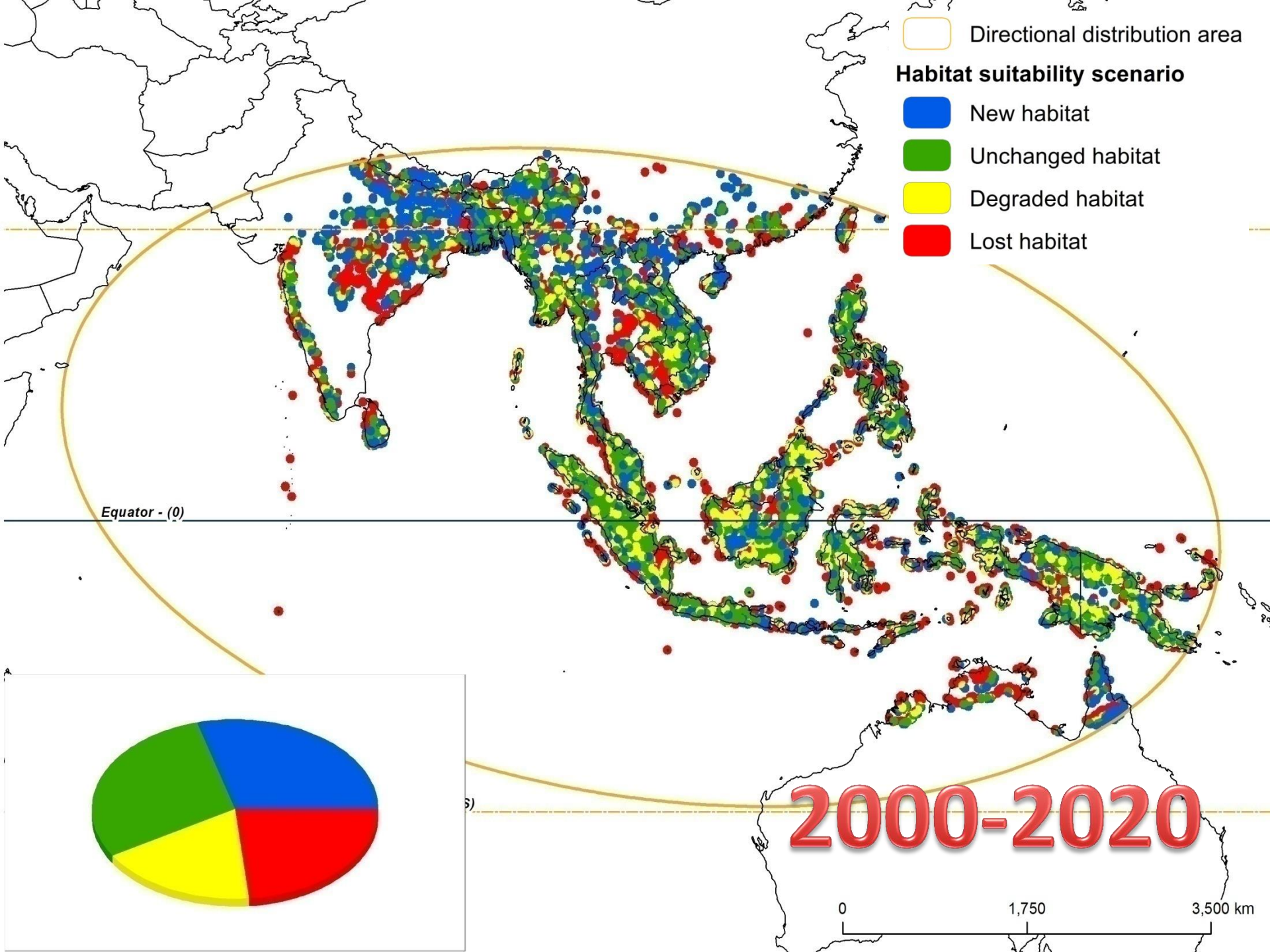
- to coordinate and integrate all researches on climate change in all schools
- to produce highly quality and reliable data on carbon reduction;
- to well coordinate communication – reporting, media, government (national, provincial and local governments), stakeholders, and public/ communities.
- to build up research and joint programs with an international and national institutions on climate change;
- to support government in the whole steps of policy processes on mitigation and adaptation.
