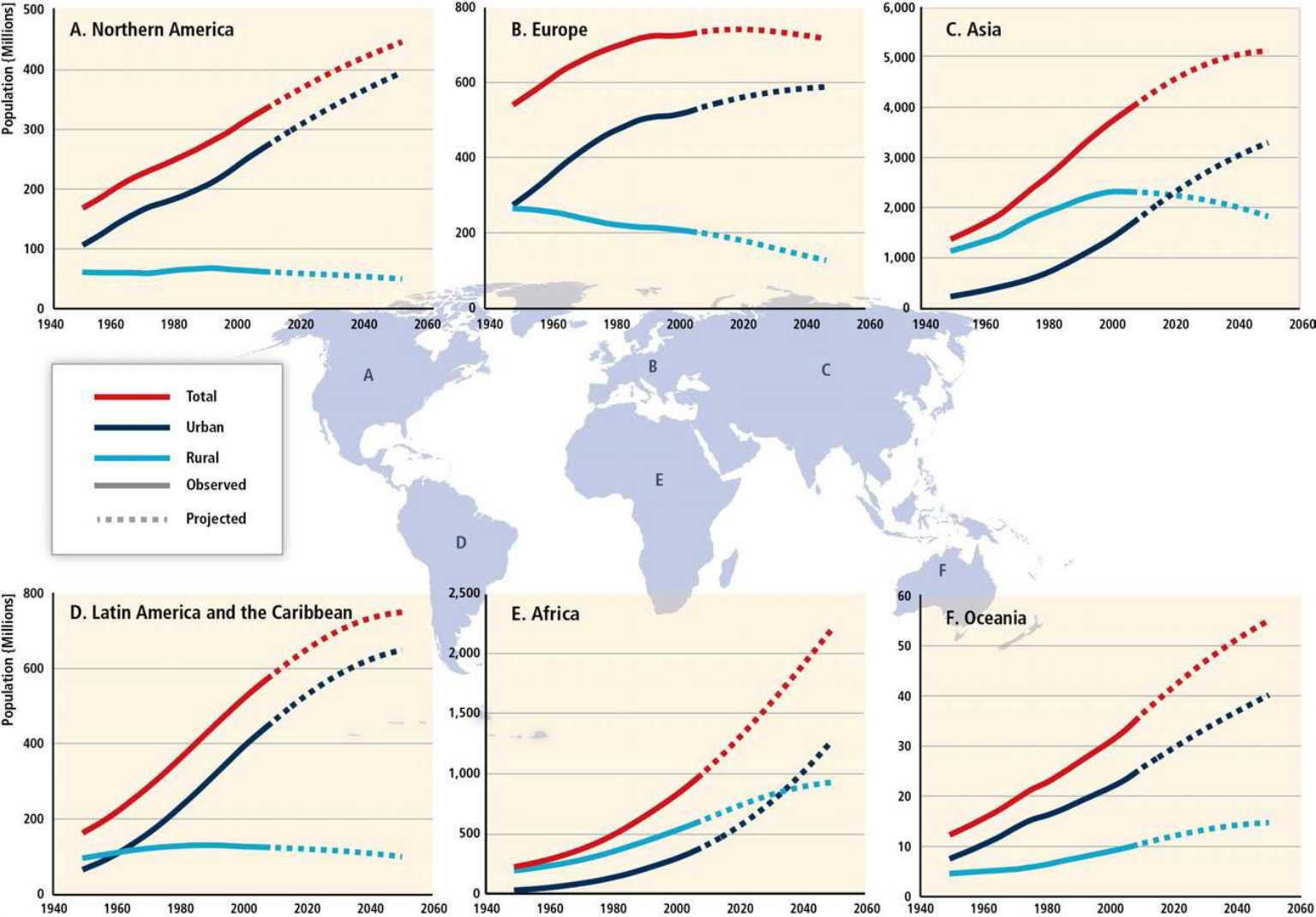


Rural Areas & Human Settlements



Purnamita Dasgupta
CLA, Rural Areas (Chapter 9)



Rural Areas:

- 50% world population
- 70% of developing world's poor
- Poverty rates high, but falling sharply, except SS-Africa

Trends in rural (blue), urban (black), and total (red) populations by region. Solid lines represent observed values and dotted lines represent projections; Source: UNDESA, 2012

Multiple non-climate stressors for vulnerability

Substantial Impacts; in developing countries due to low adaptive capacity, geographical location, high dependence on natural resource based livelihoods and agriculture.

