

# Why does biodiversity matter for development

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Kehityspolitiikan päivät  
Finlandiatalo

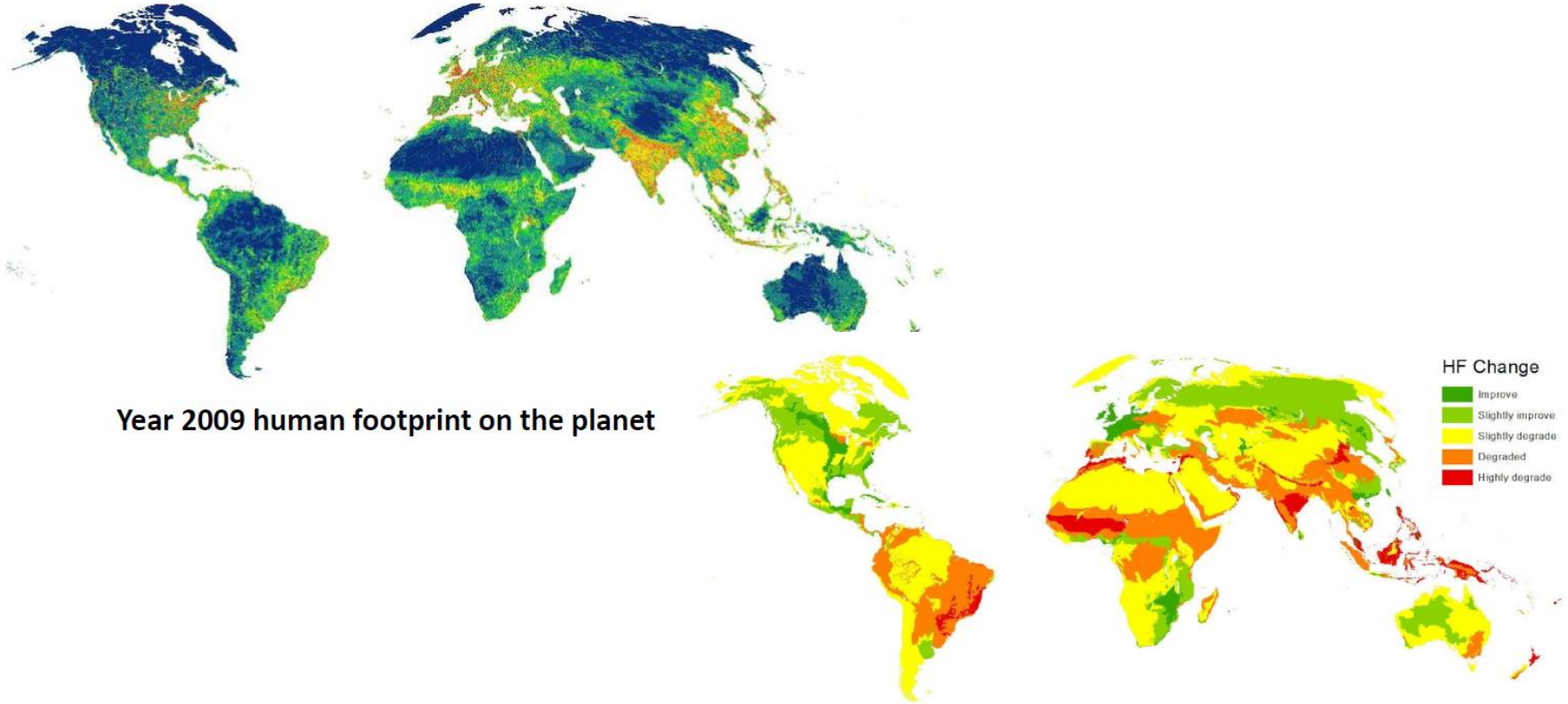
10.11.2021



# Geological epoch: the Anthropocene



# Global human footprint through infrastructure development, land use change and human encroachment is notably intensifying in places with high biodiversity



