

**International Conference on
Science and Technology for Sustainable Societies
“Building from regional to global
sustainability: Visions from Asia”
September 14-16, 2011, Kyoto, Japan**

Organized by the Science Council of Japan (SCJ)

Co-organizers:

Research Institute for Humanity and Nature (RIHN)

BCES-GCOE Program of Nagoya University

GCOE Programs of Hokkaido University and Tohoku University

Co-sponsored by International Council for Science (ICSU)



International Programs for Global Environmental Change (地球環境変化に関する国際プログラム)

WCRP: World Climate Research Programme (1980 –)
世界気候研究計画

IGBP: International Geosphere–Biosphere Programme(1987–)
地球圏生物圏国際協同研究計画

IHDP: International Human Dimensions Programme
地球環境変化の人的側面に関する国際研究計画

DIVERSITAS: International Programme of Biodiversity Science
生物多様性科学国際協同研究計画

ESSP: Earth System Science Partnership
地球システム科学パートナーシップ

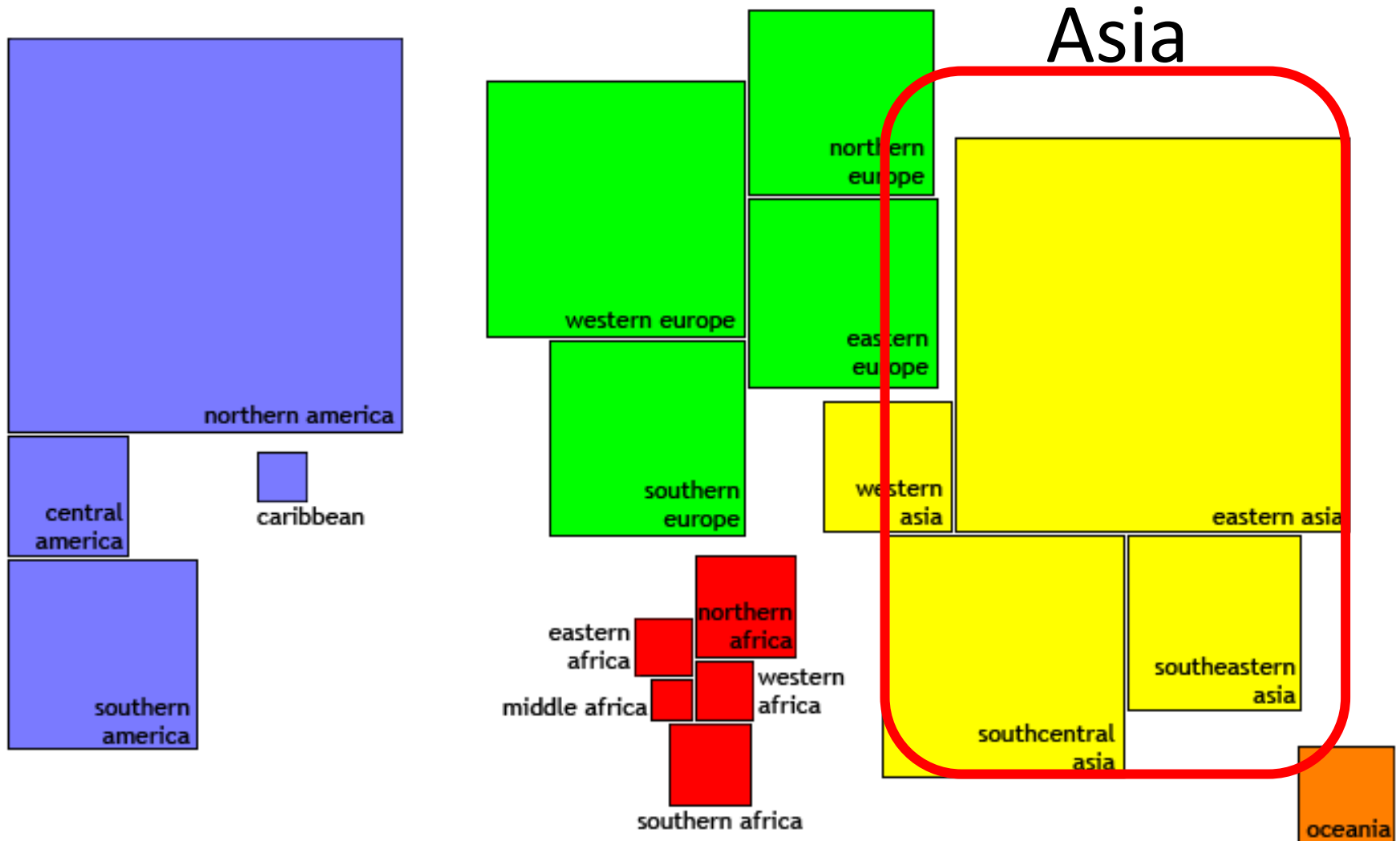
World Population (世界の人口と人口密度)

