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# Twenty years later: can green growth change the conversation on conservation and development?

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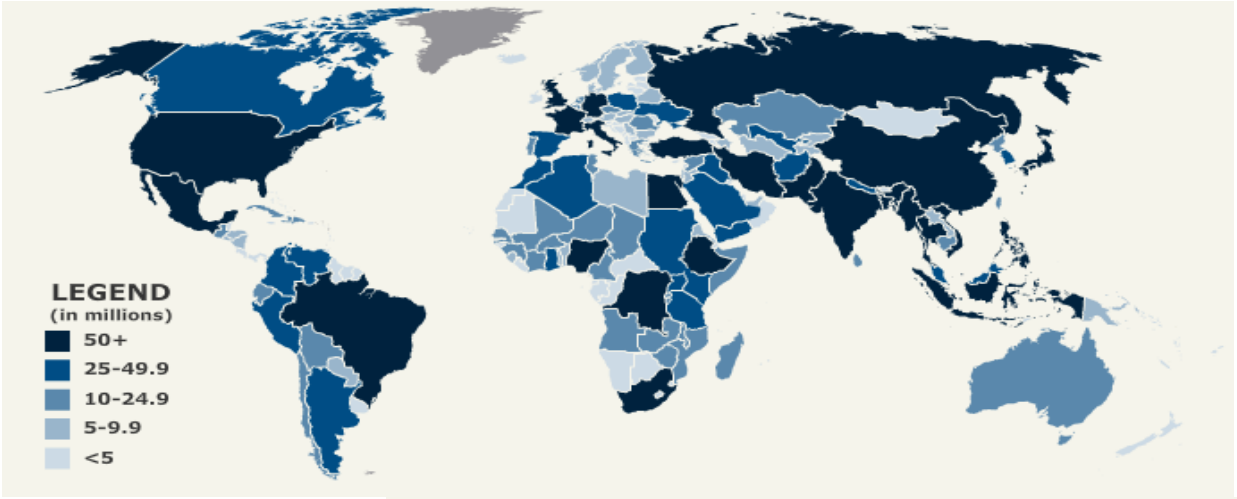
# Can green growth change the conversation on conservation and development?

- **The megatrends**
  - population, urbanization, water stress, land use changes, climate impacts and natural resource degradation, and human vulnerability

- **The opportunity**
  - green growth as a new pathway for sustainable development

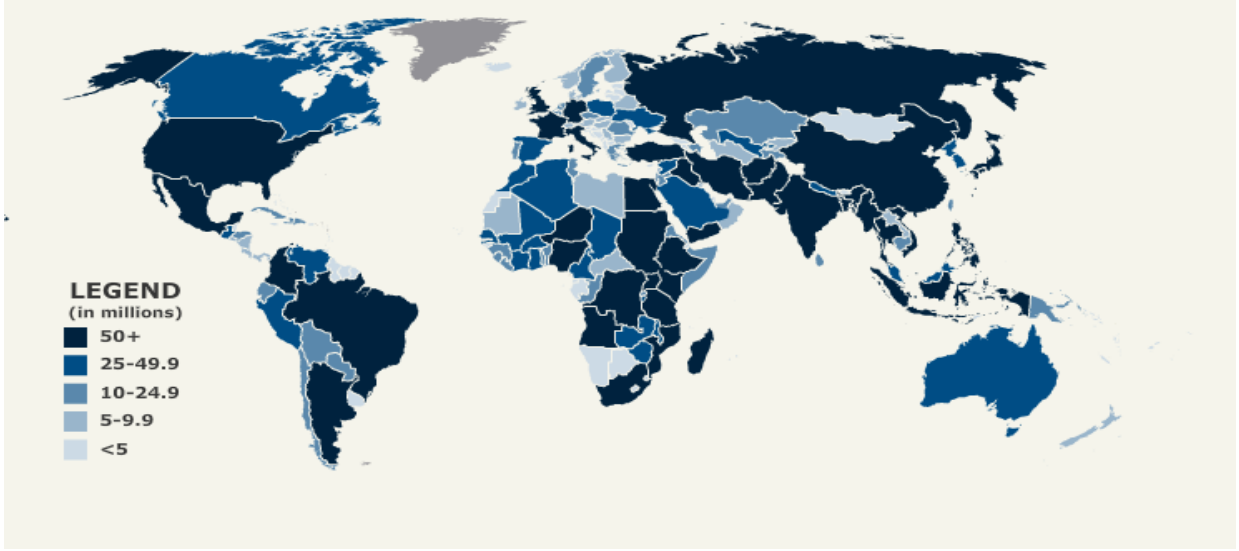
- **Three policy levers**
  - Pricing Natural Capital
  - Leveraging International and Innovative Finance
  - Investing in Innovation