- To enhance the university public education program /communities especially the youth

## Strategies:

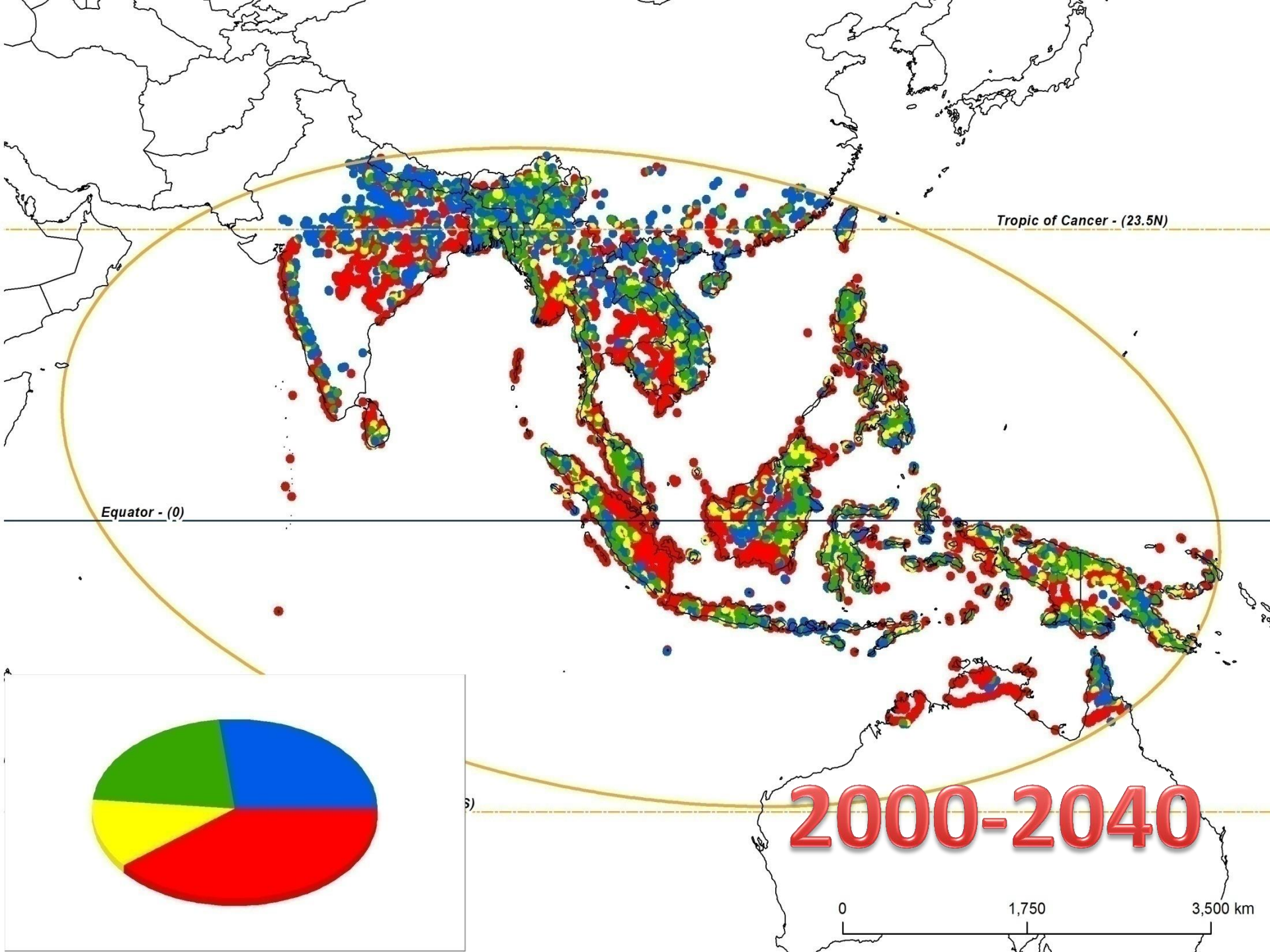
- To enhance the capacity of faculty members at all schools in doing research on climate change;
- To encourage the faculty members of all schools to do research on carbon reduction based on a research agenda;
- To enhance collaboration programs with other institutions nationally and internationally;
- To produce good and annual reports, blue prints and roadmaps;