ensity.svghttp://en.wikipedia.org/wiki/File:Countries_by_population_density.svg

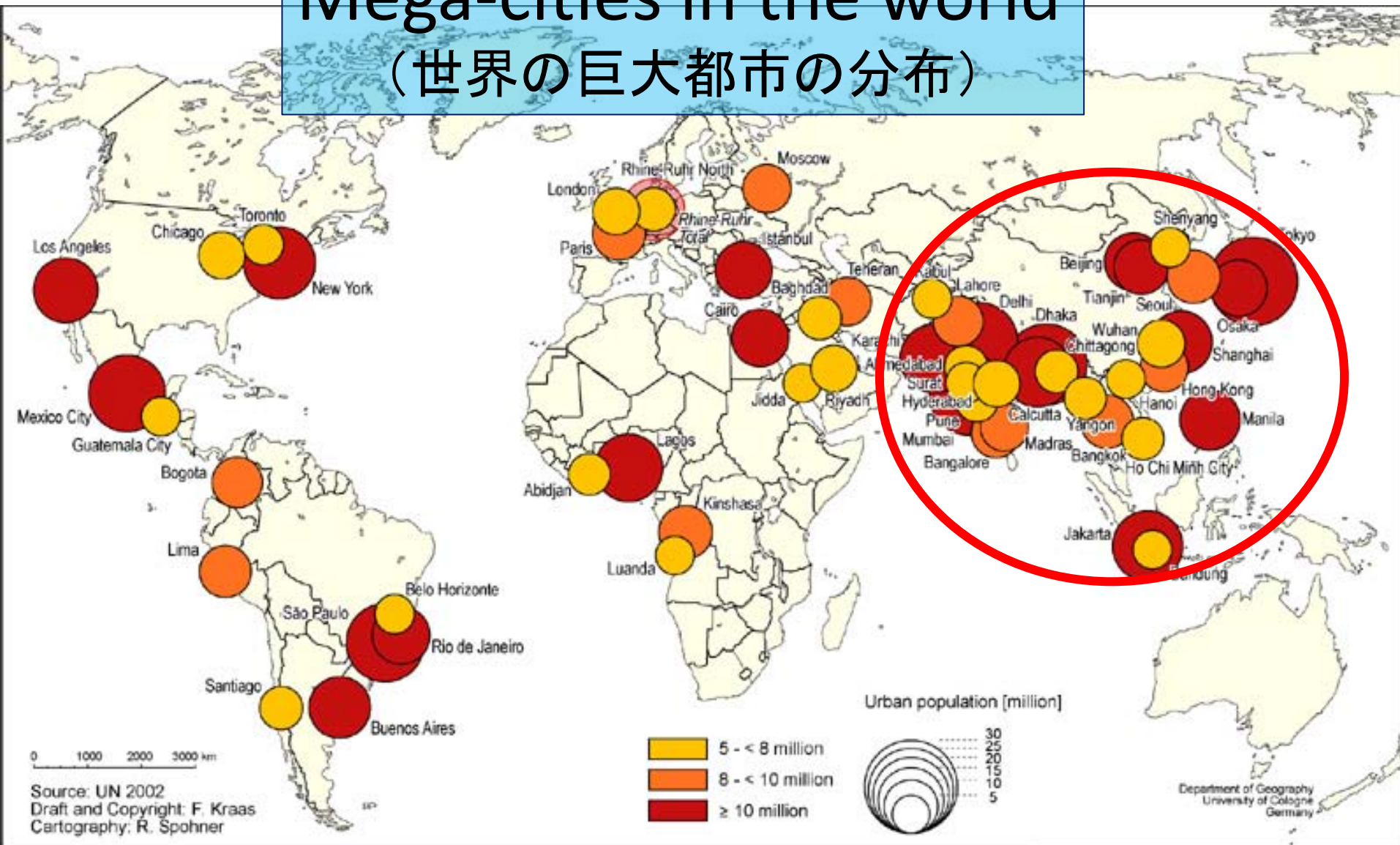