# Population increases in 2050 will be mainly in the developing world



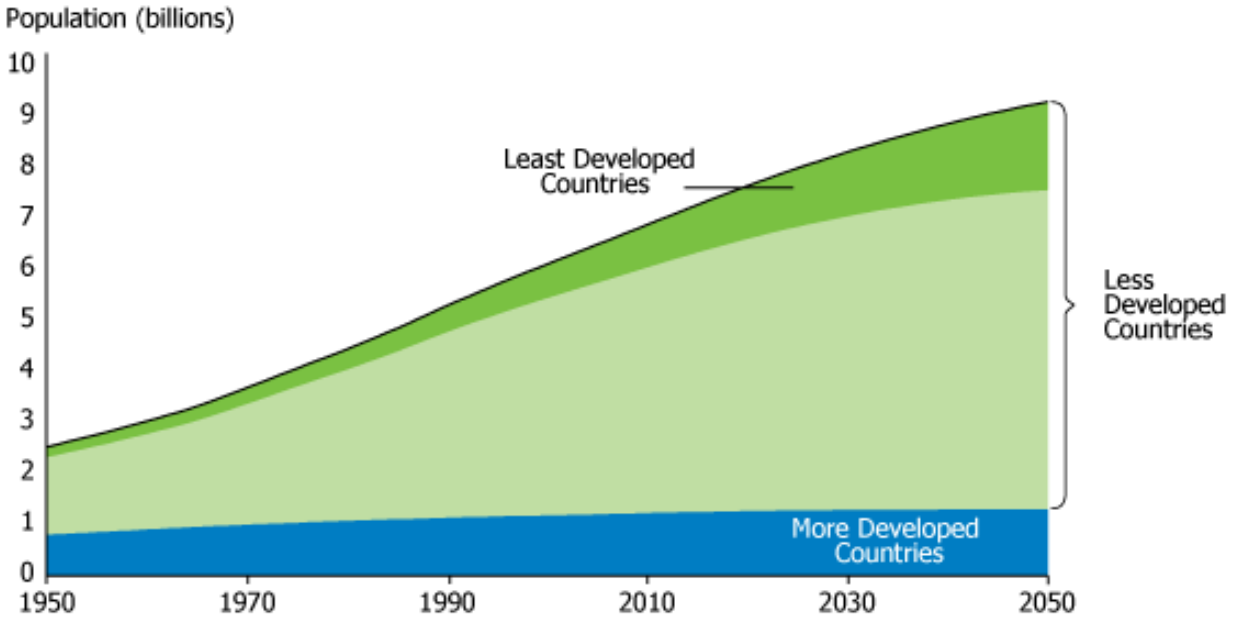

**Global population reached over 7 billion in 2012…**

**…and is projected to rise to nearly 10 billion by 2050**




Source: Population Reference Bureau, 2012.

