Regenerative Cities
Opening Address

Urban Solutions & Sustainability R&D Congress
Science of Cities Symposium

5 October 2023

Prof. Dr Thomas SCHROEPFER
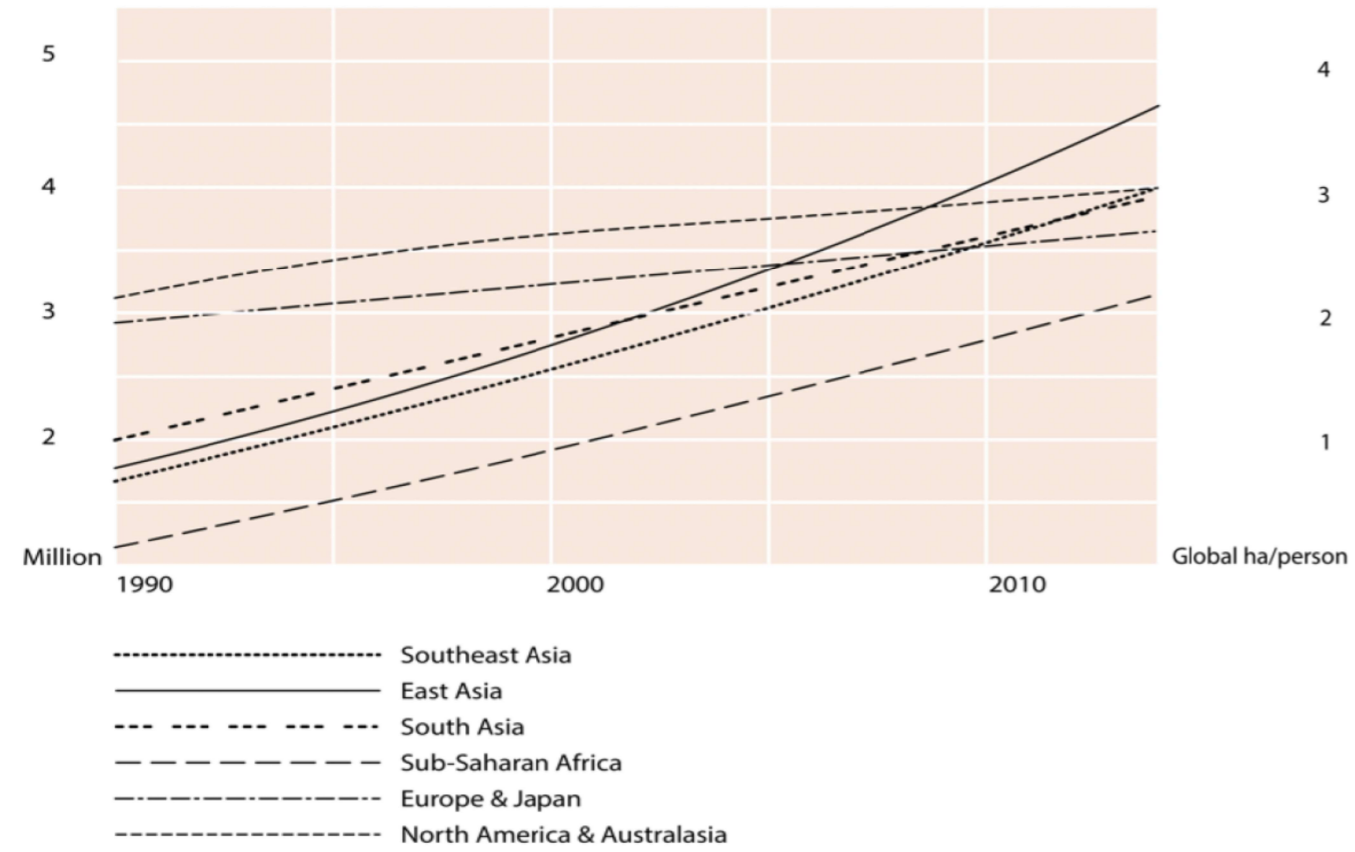Co-Director, Future Cities Laboratory (FCL) Global
