Master Class
Climate Adaptation and Poverty

ENGINEERS WITHOUT BORDERS DENMARK

Prof. Dr. Nicola Tollin
Professor wsr in Urban Resilience

Katarzyna Wieszczeczynska
PhD Candidate

Civil and Architectural Engineering CAE
University of Southern Denmark SDU
nto@iti.sdu.dk
kawi@iti.sdu.dk

SDU
University of Southern Denmark

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Agenda

10.00 – 10.10 (10 min) – Introduction, Dorte Lindegaard Madsen (EWB)

10.10 – 10.40 (30 min) – Presentation of SDU.Resilience work, Prof. Dr. Nicola Tollin (SDU)

10.40 – 11.00 (20 min) – Q & A session

11.00 – 11.10 (10 min) – Break

11.10 – 12.10 (60 min) – Presentation of Urban Resilience Tools & Methods, Katarzyna Wieszczeczynska (SDU)

12.10 – 12.30 (20 min) – Q & A session

12.30 – 12.40 (10 min) – Break

12.40 – 13.00 (20 min) – Exercise

SDU

Department of Technology and Innovation ITI

Educating engineers for the future in both Odense and Sønderborg providing research & innovation with global impact in collaboration with industry and other external partners

Civil and Architectural Engineering CAE

The section Civil and Architectural Engineering provides education and conducts research in the design, construction, and use of the built environment. We are a section of engineers and architects, working together following the concept of total design, which implies a comprehensive understanding of the complexity of building projects and the need for building engineers to collaborate across disciplinary boundaries.

Urban Resilience Research Group SDU-RESILIENCE

SDU-RESILIENCE undertakes transdisciplinary research, and education and knowledge transfer activities on urban resilient transition, addressing both causes and effects of climate change and global challenges in cities.

The group's activities are aimed at informing policy making at international and national level, as well as at supporting science-based urban planning and design at local level, both in the global north and the global south.

SDU-resilience actively contributes to the implementation of the Sustainable Development Goals, the Paris Agreement, the New Urban Agenda and the Sendai Action Framework for Risk Reduction.

OPERATIONAL DEFINITION

URBAN RESILIENCE

Is the ability of urban systems to address systemically and dynamically the

causes and effects of major global challenges and crises:

environmental, biological, geological and man-made hazards

un-just development patterns,

unsustainable use of resources and negative externalities

rapid and unplanned urbanization,

climate change mitigation and adaptation

Urban resilience is NOT ONLY : Disaster Risk Reduction nor Climate Adaptation

SDU

KEY CHALLENGES

Lack of capacities and need for systemic actions

Capacity building and skills development

Shift from basic services to integrated interventions

Empower local communities and action

Couple development and climate interventions

Address both causes and effects of climate change

Use of appropriate technologies

Gender equality

KEY PRINCIPLES

1) Eco-system services and nature based solutions are integrated and systemic solution that can generate co-benefits in a cost effective manner

2) Co-benefits can be tackling climate change causes (mitigation) and effects (adaptation) including slow and rapid on-setting one, at once.

3) Co-benefits can be tackling also sustainable development issues, as:
growth/job creation, social inclusion/justice, preservation of bio-diversity, health..

4) Appropriate technologies can enable social, environmental, and economic transformation processes.

