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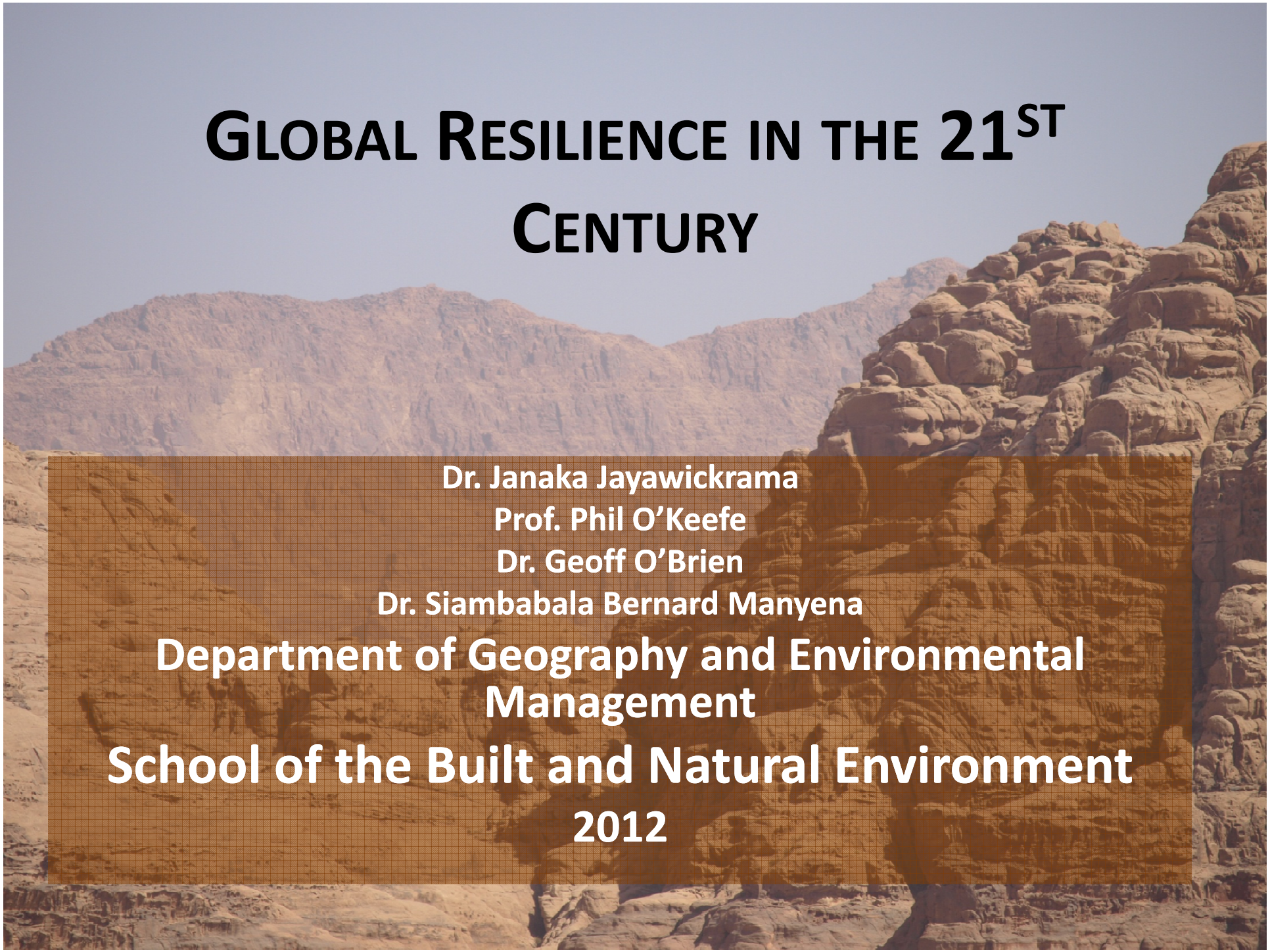