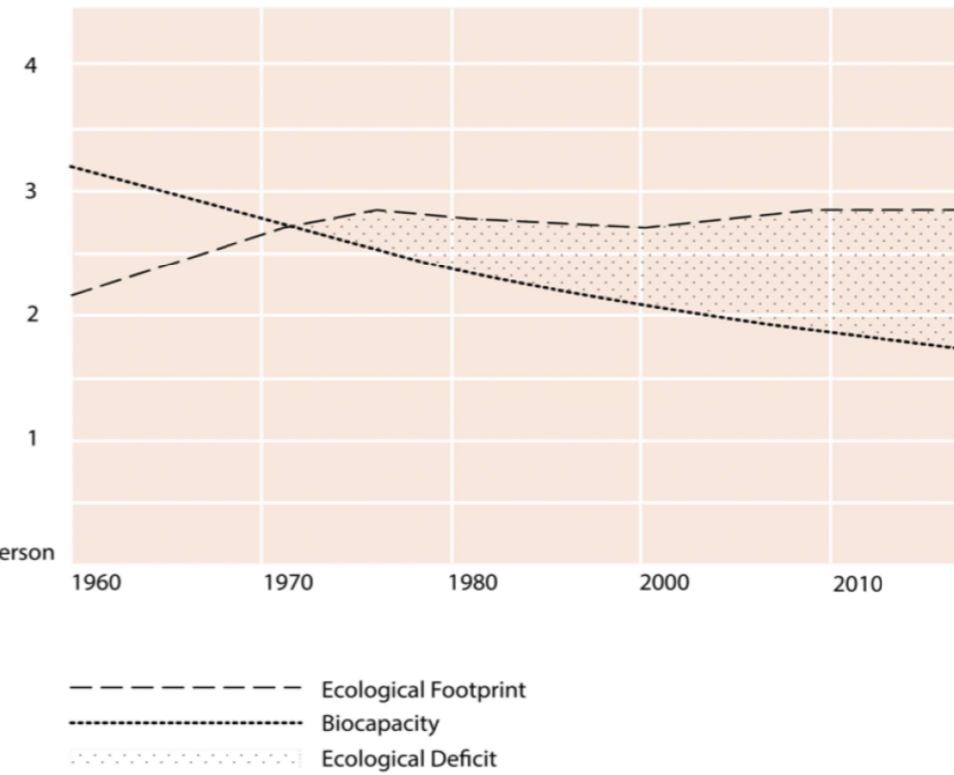
CREATE **ETH** *zürich* NUS National University of Singapore NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE SUTD SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