Water supply, food security,
agricultural incomes;
Shifts in agricultural production
(e.g. beverage crops) and trade
volumes

Secondary impacts, and trade-offs between mitigation and adaptation policy on rural livelihoods

Adaptation : Access to credit, land, water, technology, markets, knowledge and information, **Perceptions** of the need to change: Many practical examples documented

Understanding Differentials in Settlements: Hazards, **Vulnerabilities** & **Adaptation**

- **Rural: Droughts & Water Shortage (ch 9)**
 - **Pastoralists, artisanal fisheries, poor /complex property rights, lack of drinking & irrigation water**
 - **Focus: awareness, remoteness, lack of voice; land policy; capacity building in water management**
- **Urban: Inland & Coastal Flooding (ch 8)**
 - **Low lying areas; low income informal settlements; lack of local interest**
 - **Infrastructure : water, drainage, housing; insurance; protection of exposed assets (old and new); coastal habitat restoration**

Human Settlements: Rural-Urban Interactions

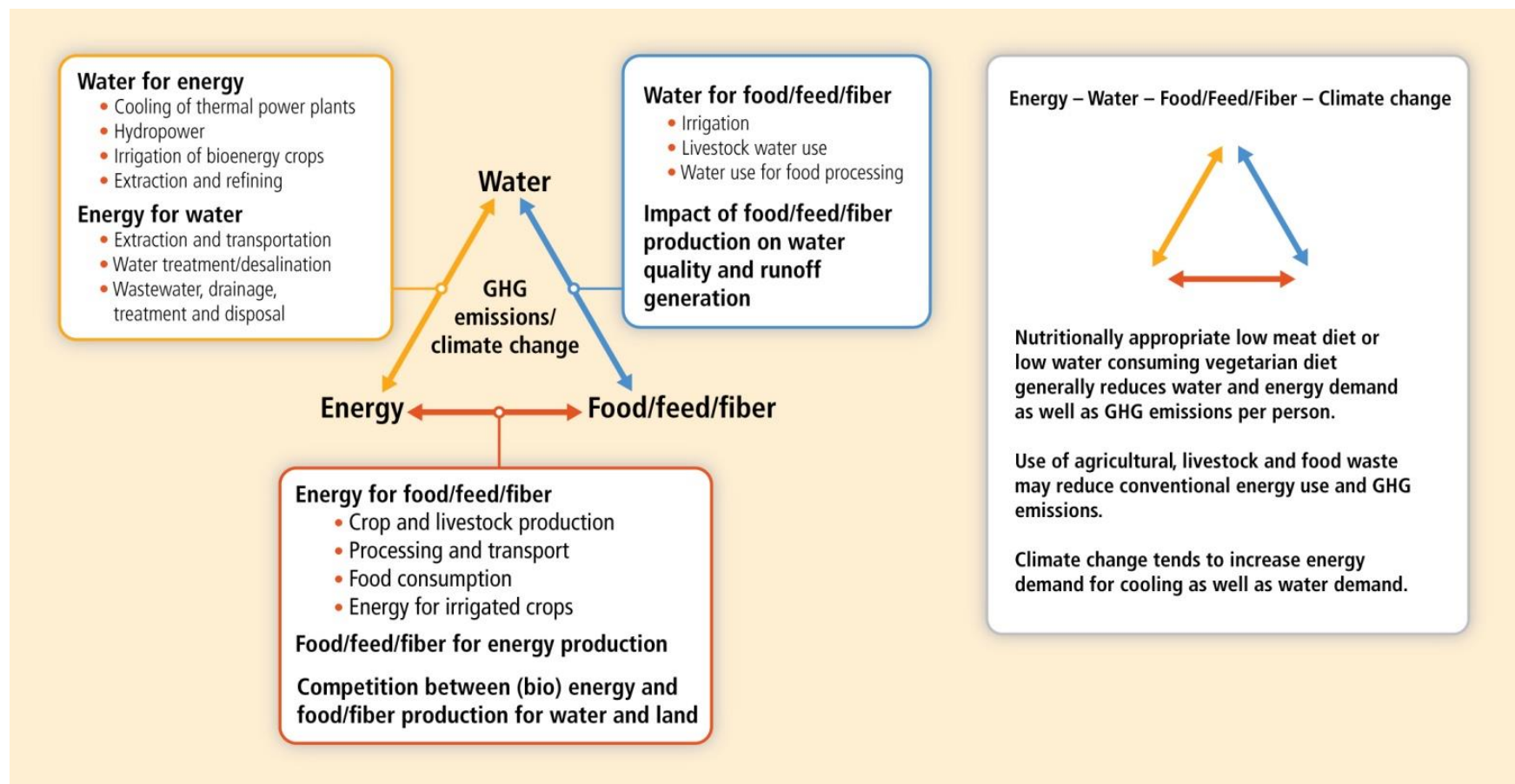
- **Climate extremes in rural areas: migration, water supply**
- **Interface specific: agriculture, marginalization, health**
- **Integrated infrastructure and service disruption**

