

Exploration of Research Themes

Anthropogenic Biomes, Land Use and Climate Change

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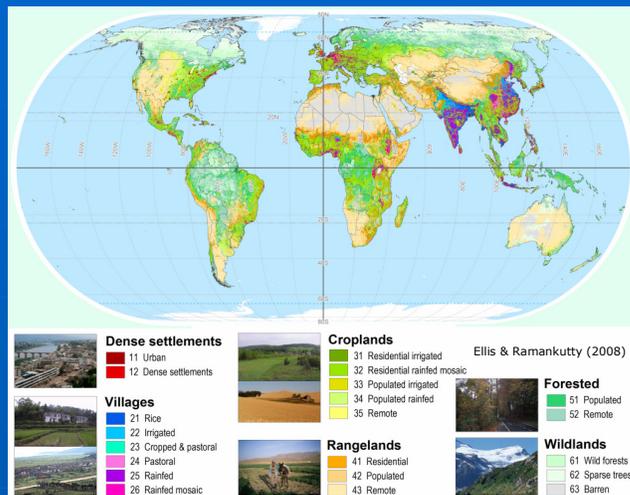
To Prepare for Climate Change, it is necessary to:

- Evaluate risks from the interaction of climate change and land use
- Communicate globally to share results

Anthropogenic Biomes (Anthromes) provide a global model useful for both of these tasks.

What are Anthropogenic Biomes?

- Classical biomes ignore human interactions
- Anthromes provide an alternative model of the terrestrial biosphere based on
 - Population density
 - Land use
- A global system representing human interactions with the environment



Risks of Climate Change

- Changes in climate are impacting land use
 - Agriculture
 - Crops no longer thrive in climate
 - Water scarcity
 - Replacement with tolerant crops
 - Soil exhaustion, move on to other areas
 - Development potential
 - Low-lying areas, susceptibility to floods
 - Coastal storm vulnerability
- Impacts and solutions are related to population density and human systems
 - Soil degradation
 - Crop failures
 - Irrigation
 - Emergency planning
 - Protected areas
- Influence planning agendas
 - How best to designate/allocate resources
 - Impacts from climate change vary
 - Depend on land use systems
 - Management based on target populations

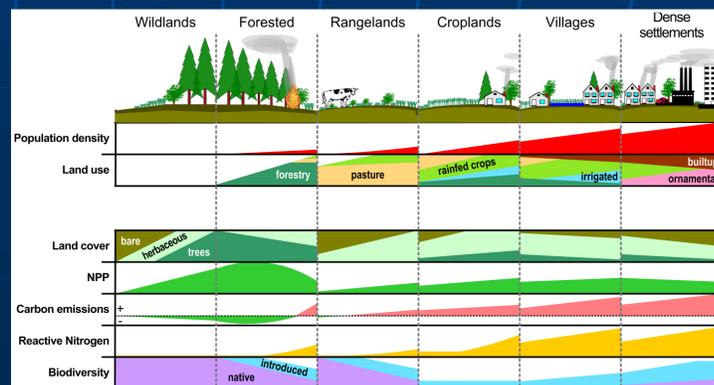
Global Communication

- Anthromes: places with similar characteristics and needs
- Global Exchange of Information and Solutions
 - Similar challenges faced within Anthrome?
 - Communications
 - Successes and failures
 - Establish useful approaches
 - Develop problem solving framework
 - Learn from each other's mistakes
 - Encourage win-win situations
 - Create multi-functional landscapes
- Joining stakeholders globally
 - Citizens, Planners, Researchers, Land managers, Practitioners, Politicians, NGOs

Collaboration Potential

- Biodiversity, land use and climate: planning
 - Can maintenance of biota improve resilience of anthropogenic systems?
- The role of human populations
 - Where will people reside?
 - Where will supporting resources come from?
- Develop networks to share experience & results
- Design systems to decrease vulnerability

Anthropogenic Biomes: Land use & Ecosystems



Ellis, E. C., and N. Ramankutty. 2008. Putting people in the map: anthropogenic biomes of the world. *Frontiers in Ecology and the Environment* 6:439-447.