Year 2009 human footprint on the planet

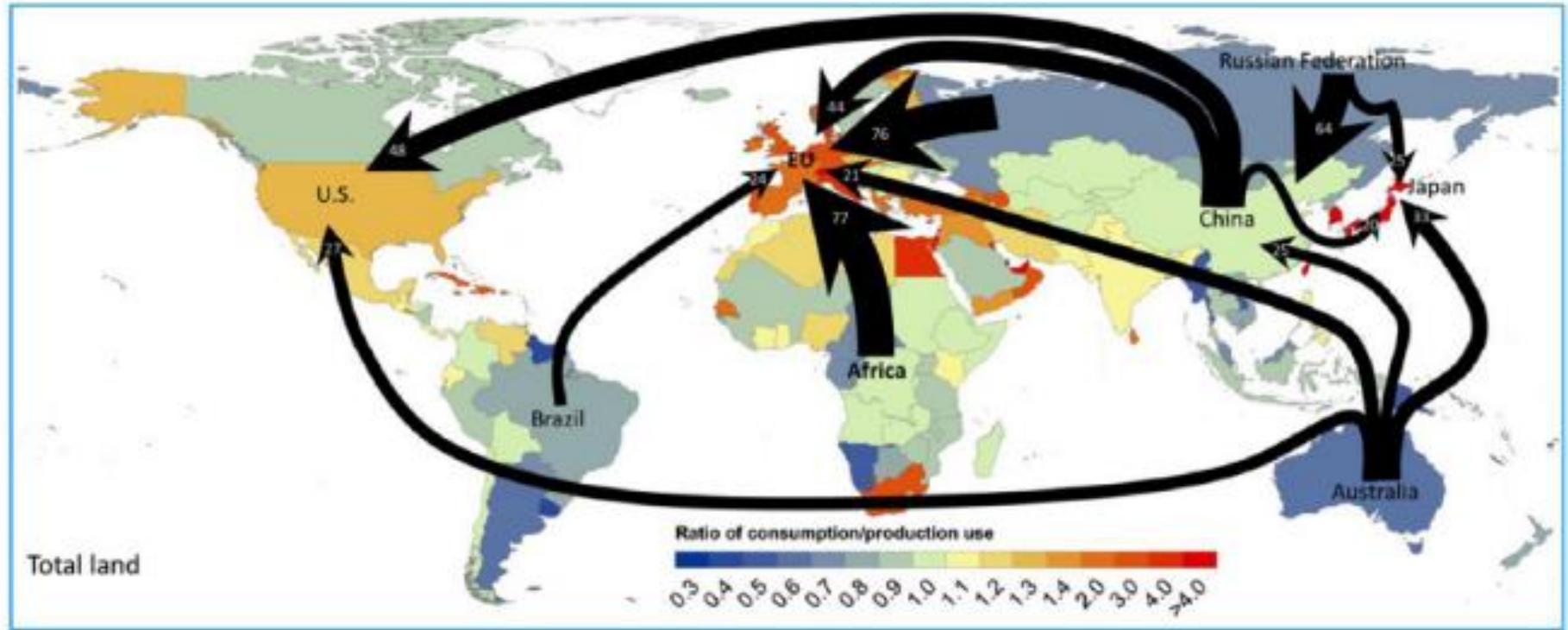
From Venter *et al.* (2016) *Nature Communications*

Human impact on the environment increase or decrease from 1993 to 2009

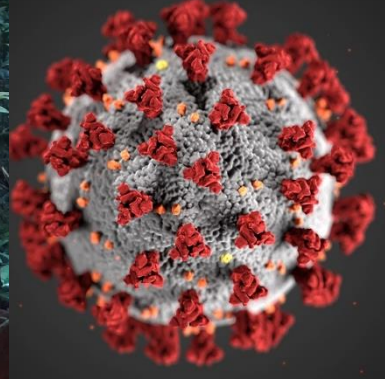
Prezode 2021



# The global flows of goods affect biodiversity worldwide



# The Covid-19 pandemic crisis shows how Anthropocene functions



Today, only 4%  
of mammal  
biomass is wildlife  
and ecosystem  
functions are broken