GLOBAL RESILIENCE IN THE 21ST CENTURY

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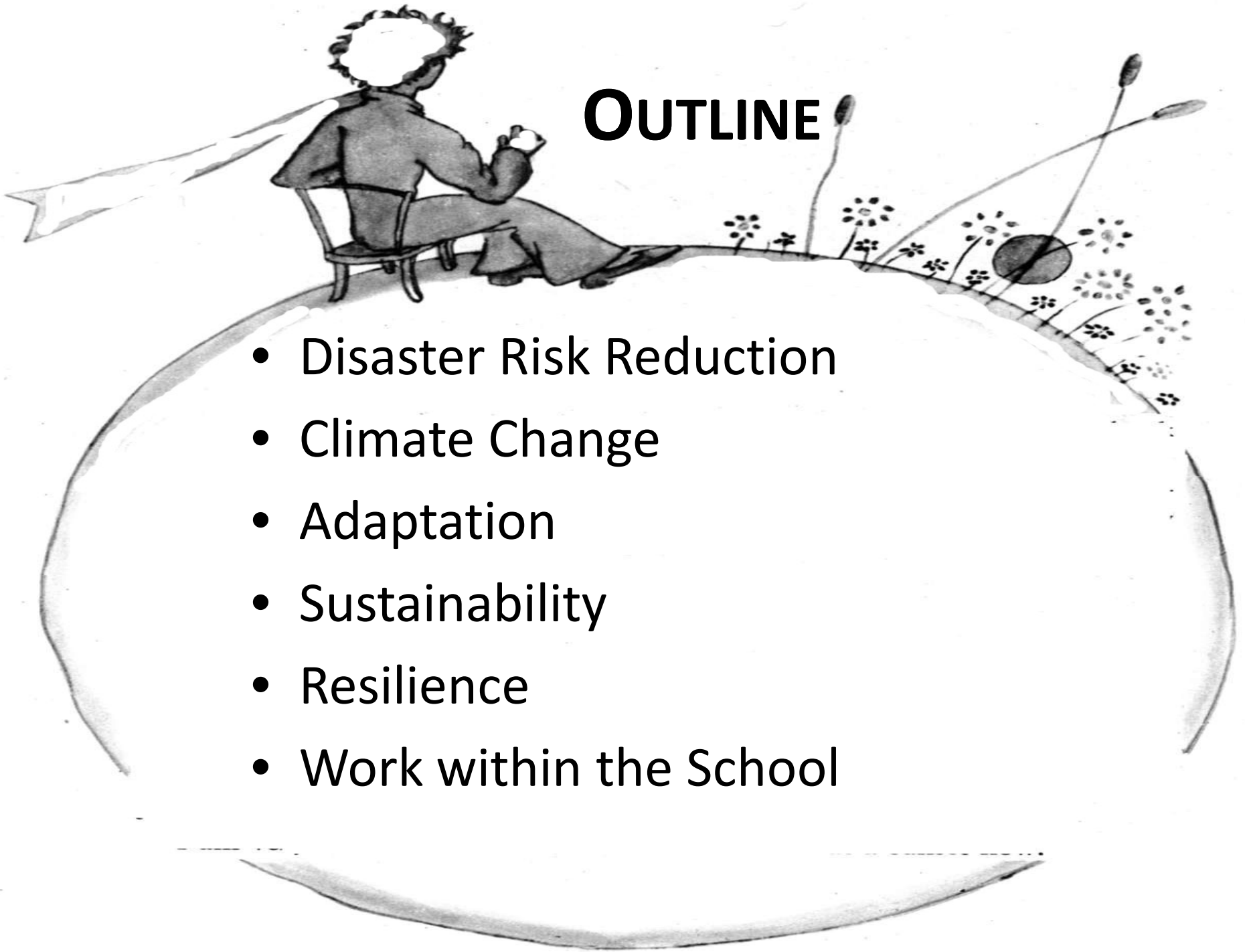
School of the Built and Natural Environment

2012



OUTLINE

- Disaster Risk Reduction
- Climate Change
- Adaptation
- Sustainability
- Resilience
- Work within the School

Drive for Disaster Risk Reduction

- Increase of disaster events globally and increasing disaster costs.
- Social, political, cultural, economic and environmental implications.
- Recognition that prevention is better than response (HFA, 2005).