CIRCULARITY AND SYSTEMIC INTEGRATION

CIRCULAR ECONOMY AND URBAN METABOLISM

Circular economy transition

Urban metabolism and circular urban metabolism

Decent work

CIRCULAR URBAN METABOLISM

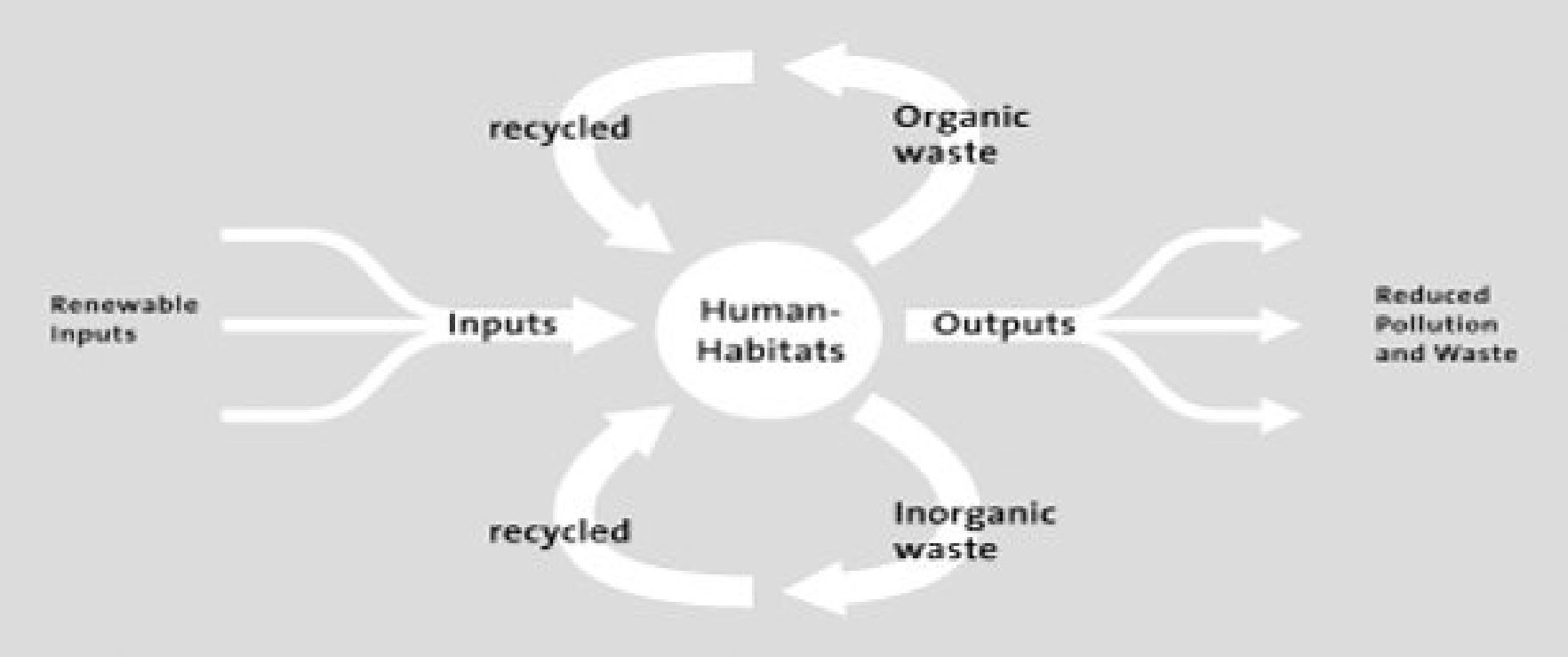
> Material

> Water

> Energy

> Land

> Information



EXAMPLES

BICIMAQUINAS

Low tech upgrade

Re-Cycling

Andalucía

Recover intangible knowledge

Bio-climatic and reource use through nature

DATA AND PROFILING

RESILIENCE PROFILING, RISK MAPPING & SCENARIOS

Profiling and awareness

Data gaps

System thinking and interconnections/relations

13 CLIMATE ACTION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

10 REDUCED INEQUALITIES

KEY SECTORIAL ISSUES

SDU

HOUSING

Right to the house and right to the city

Vulnerability

Urban sprawl and informality

VIVIENDA Y ODS EN MÉXICO

WATER

Basic services

Human rights

Climate change adaptation

6 CLEAN WATER AND SANITATION

13 CLIMATE ACTION

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

United Nations Educational, Scientific and Cultural Organization

Intergovernmental Hydrological Programme

CAPACITY BUILDING

EDUCATION AND CAPACITY BUILDING

Education of future generations

Capacity building and skills development

Lifelong learning and community of practice

13 CLIMATE ACTION

4 QUALITY EDUCATION

11 SUSTAINABLE CITIES AND COMMUNITIES

17 PARTNERSHIPS FOR THE GOALS

EXAMPLES

Morro Moravia Medellin

LESSONS LEARNED

Co-design and co-creation: participatory design and implementation at the core of the project

Territorial re-appropriation: re-appropriation of the territory by local communities

Planning (technology) as a process: a resilient planning process, as a dynamic and adaptive process

Co-generation of knowledge: dialogue and knowledge exchange between stakeholders and local communities

Women: the central and steering role of women through all the process

Community's priorities: adaptation, mitigation, TEM, SB????....NO just their quality of life

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