(FCL) FUTURE CITIES LABORATORY GLOBAL

Regenerative Cities

Taking stock of today's situation

Urban Population Growth

Legend:
- Southeast Asia
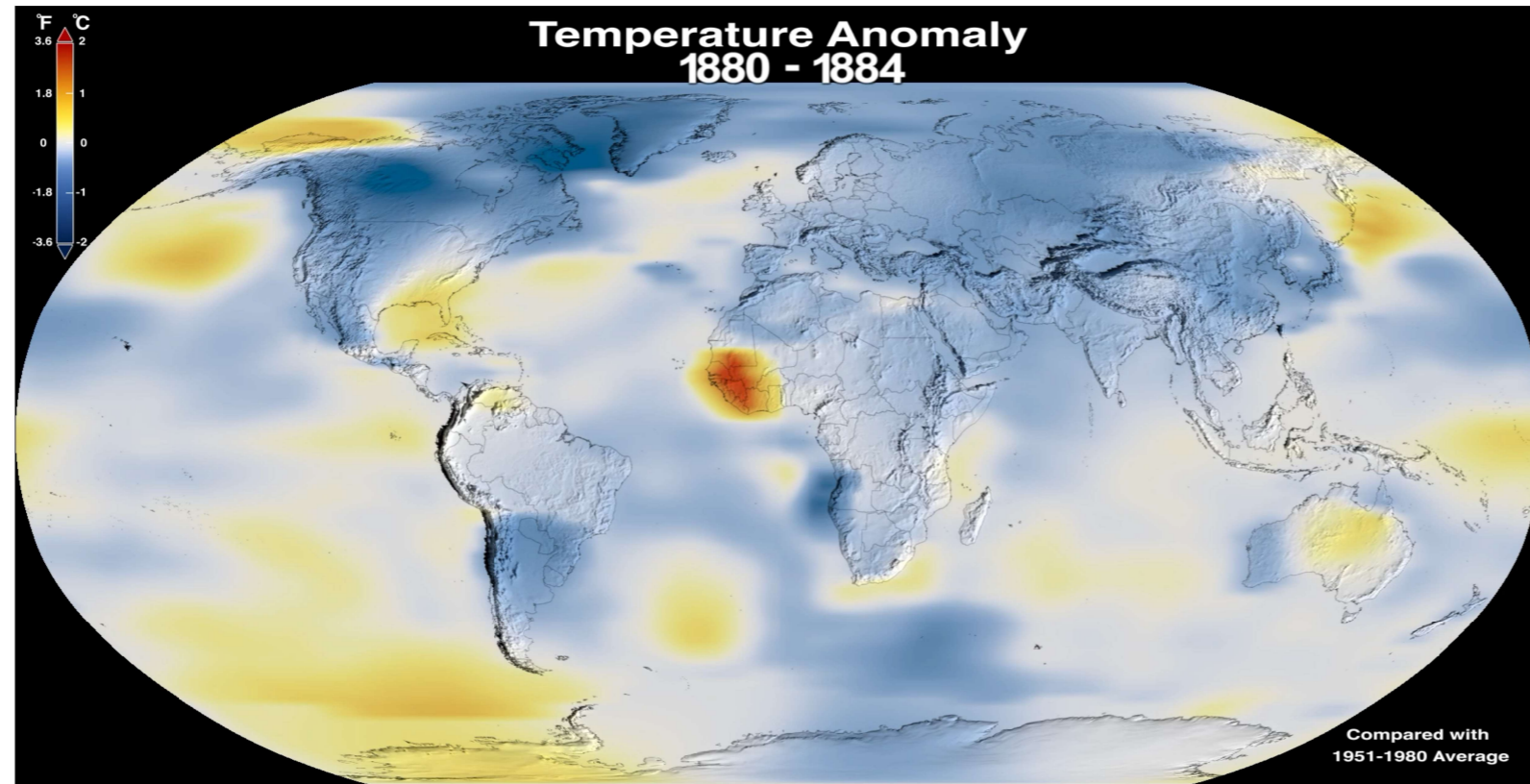- East Asia
- South Asia
- Sub-Saharan Africa
- Europe & Japan
- North America & Australasia

World Ecological Deficit

Legend:
- Ecological Footprint
- Biocapacity
- Ecological Deficit

Data: Angel 2016 , Wackernagel 2019

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Taking stock of today's situation