# Four alarming trends, which threaten the progress of the entire 2030Agenda



Injustice grows



Biodiversity loss continues



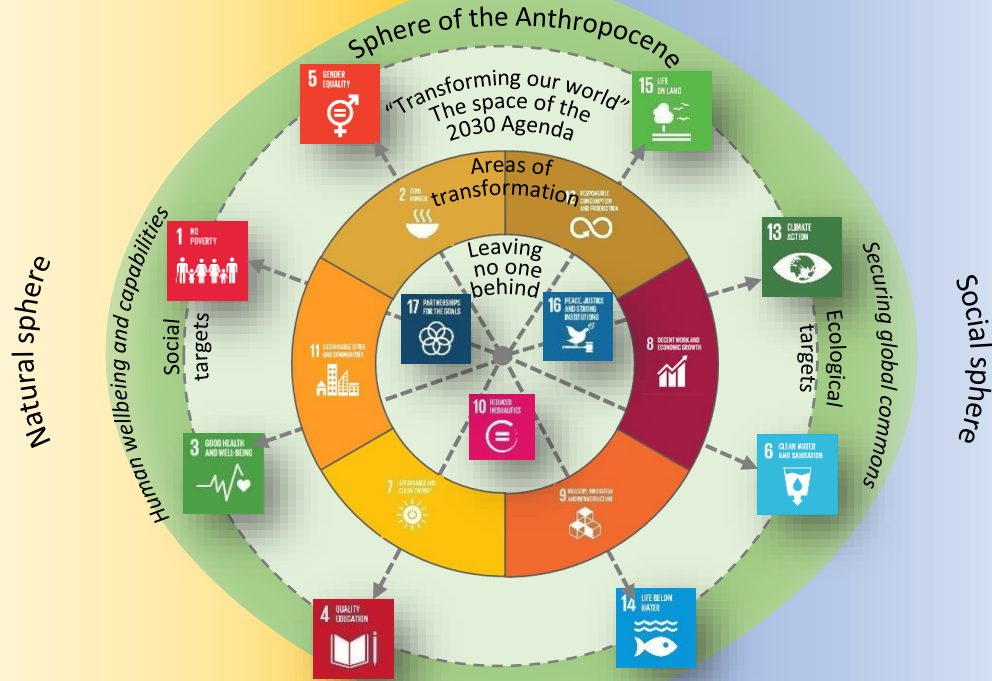
Climate change proceeds



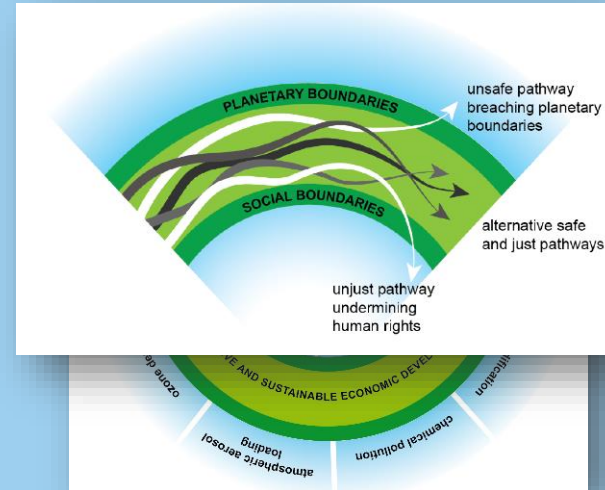
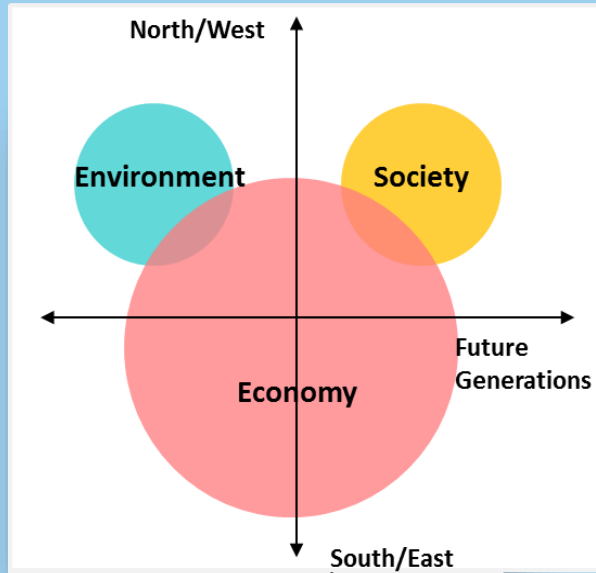
Waste-problem grows