# Nearly All Future Population Growth Will Be in the World's Less Developed Countries

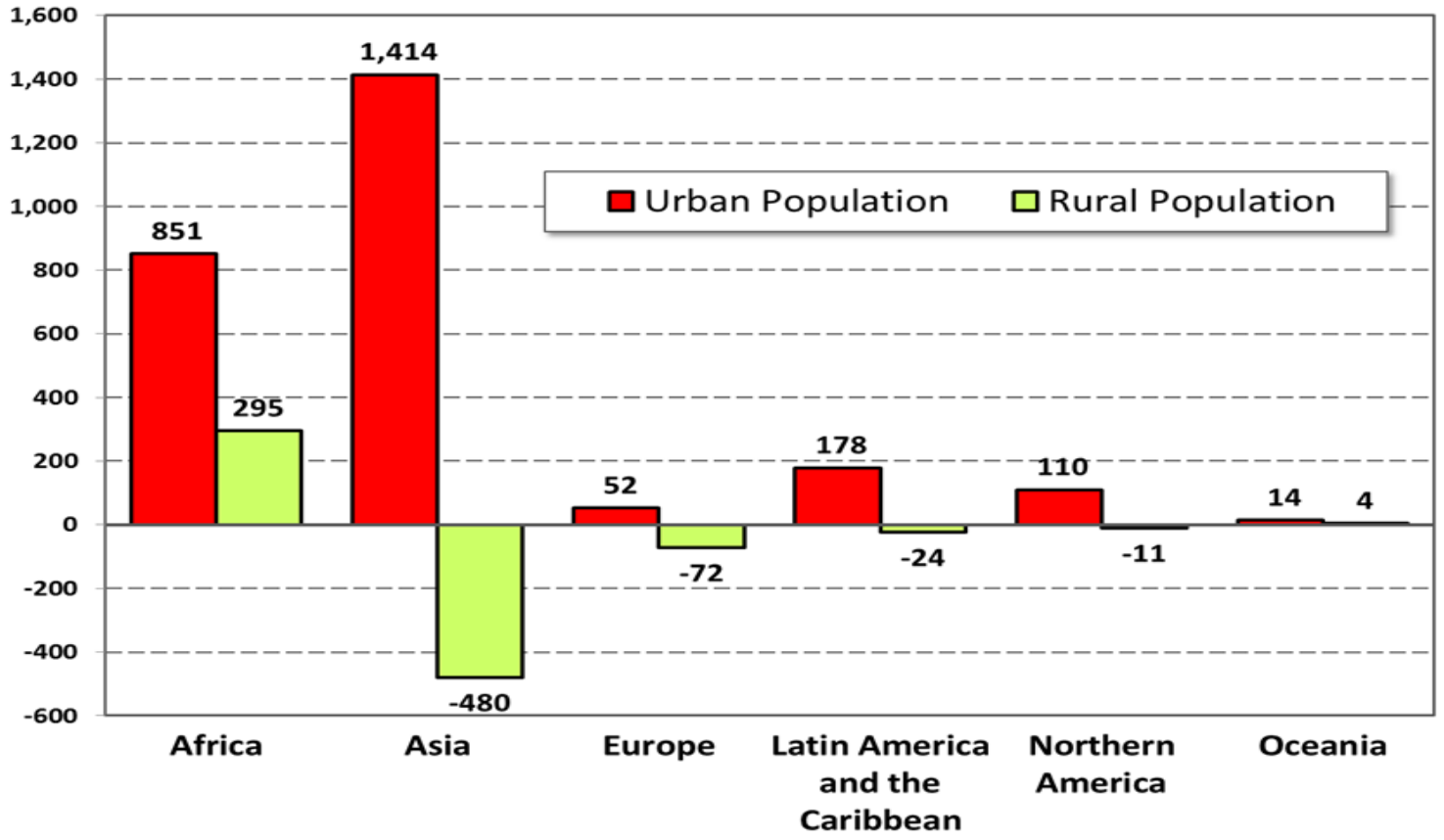



## Africa and Asia will see the biggest increases in population

Source: Population Reference Bureau, 2012.

# From 3.6 now to 6 billion people in cities by 2050 – with dramatic changes in Africa and Asia

Changes in urban and rural populations between 2011 and 2050 (millions)




Source: United Nations, Department of Economic and Social Affairs: *World Urbanization Prospects, the 2011 Revision*

