



TOWARDS CLIMATE-RESILIENT FORESTS THROUGH TRANSDISCIPLINARY COLLABORATION BETWEEN SCIENCE AND PRACTICE

the FORESTS are UNDER THREAT by MULTIPLE GLOBAL CHANGE DRIVERS examples from CANADA & EUROPE/BELGIUM

The FOREST MANAGERS are well aware But don't know HOW to make the FOREST MORE RESILIENT to these global changes

there still is a GAP between SCIENCE & PRACTICE
last year study interviewing both practitioners & scientists
WORK TOGETHER SUPPORT SEEK for WIN-WINS

a TRUE TRANSDISCIPLINARY APPROACH is needed to BRIDGE this gap

*** TIMETWORK** at the PROVINCE of ANTWERP with practitioners on a FUTURE-ORIENTED MANAGEMENT of TREES in FORESTS

Actual LAND-SYSTEM rely on LAND COVER and IGNORE what lies UNDERNEATH

WALLONIA 2001-2019
the study shifts to a SOIL-INTEGRATED VIEW with consideration for ECOSYSTEM SERVICES
Water quality regulation
Flood mitigation
Erosion control
Additional regulating & cultural services

SOIL-SENSITIVE INSIGHTS INTO LAND-SYSTEM CHANGE: VULNERABILITY AND ECOSYSTEM SERVICE LOSSES UNDER ARTIFICIALISATION IN WALLONIA

KEY FINDINGS

MAIN SOURCE = CROPLANDS
DISPROPORTIONATE ARTIFICIALISATION of marginal / sensitive soils
HIGH REGULATING-SERVICE VALUE
LOSS of ECOLOGICAL "SAFETY NETS"

INCREASING

FLOOD RISK
WATER POLLUTION
SOIL EROSION
LOSS of LANDSCAPE MULTIFUNCTIONALITY

MARIE PAIRON UMONS

all invisible impacts in standard land-cover metrics

LAND-SYSTEM must shift to "What is UNDER the surface"

PROTECTING MARGINAL SOIL = ESSENTIAL for landscape resilience within planetary boundaries

TRANSDISCIPLINARY PATHWAYS FOR CLIMATE-RESILIENCE



THE PARALYSING EFFECT ON (CLIMATE) RESILIENCE OF A RISK-BASED APPROACH

Focusing on PREDICTING & MANAGING RISKS may WEAKEN our ABILITY to DEAL with UNCERTAINTY, COINCIDENCES & NON-LINEAR situations

Risks formulas enable PRECAUTIONARY but can create an ILLUSION of CONTROL

Some uncertainties cannot be quantified

important factors overlooked despite thorough risk assessments

Shift from "RISK MANAGEMENT"

to "GOVERNING UNCERTAINTY"

to better address the UNKNOWN rather than only the MEASURABLE

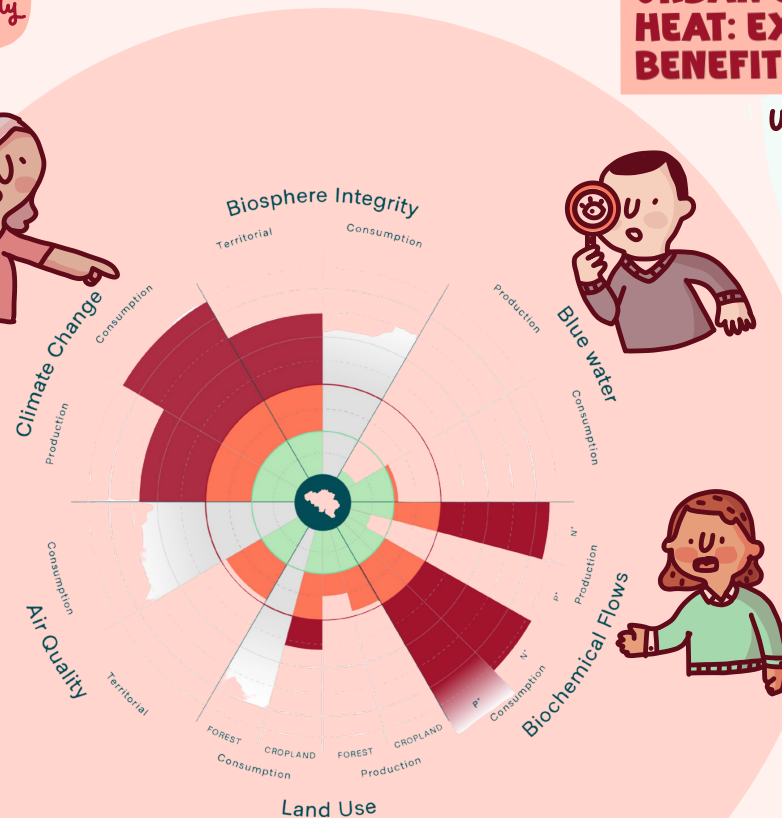


Risk = turning uncertainty into probability

RISK LISTS shift attention from what is NOT LISTED

a list does not guarantee sufficient action

STRATEGIES for 1 RISK can CONFLICT with STRATEGIES needed for OTHERS



URBAN GREEN SPACE AS A BUFFER AGAINST URBAN HEAT: EXPLORING THERMAL AND HEALTH-RELATED BENEFITS OF GREEN COMPOSITION AND CONFIGURATION



EVA BEELE KU LEUVEN

URBANISATION & CLIMATE CHANGE intensify the

URBAN HEAT ISLAND EFFECT

is a nature-based solution TYPE? HOW MUCH? WHERE?

CONFIGURATION + COMPOSITION matter

CONTEXT-SPECIFIC STRATEGIES

are needed

URBAN FOREST in green locations

URBAN SAVANAS in built-up grey locations

VEGETATION in open areas

the most important for HEALTH OUTCOMES especially when adjusting for socio-economic & physical vulnerability

During heat events, NEARBY GREEN SPACE significantly

REDUCES HEAT STRESS
OFFERS BENEFITS to SLEEP

Different vegetation types offer different benefits

Integrating FINE-SCALE CLIMATE DATA with CITIZEN HEALTH DATA highlights how DIVERSE TARGETED & INCLUSIVE green strategies PROTECT HEALTH & STRENGTHEN URBAN RESILIENCE

PLANETARY LIMITS AND COMPLEX RISKS : DEVELOPING INTERDISCIPLINARY PERSPECTIVES

PANEL 1

DECEMBER 2ND OF 2025 BRUSSELS

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ULB