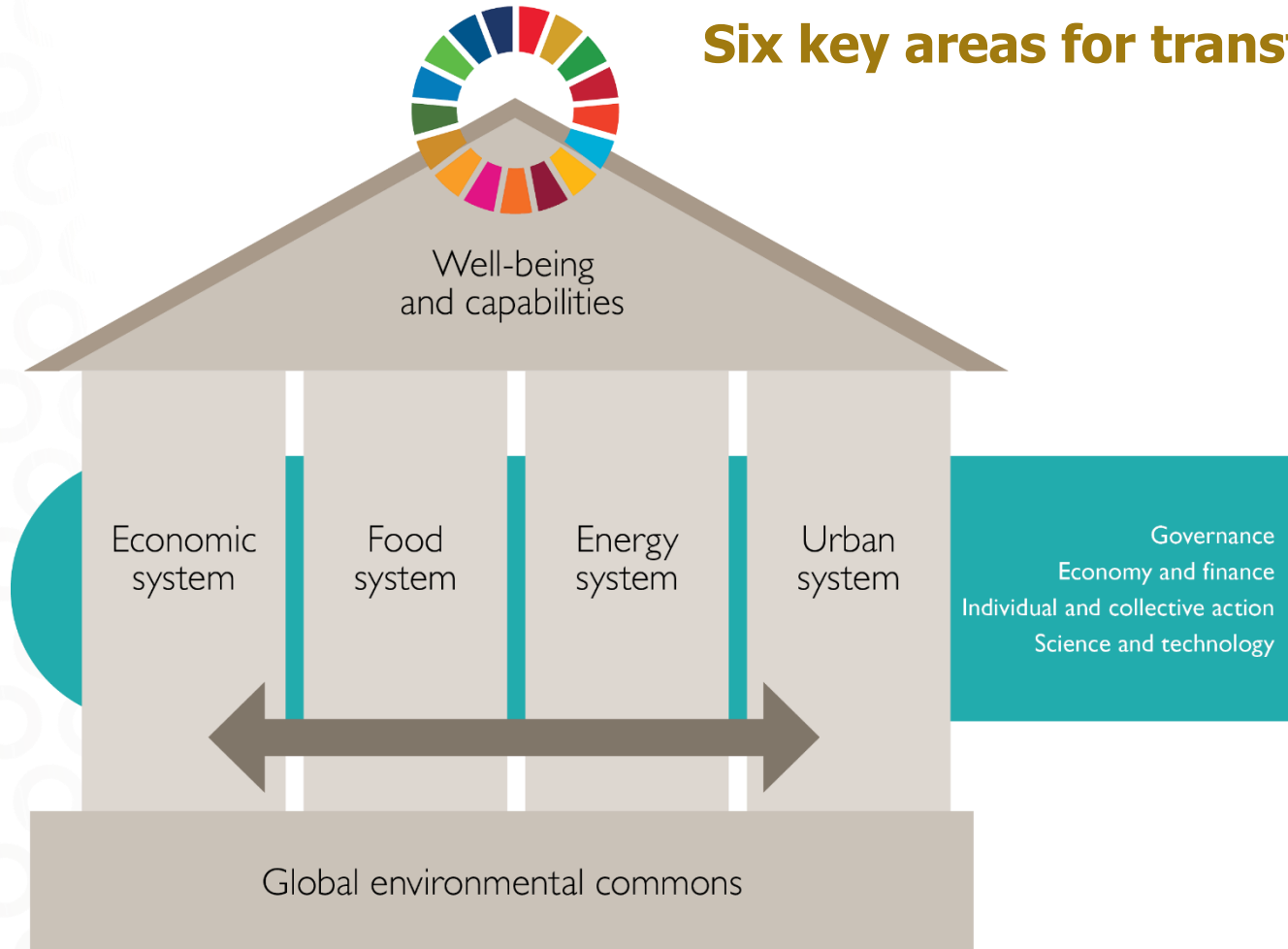
# Sustainable Development in the world of the 2030 Agenda