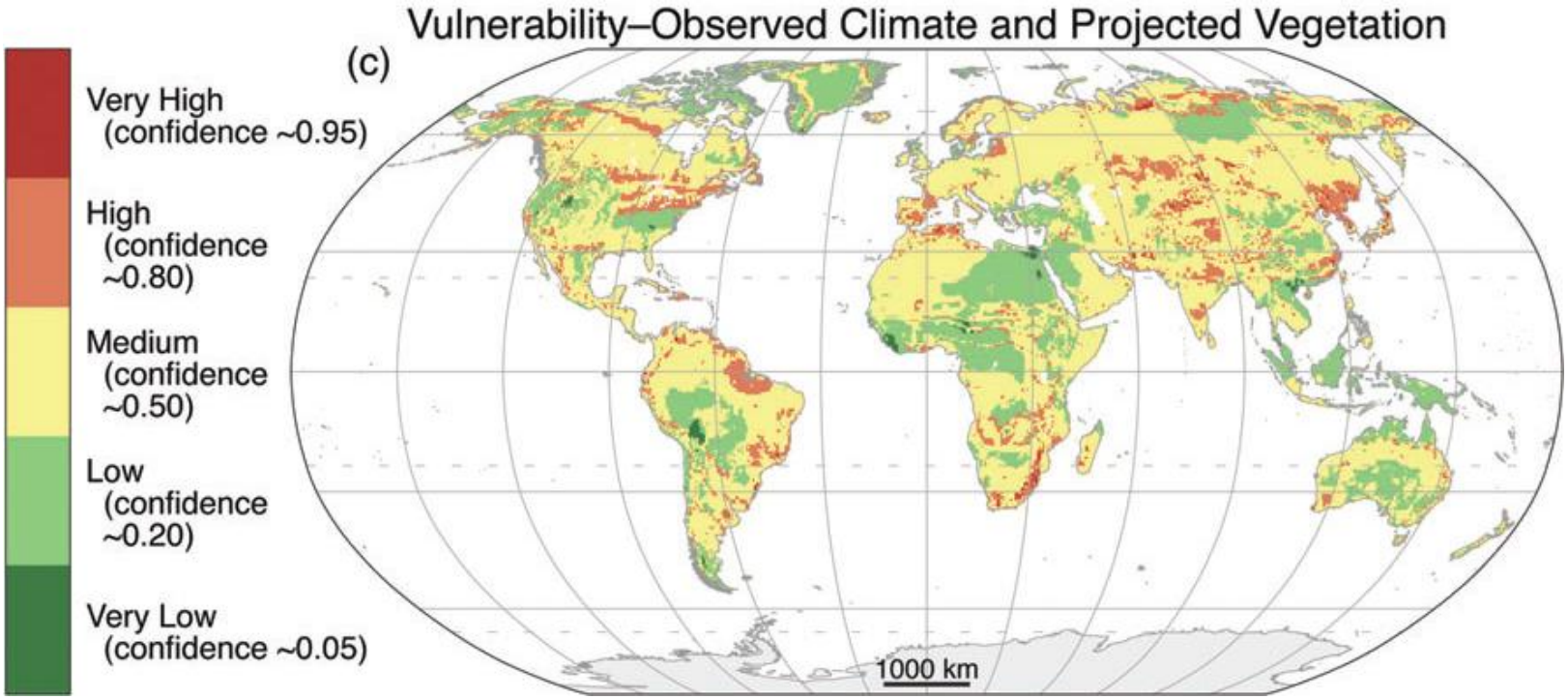
# Water stress is growing

## Global water demand is projected to increase by 55% between 2000 and 2050

….with increases coming from: manufacturing (+400%), electricity (+140%) and domestic use (+130%)

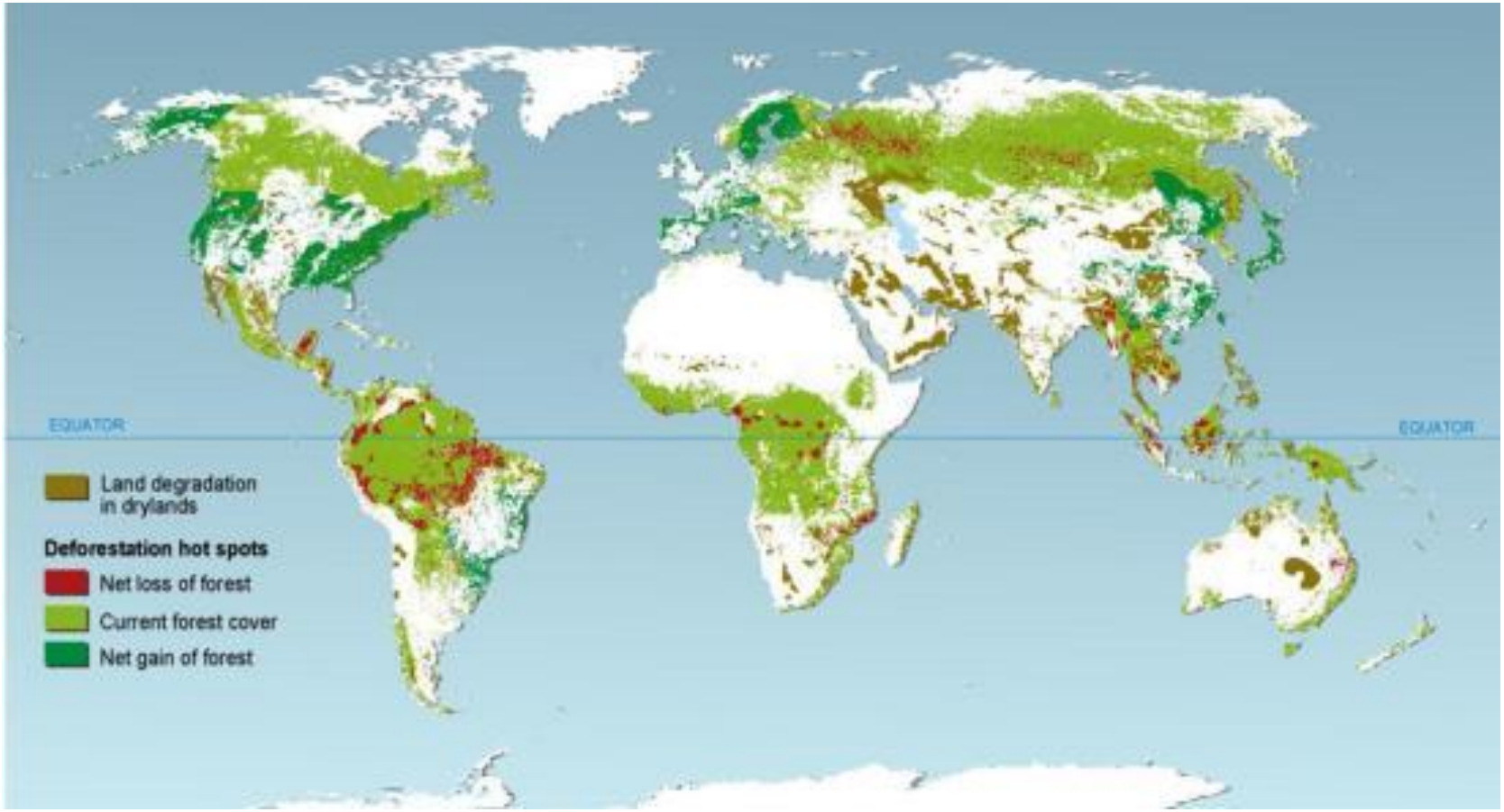
# Climate change increases ecosystem vulnerability