Global GDP distribution (2005)

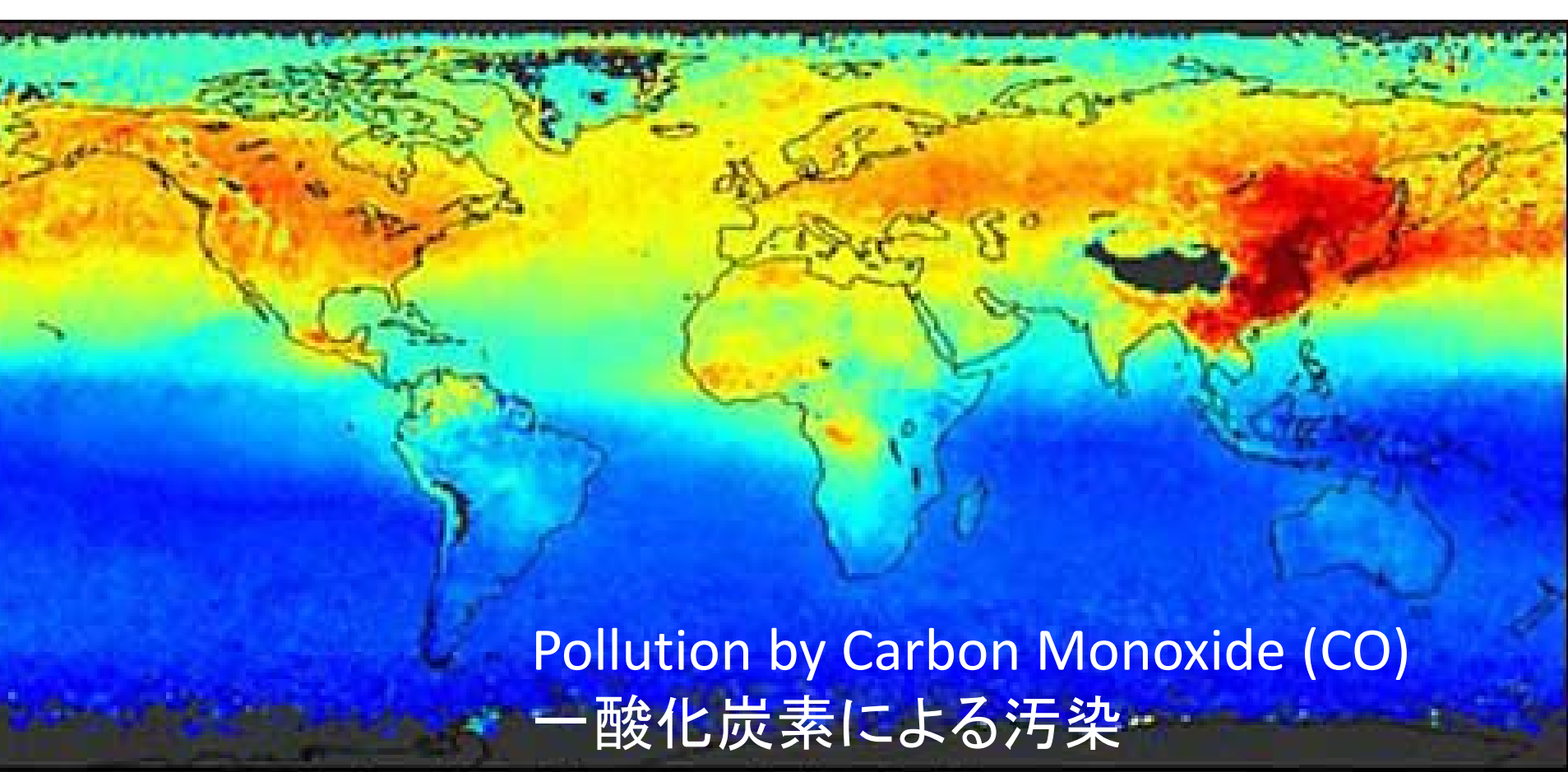
http://en.wikipedia.org/wiki/File:World_GDP_per_region_2005.png