Hyogo Framework for Disaster Risk Reduction

1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
2. Identify, assess and monitor disaster risks and enhance early warning.
3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.

HYOGO FRAMEWORK FOR DISASTER RISK REDUCTION

4. Reduce the underlying risk factors.
5. Strengthen disaster preparedness for effective response at all levels.

CLIMATE CHANGE – CHALLENGE

- Accelerated Climate Change and increasing variability is a great single threat to **sustainable development** and **MDGs**.
- International goal of maintaining average global temperature rise below 2 Celsius is very unlikely due to lack of international commitment to an agreed Greenhouse Gas concentration level and a mitigation timetable to achieve that target.

CLIMATE CHANGE – CHALLENGE

- International action unlikely before 2020 – possibility of some regional agreements; e.g.: EU but growing energy demand means that Greenhouse Gas emissions will continue to rise.
- Increasing extremes, more problematic than average change in precipitation of temperature.

Delivering Adaptation

- Historic and ongoing loading of Greenhouse Gases into the atmosphere means that change is built-in (and will continue to be) into the climate system. We will have to adapt.
- Adaptation will mean long term adjustment to new average global mean temperature and to extreme events as the climate system adjusts.

DELIVERING ADAPTATION

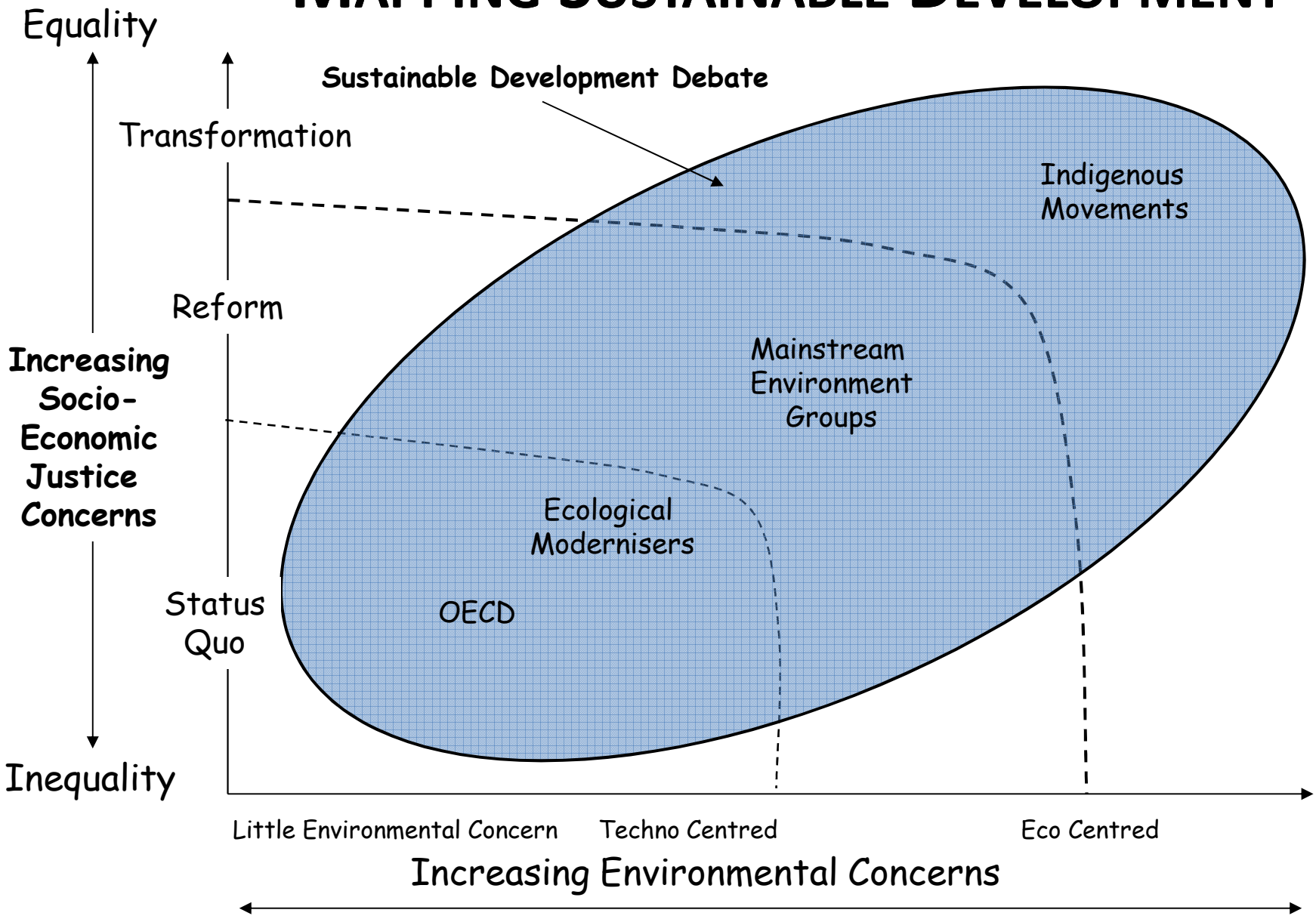
- There will be winners and losers (but more losers). In general it will be easier for wealthier countries to adapt than poorer ones.
- Adaptation will need to be purposeful – this will require iterative risk assessments Linked to ongoing actions. Adaptation actions will need at local, regional and national levels. Delivery will need to collaborative.