Temperature Anomaly
1880 - 1884

Compared with
1951-1980 Average

Source: climate.nasa.org

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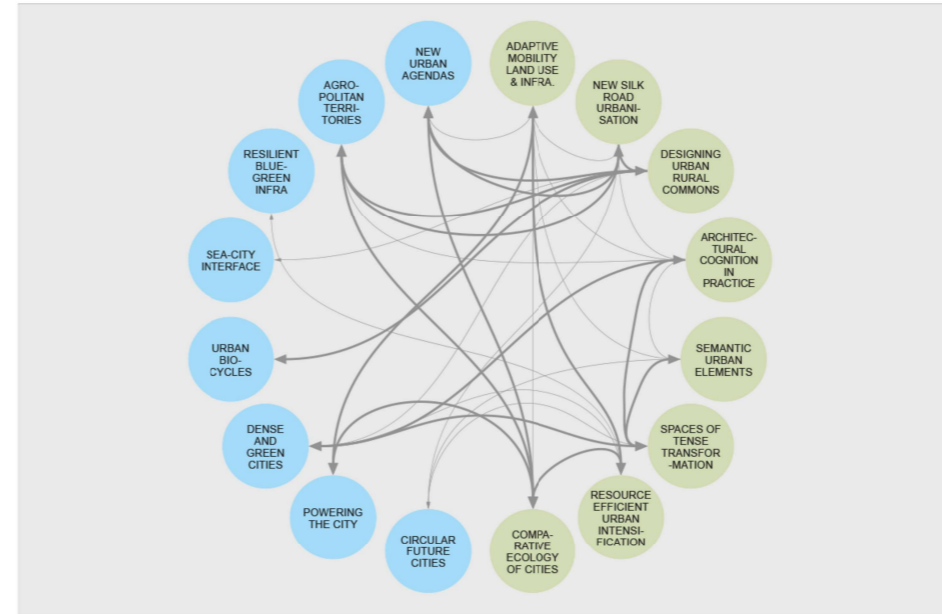SINGAPORE UNIVERSITY OF
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UN Sustainable Development Goals and FCL Global research

Source: United Nations

Core research modules
Stage 2 research modules
Links between research modules

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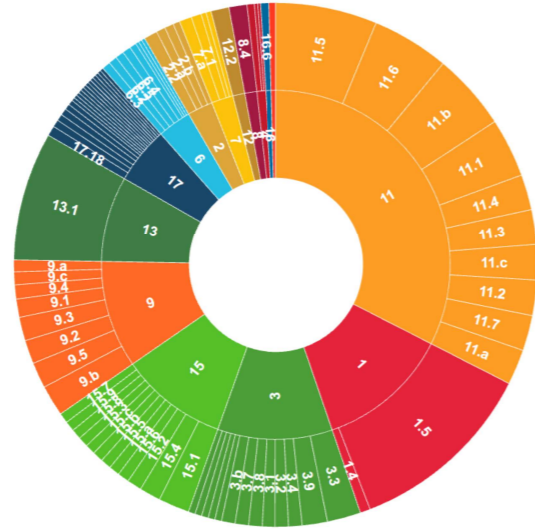## UN Sustainable Development Goals and FCL Global research

SUSTAINABLE DEVELOPMENT GOALS

The United Nations **Sustainable Development Goals** (SDGs) are 17 global goals that all UN Member States have agreed to try to achieve by the year 2030.

The 17 SDGs are articulated into 169 **targets**, 230 **indicators**, and over 400 **data series** that help to measure the progress towards achieving the SDGs.

The full SDG Taxonomy is officially published and maintained as **linked open data** at: http://metadata.un.org/sdg/

Explore the SDG wheel to find goals, targets, indicators and data series that are most relevant to the processed document, based on the extracted concepts and geographical areas.

11 SUSTAINABLE CITIES AND COMMUNITIES
Make cities and human settlements inclusive, safe, resilient and sustainable

NAME: Goal 11

DESCRIPTION: Make cities and human settlements inclusive, safe, resilient and sustainable