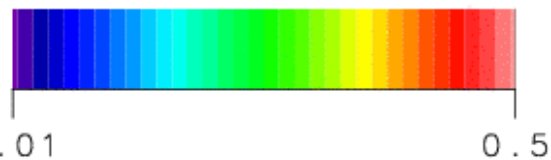
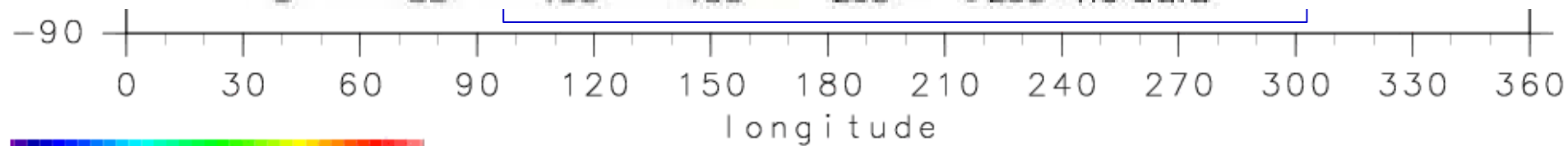
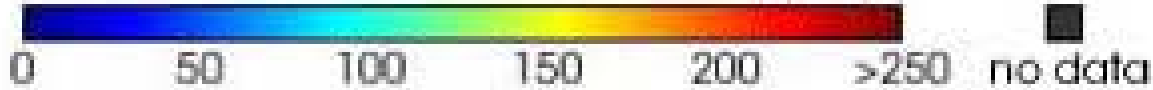
Mega-cities in the world (世界の巨大都市の分布)