SCHOOLS OF SUSTAINABILITY

Subject matter	Ecological sustainability	Sustainable growth	Sustainable development
Major concerns	Ecosystems and biosphere	Economy, markets and prices	People's livelihoods, economy, society
Major disciplines, theoretical base	Natural sciences, biology, ecology	Neo-classical and new institutional economics, new political economy, rational choice theory	Agricultural and social sciences: "old" and some "new" economics, anthropology, ethnology
Basic world view	Equilibrium focused, nature centred	Equilibrium focused, anthropocentrist	Basically evolution focused, anthropocentrist
Major concerns with respect to quantification of sustainability	Rates of population growth, environmental degradation, loss of biodiversity, deserts, pollution, etc	Rates of growth of income or consumption based on national accounts, market-valued flows of goods and services	Specific and aggregate social indicators, case studies of livelihoods, coping and conflict solving strategies
Major policy prescriptions	Protect nature, educate people	Develop markets and internalise externalities	Empower people, develop institutions
Major goals	Ecological viability	Economic efficiency	Social efficiency, justice

Source: Adapted from Hatzius, T, 1996, Institute of Development Studies Working Paper 48

MAPPING SUSTAINABLE DEVELOPMENT



Source: Adapted from Paper 2: 41

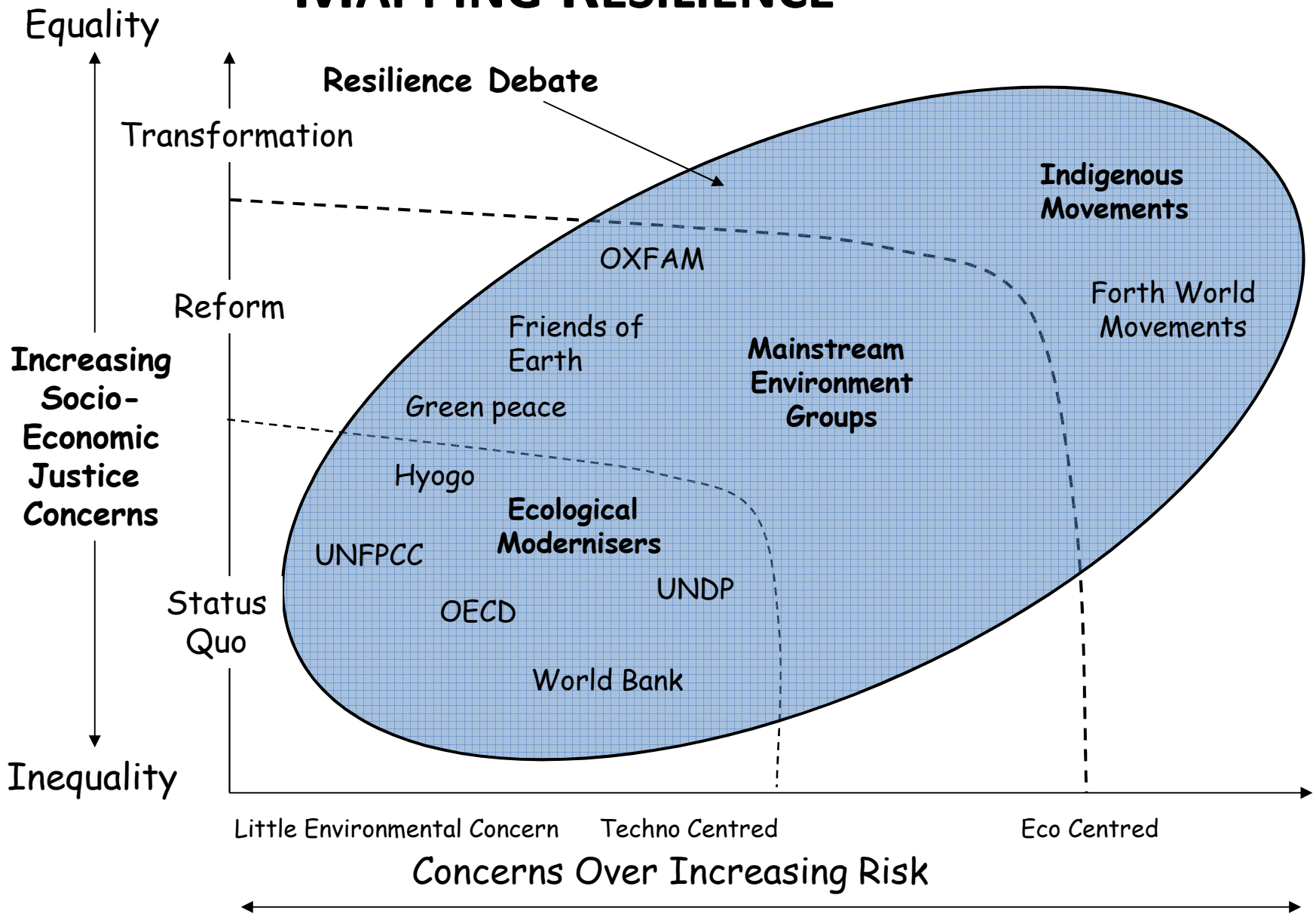
RESILIENCE

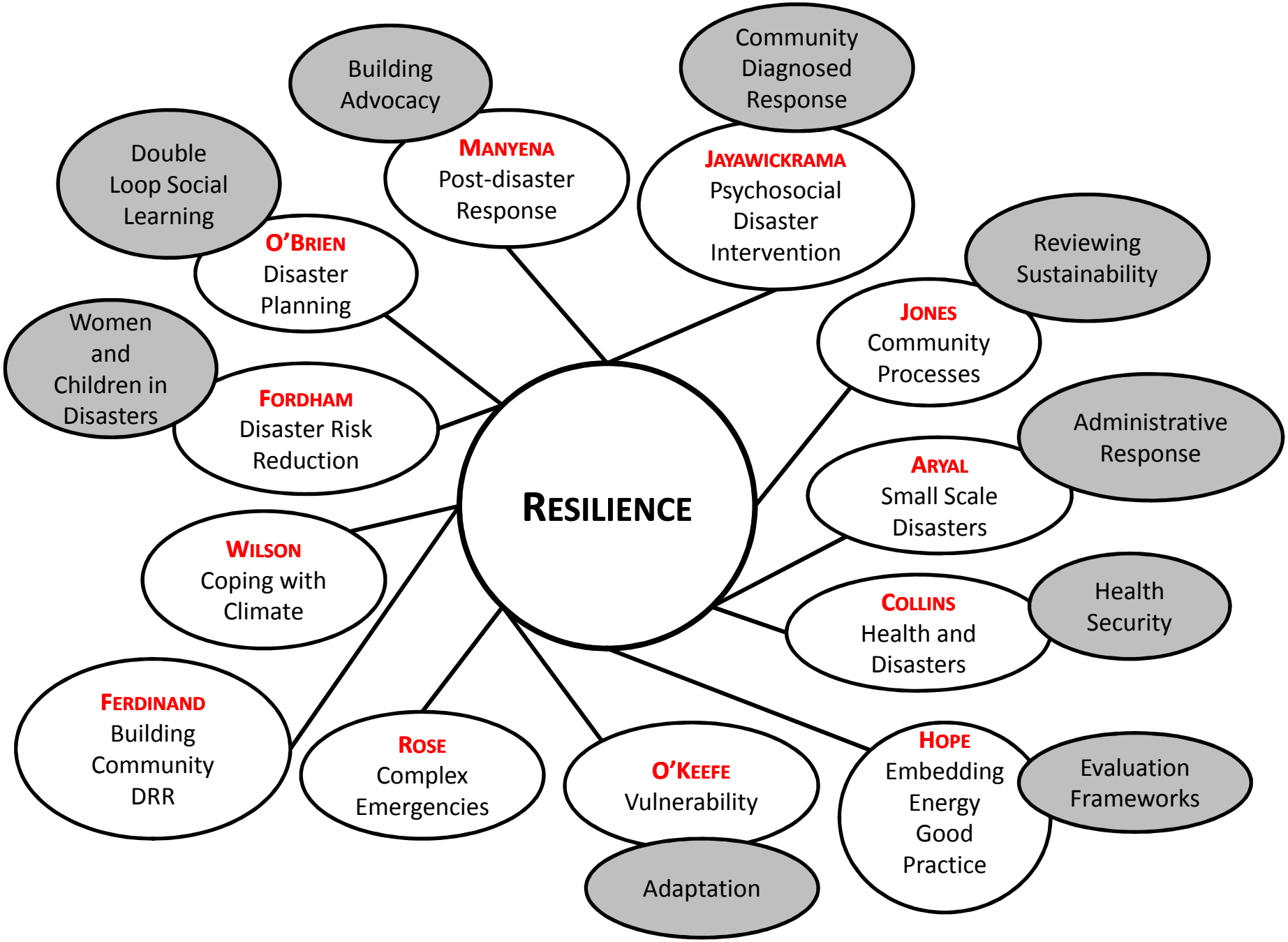
- Resilience is usually defines as the ability to recover from disruptive events.
- Has become an important part of the disaster management discourse as it implies greater self-reliance.
- Now expressed as bounce-forward ability.
- Resilience can be viewed as transformative.

Resilience Matrix

Subject Matter	Ecological Resilience	Conventional Economics	Socio-economic Resilience
Major Concern	Ecosystem	Market Efficiency	Livelihoods
Major Goal	Ecological Viability	Profit	Social Justice
Major Academic Base	Biology	Business Schools	Political Economy
World View	Equilibrium	Market Equilibrium	Evolution
Research Approach	Neutral	Neutrality	Explicit Values
Major Advantages	Diversity	Dominant Ideology	Equity
Major Flaws	No Disequilibrium Design	No disequilibrium is assumed	Little Formal Theory
Policy Prescription	Protect Nature/Institutions	Encourage Competition	Empower People
Policy Delivery	Top Down	Top Down	Bottom Up
Policy Presentation	Bounce Back Ability	Restoration of Status Quo	Bounce Forward Ability

MAPPING RESILIENCE




RESILIENCE
Building Advocacy
MANYENA
Post-disaster Response
Community Diagnosed Response
JAYAWICKRAMA
Psychosocial Disaster Intervention
Double Loop Social Learning
O'BRIEN
Disaster Planning
Reviewing Sustainability
JONES
Community Processes
Women and Children in Disasters
FORDHAM
Disaster Risk Reduction
Administrative Response
ARYAL
Small Scale Disasters
WILSON
Coping with Climate
COLLINS
Health and Disasters
Health Security
FERDINAND
Building Community DRR
ROSE
Complex Emergencies
O'KEEFE
Vulnerability
HOPE
Embedding Energy Good Practice
Evaluation Frameworks
Adaptation

THANK YOU