**Vulnerability to biomass change based on IPCC confidence class names and levels**



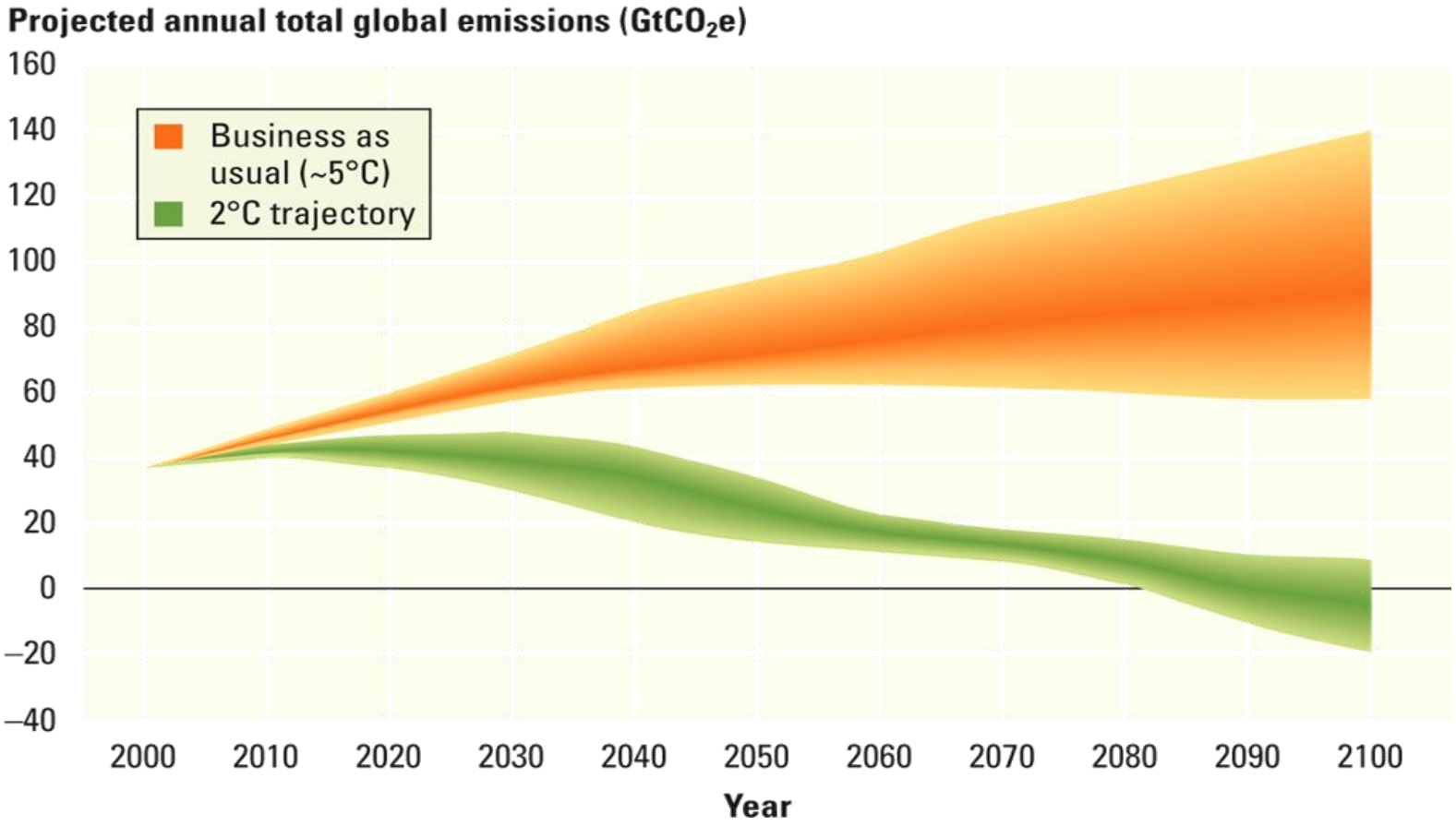

Source: Gonzalez et al., 2010. Global Patterns in the Vulnerability of Ecosystems to Vegetations Shifts due to Climate Change. *Global Ecology and Biogeography*.