<http://www.megacities.uni-koeln.de/documentation/megacity/map/MC-2015-PGM.jpg>



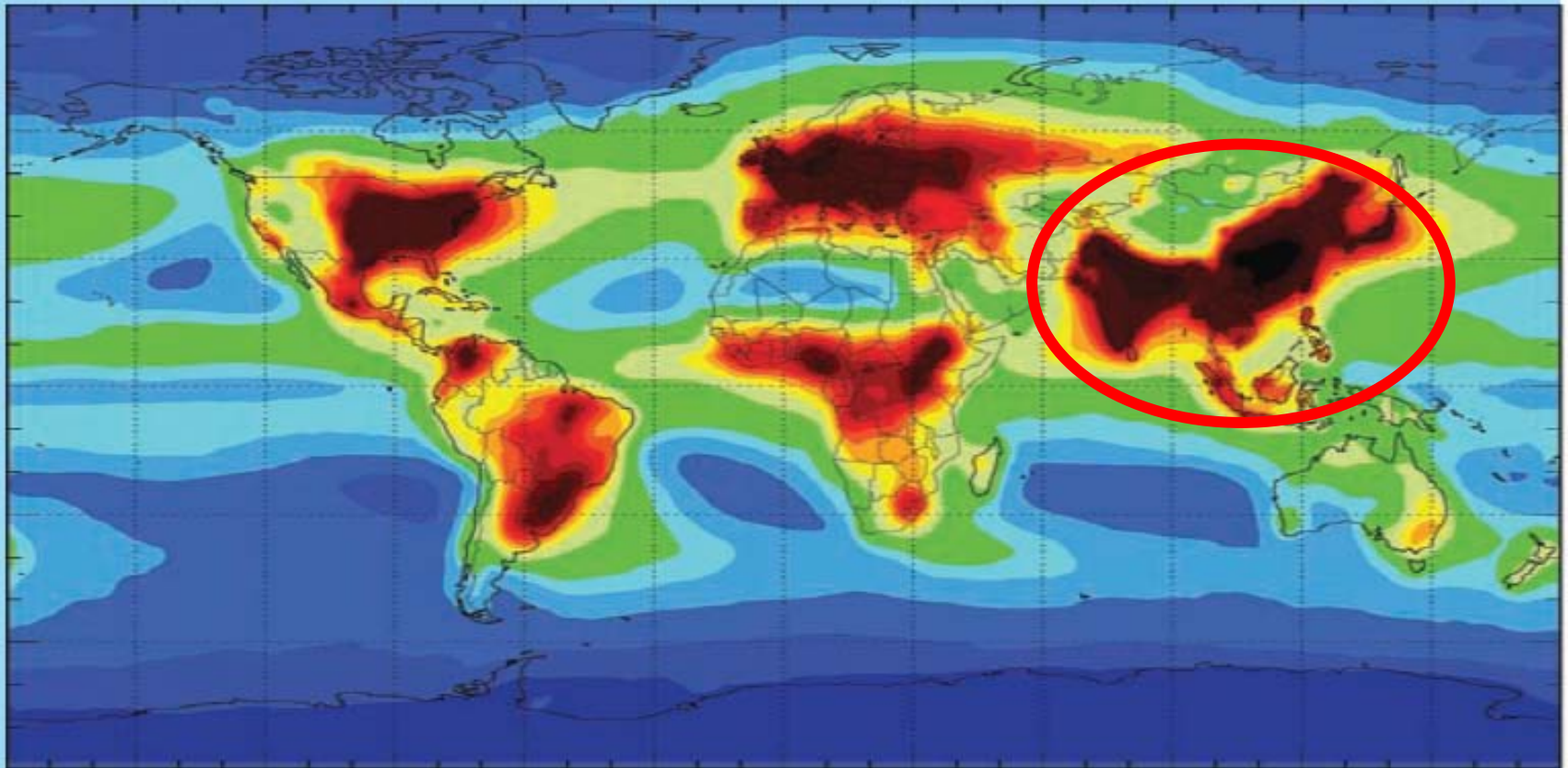
Carbon Monoxide concentration (ppbv)



(肥料使用による)窒素の負荷はすでに生命圏を壊しつつある

Nitrogen Loading is already damaging the biosphere

N Deposition rates (0 – 60kg/ha/yr)



Galloway et al Science 2008

Terraced Rice paddy field in Nepal(ネパールの棚田)



'01 12 13

Key themes

- Key environmental issues in Asian countries and regions and their relevance to regional/global sustainability
- Important environmental issues in Asia relevant to
 - water resources and their sustainable management;
 - land cover/change as it affects ecosystem services; and
 - urbanization and vulnerability of urban-rural system under rapid environmental changes and natural disasters
- Messages from the international/multi-national initiatives and their implication and relevance in Asian issues

The Great Earthquake and Tsunami in Eastern Japan 2011.3.11



“The Asia vision”

- Some contemporary sustainability challenges in Asia will require wholly new approaches in science, technology and governance; “innovation” will also entail more active recognition of the wisdom already embedded in traditional thought and patterns of livelihood.

アジアの現在の持続可能性の達成には科学・技術・管理における全く新しいアプローチが必要； その“革新”には、伝統的思考と生活の中の「知」の再認識も必要⇒「温故知新」

- In either case, designing sustainable interactions between humanity and nature in Asia is a global challenge, for there can be no global sustainability without it.

アジアにおける人間－自然の持続的な相互作用系の設計は、グローバルな課題そのものであり、それなくして、グローバルな持続可能性もあり得ない。

The Asian Challenge

- More than 60% of the global population is concentrated in Asia, and the total GDP of Asia is equal to about one-third of the global GDP.
- The region as a whole is characterized by rapid population and economic growth and urbanization, great disparities of wealth both within and between countries, and social and ecological vulnerability to the potential impacts of climate change.
- At the same time, the region offers many examples of long-term social and ecological sustainability in the midst of great ecological diversity, including many traditional systems of agriculture and livelihood that have supported large numbers of people through time.