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

NAME: Goal 9

DESCRIPTION: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

3 GOOD HEALTH AND WELL-BEING
Ensure healthy lives and promote well-being for all at all ages

NAME: Goal 3

DESCRIPTION: Ensure healthy lives and promote well-being for all at all ages

13 CLIMATE ACTION
Take urgent action to combat climate change and its impacts

NAME: Goal 13

DESCRIPTION: Take urgent action to combat climate change and its impacts

15 LIFE ON LAND
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

NAME: Goal 15

DESCRIPTION: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
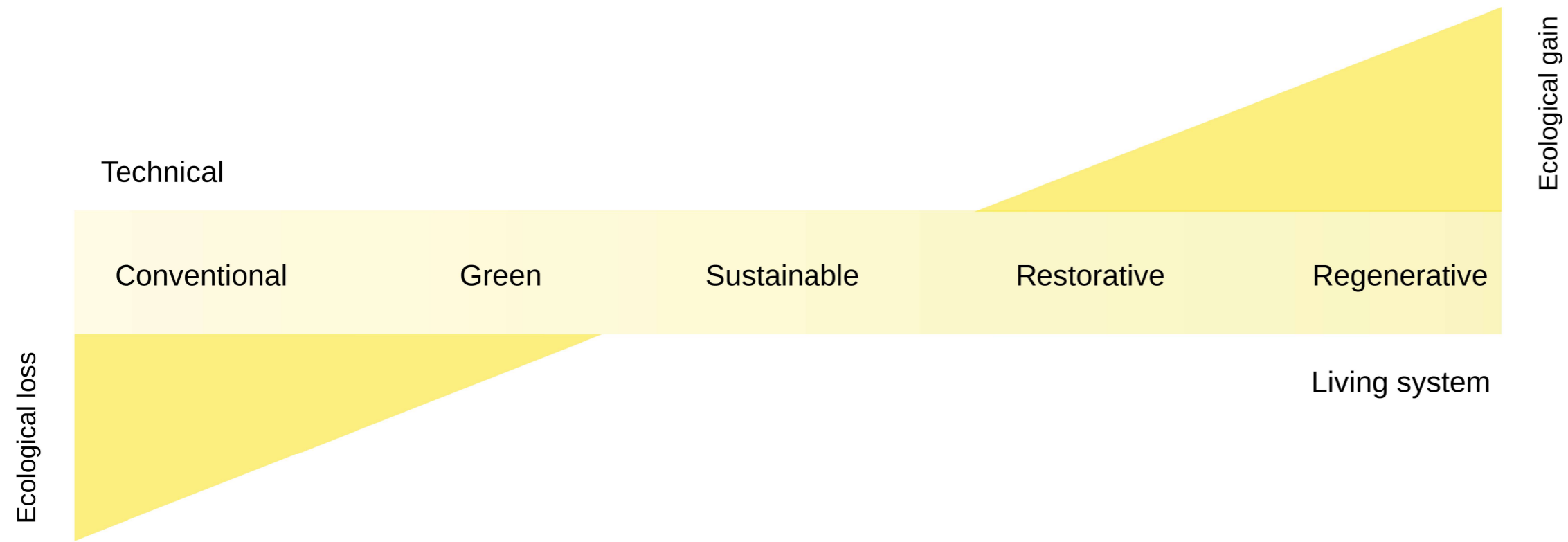
17 PARTNERSHIPS FOR THE GOALS
Strengthen the means of implementation and revitalize the global partnership for sustainable development

NAME: Goal 17

DESCRIPTION: Strengthen the means of implementation and revitalize the global partnership for sustainable development

11 SUSTAINABLE CITIES AND COMMUNITIES | **3 GOOD HEALTH AND WELL-BEING** | **15 LIFE ON LAND** | **9 INDUSTRY, INNOVATION AND INFRASTRUCTURE** | **13 CLIMATE ACTION** | **17 PARTNERSHIPS FOR THE GOALS** | **1 NO POVERTY**

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Regenerative Cities

Towards a new paradigm for urban planning and design

Technical

Ecological gain

Conventional   Green   Sustainable   Restorative   Regenerative

Ecological loss

Living system

Source: Arup

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Towards a new paradigm for urban planning and design

Regenerative Cities

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Future Cities Laboratory Global Conference

ETH Zurich, 12-13 October 2023

fcl.ethz.ch