# Land use change is leading to increased rates of deforestation




Source: Millennium Ecosystem Assessment, 2007

# Global Greenhouse Gas Emission are on a dangerous path



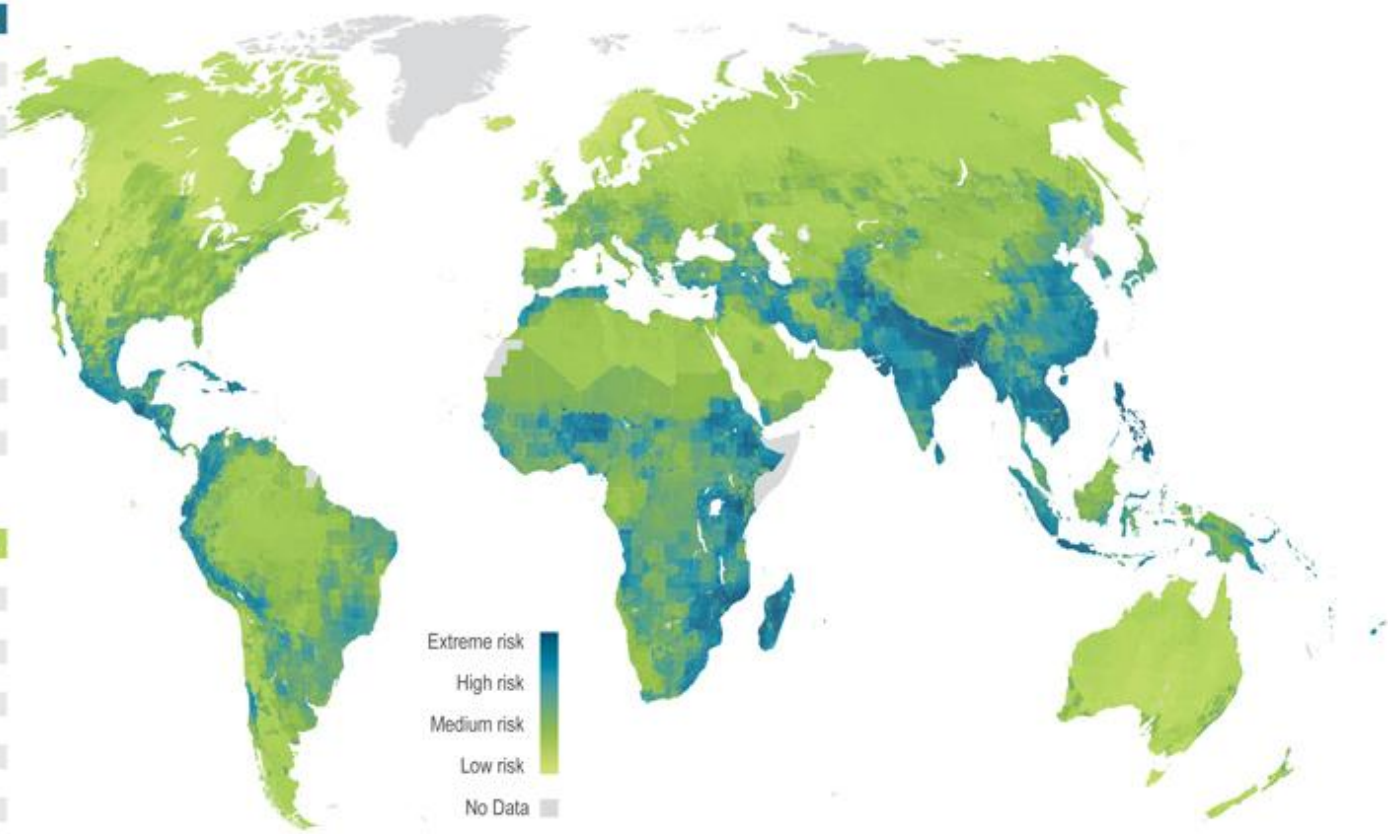

Source: World Development Report: Climate Change and Development

# Climate change is putting people at risk

## Climate Vulnerability Index 2011

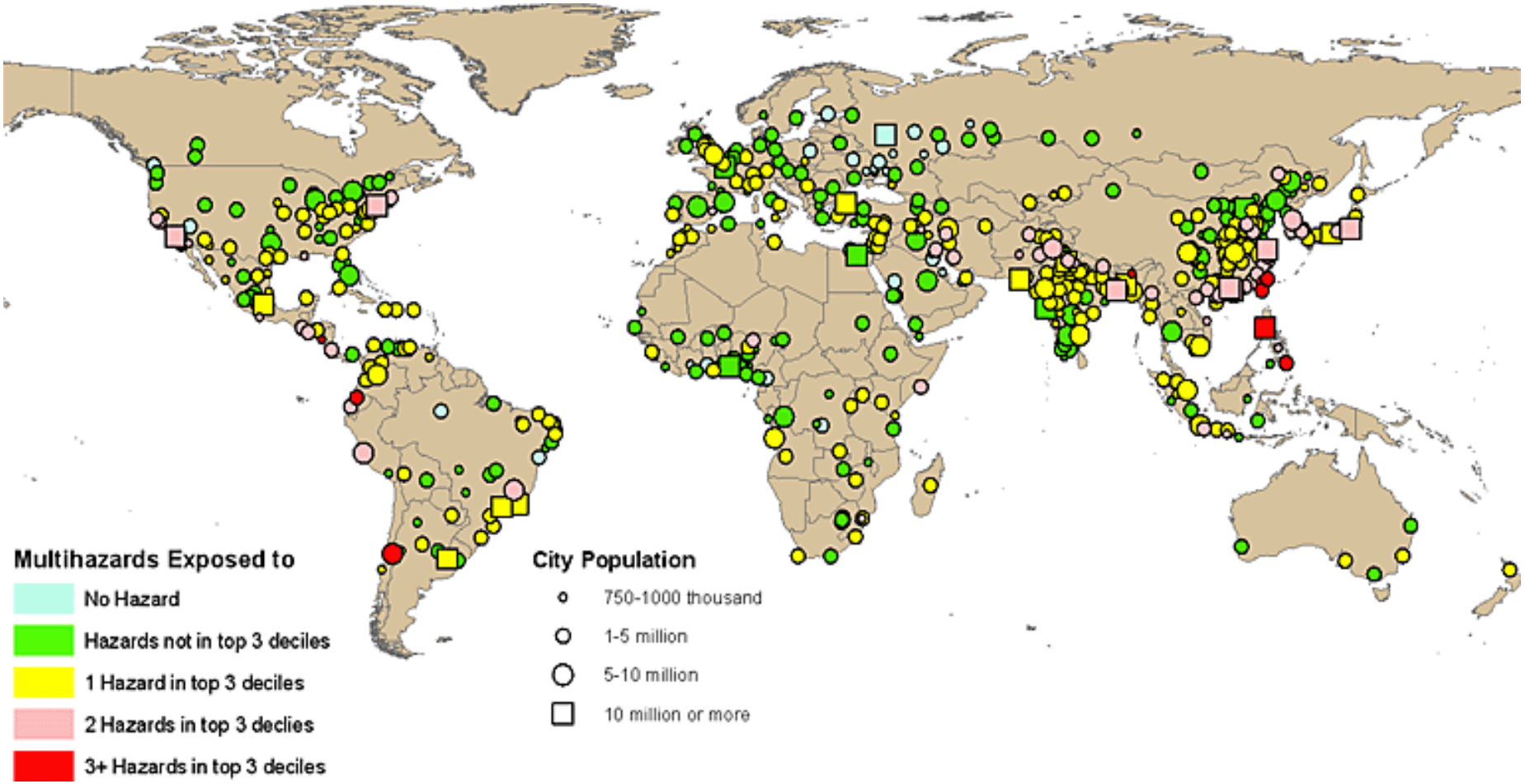
| Rank | Country | Category |
|---|---|---|
| 1 | Bangladesh | Extreme |
| 2 | India | Extreme |
| 3 | Madagascar | Extreme |
| 4 | Nepal | Extreme |
| 5 | Mozambique | Extreme |
| 6 | Philippines | Extreme |
| 7 | Haiti | Extreme |
| 8 | Afghanistan | Extreme |
| 9 | Zimbabwe | Extreme |
| 10 | Myanmar | Extreme |
| 11 | Ethiopia | Extreme |
| 12 | Cambodia | Extreme |
| 13 | Viet Nam | Extreme |
| 14 | Thailand | Extreme |
| 14 | Malawi | Extreme |
| 16 | Pakistan | Extreme |