- To provide reliable data into policy process (from national to local governments);
- To enhance communication with stakeholders including communities

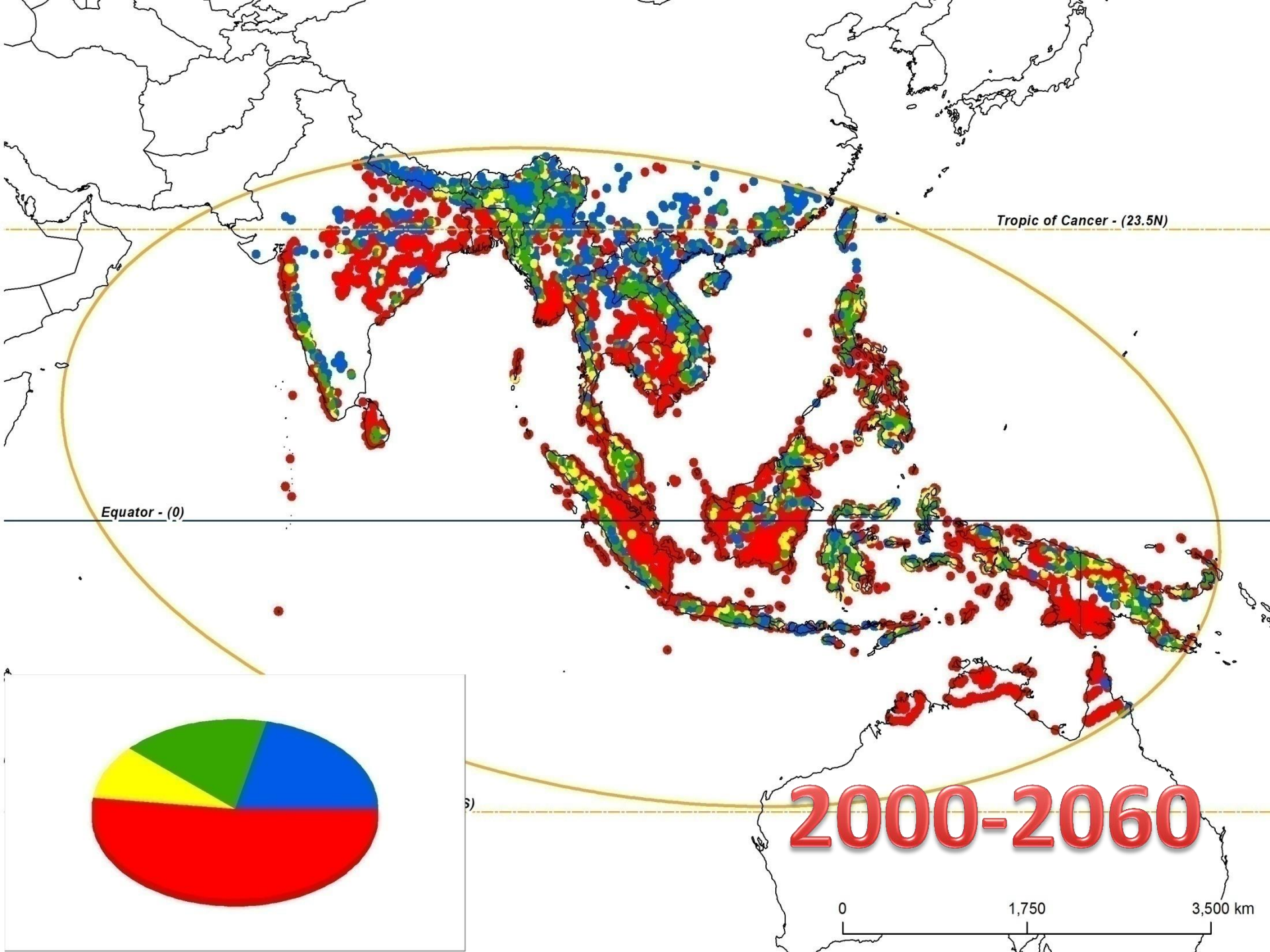
# Concluding Remarks

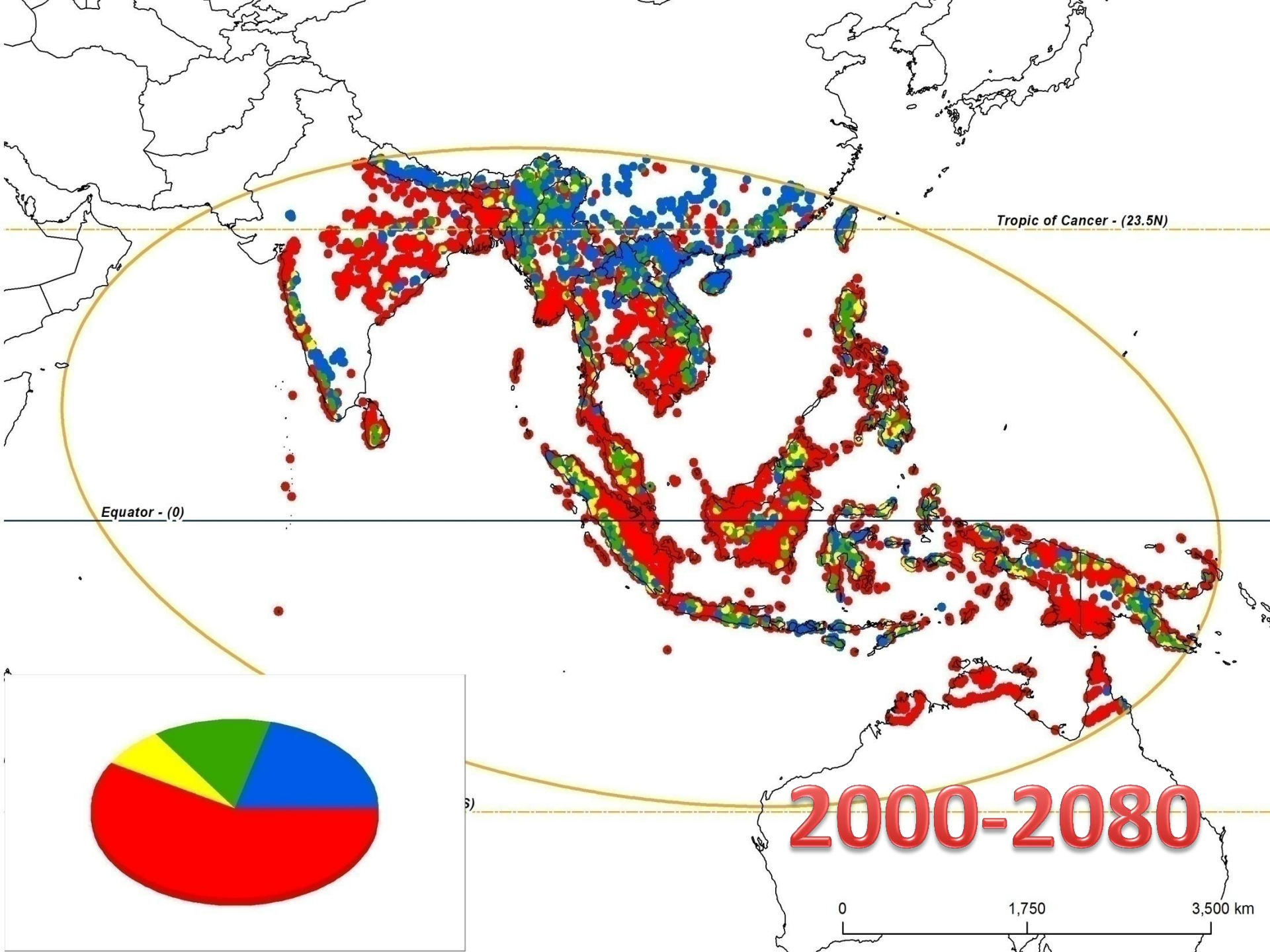
- UNSRAT has resources that are potential for research and other programs on low carbon in the areas of build environment, social and ecological aspects, carbon accounting, transportation system, land-use, forestry, green energy, marine science, agriculture, etc. Collaboration programs are welcomed!
- A research center on mitigation and adaptation on climate change is establishing in order to have good and reliable data, to coordinate and all researches on climate change in the university, to communicate with government and stakeholders to meet the national and international goals on carbon reduction.
- UNSRAT will support government (particularlry provincial and local government) in policy processes on law carbon











Thank you for your attention!