Stress from Climate Change exacerbates Rural-Urban conflicts about management of natural resources (Box IPCC AR5 WG II, Box CC-UR)

Sectoral interactions with Rural-Urban interactions:

irrigation increases climate resilience for food and fibre production but reduces water availability for other uses (IPCC AR5 WG II, Box CC-WE: The Water-Energy-Food Nexus)

Integrated Adaptation and Mitigation options: Water-Energy-Food nexus (AR5 WG II, Box CC-WE)



Impacts and Costs

- Differential impacts of climate change across people, countries and in time; multi-metric approaches
- Trade-offs and synergies, and comparison of values. Economic valuation for impact valuation and adaptation costs
- CC : context of non-market values, inequities, ancillary costs and benefits of response options (e.g. maldaptation)

Challenges

- Costing challenges: In rural areas value of non-market goods and services, esp. where communities and economies are directly dependent on ecosystem services
- Multi-metric approach: mix of non / quantifiable costs, non /monetary metrics; (distributional impacts, uncertainty)



Source: World Agroforestry Centre

NTFP collection

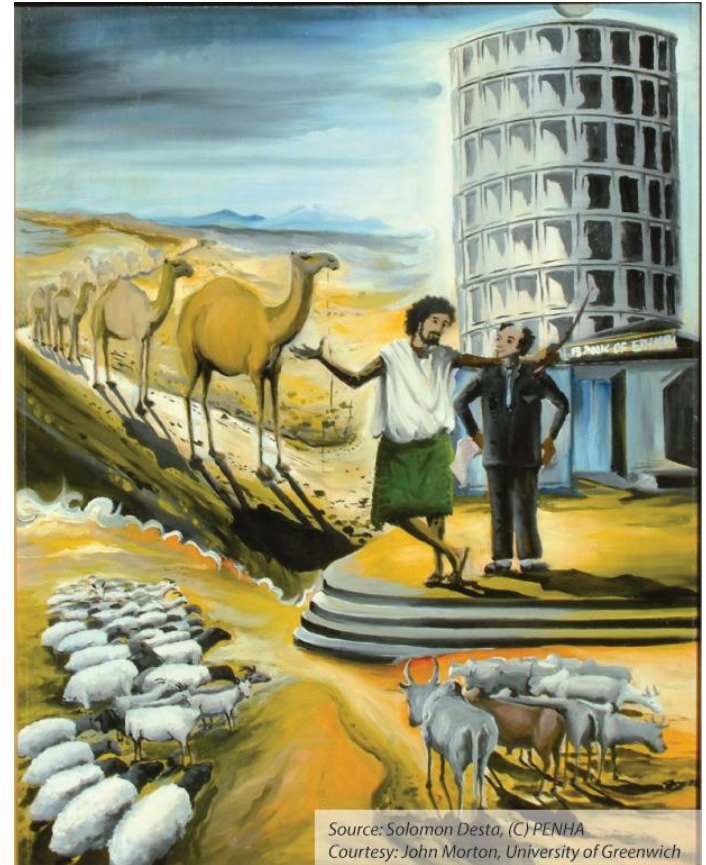
Partial / Non-market goods and services: Values and Adaptation

- Ecosystem Based Adaptation: (IPCC AR5, WG II Box CC-EA)

Sustainable water, crop management

Grasslands, range lands, restoration of coastal habitat

Crop & livestock genetic diversity



*I know my wealth is in my livestock:
I know not its value for Insurance*

Adaptation for Human Settlements

Incentives, regulation, instruments (Public sector: removing institutional barriers, basic amenities and public health provision, biodiversity)





Thank you

Courtesy: Andy Catley, Tufts University