| Rank | Country | Category |
|---|---|---|
| 160 | Netherlands | Low |
| 161 | Latvia | Low |
| 162 | Lithuania | Low |
| 163 | Qatar | Low |
| 164 | Estonia | Low |
| 165 | Denmark | Low |
| 166 | Sweden | Low |
| 167 | Ireland | Low |
| 168 | Iceland | Low |
| 169 | Finland | Low |
| 170 | Norway | Low |




Source: Maplecroft, 2011

# Cities are at risk, especially on the coasts




Source: United Nations, Department of Economic and Social Affairs, Population Division: *World Urbanization Prospects, the 2011 Revision*. Urban agglomerations by size class and potential risk of multiple natural disasters, 2011

# Green growth presents an opportunity to build pathways for sustainable development

**Green growth is sustainable**

- Efficient in use of resources
- Inclusive
- Resilient
- Attractive, improving the quality of life

**Green growth is also transformative**

- Innovative, on the technology frontier
- Productive and competitive
- Connects, using ICT
- Transforms business models
- Capitalizes on partnerships

# Countries are beginning to protect natural capital as part of low-carbon and climate resilience strategies

- **Mexico:** Water management through environmental services payments
- **Niger:** drought and water management
- **Cambodia:** agriculture and resilience to drought and flooding.
- **Mongolia:** Ecosystem based adaptation approach to maintaining water security
- **Indonesia:**
  - economy-wide National Green Growth Strategy;
  - project level conservation and flood protection efforts like mangrove conservation in West Kalimantan;
  - Yet, Jakarta flood program still "hard-solution" focused
- **Indonesia, Brazil:** REDD+
- **Maldives:** Increasing climate resilience through an integrated water resources management program

**Indonesian mangrove conservation project**

Source: Allianz.com

# Going forward: How to Scale-up?

**Development and economic growth are critical**, but the quality of that growth path is critical for future sustainability.

**Three policy levers are critical for green growth:**

- Pricing natural capital
- Leveraging international and innovative finance
- Investing in innovation

Green growth initiatives must be supported by **knowledge creation, sharing and capacity building, and partnerships.**

# Value natural capital

- **Integrate the value of ecosystem goods and services in decision making:**
  - "Hard" versus "Soft" infrastructure solutions.
  - "compact" city form

- **Use pricing as a lever**:
  - Implement policies that set a price on ecosystem services**.**
  - Price carbon through a tax or market mechanism or tax.
  - Remove water and fossil fuel subsidies, with safety net for poorest.

- **Introduce natural capital accounting, making good the Rio+20 pledge:**
  - United Nations System of Environmental-Economic Accounts (SEEA).
  - World Bank Wealth Accounting and Valuation of Ecosystem Services (WAVES).
  - Private initiatives – Natural Capital Declaration for financial services.

# Step up international and innovative finance

- **Multilateral Support:**
  - *Global Environmental Facility*: payment for eco-system services.
  - *Adaptation fund*; CIF *Pilot Program on Climate Resilience*: links conservation and resilience.
  - *CIF Forest Investment Program:* readiness & investment needed for REDD+.

- **Bilateral support, with an emphasis on performance and results:**
  - Millennium Challenge Corporation: $450 compact with Indonesia for green prosperity.
  - Norwegian $3 billion support for REDD+ (Indonesia, Brazil, Guyana, etc.).

- **Market Based Approaches:** Forest Carbon Partnership Facility; Rio de Janeiro Green Exchange; voluntary carbon markets; green bonds.

**Green Climate Fund:** priorities and practices still unclear

# Invest in innovation

- **Extend focus on technological innovation beyond clean energy:**
  - CGIAR investments important, but more R & D support needed in developing countries.

- **Build innovation capacity in developing countries:**
  - Innovation eco-systems, with a focus on entrepreneurship.
  - Business incubation centers and financial mechanisms to support venture capital in least developed countries.
  - ICT to link the digital to the physical.
  - Promote south-south sharing.