# A Renewed Understanding of Transformations to Sustainable Development

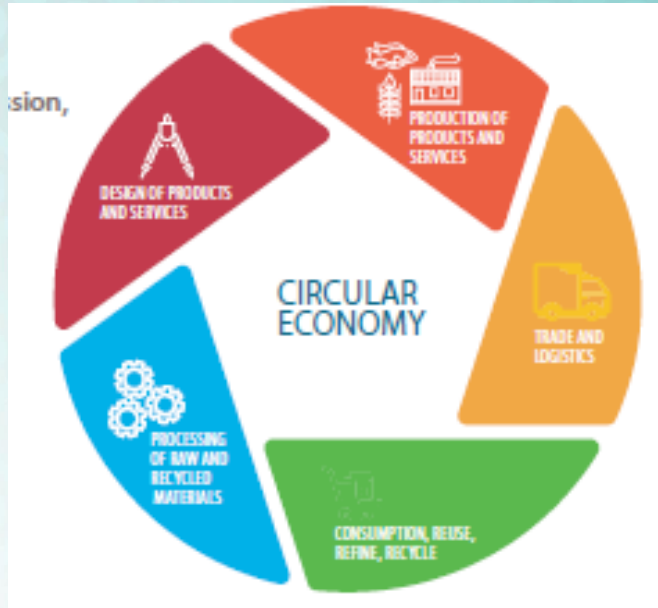


# Six key areas for transformation

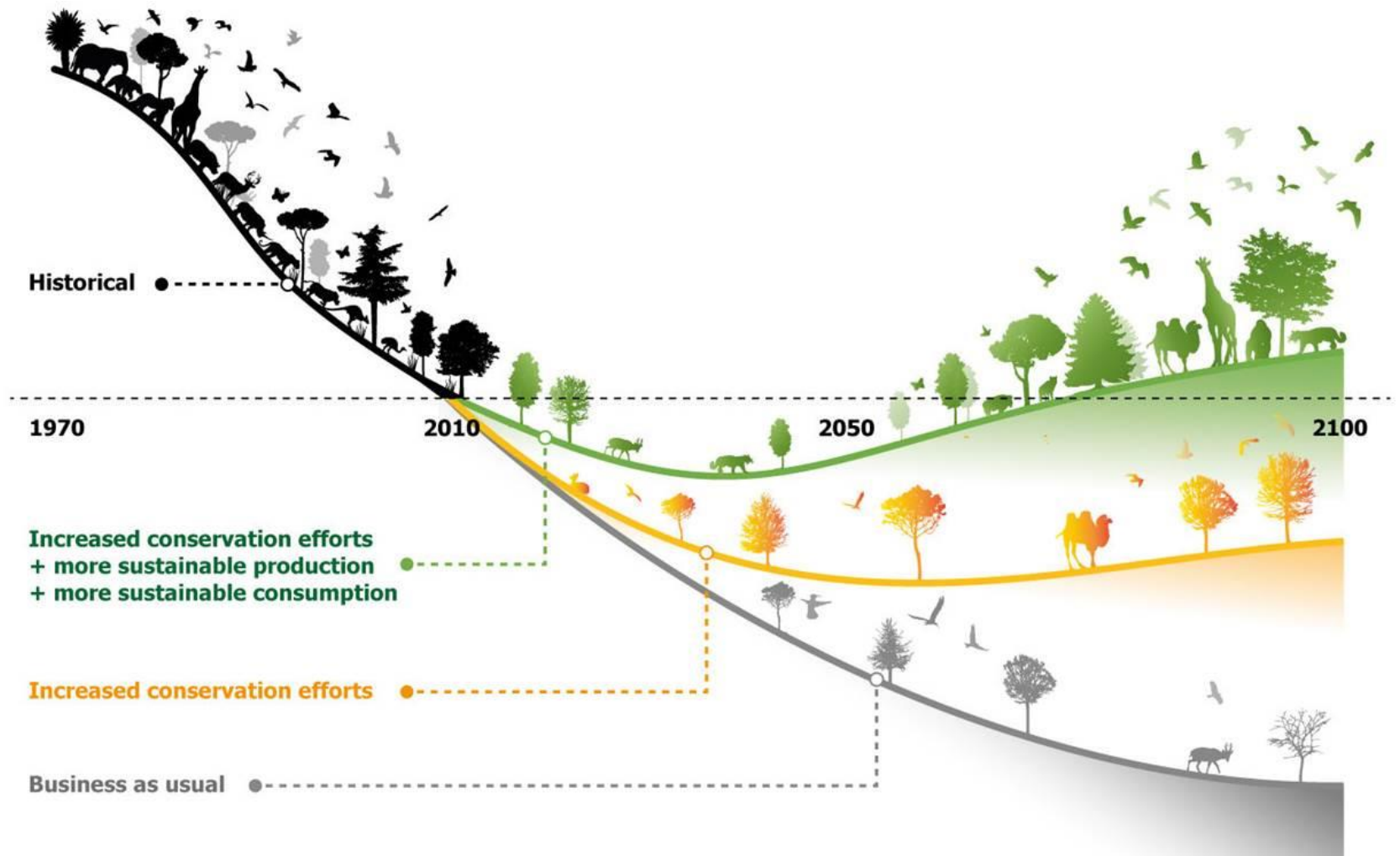




# Sustainable economies

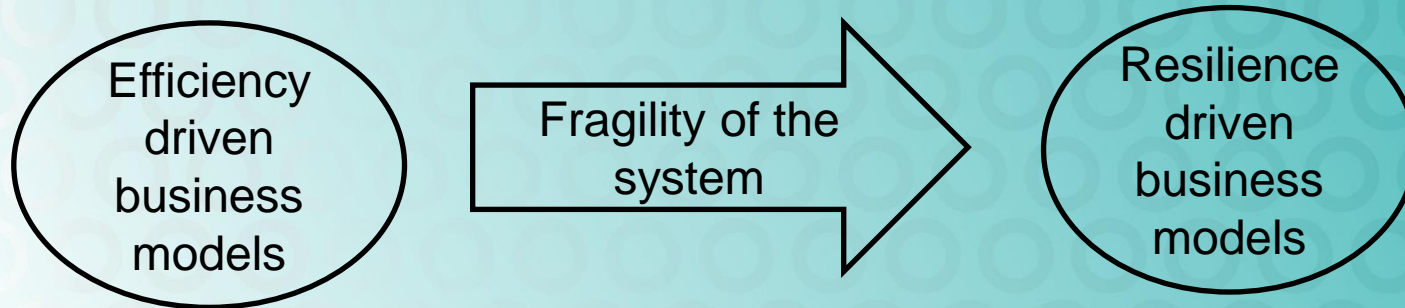


- Environmental footprint
- Equal division of benefits and losses
- Governance of global flows



This artwork illustrates the main findings of the article, but does not intend to accurately represent its results (<https://doi.org/10.1038/s41586-020-2705-y>)

# Well functioning ecosystems are beneficial for businesses





# Food and nutrition

10  
billion  
people

- Nature based solutions to food production
- Global food systems to deliver just and environmentally sustainable food to the growing populations
  - Transformation of agriculture
  - Small farms with forest farming
- Healthier and more sustainable eating habits, reduction of foodwaste



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KPHOTOS OPENNESS.EU JA MINNA KALJONEN/SYKE



# Sustainable energy systems for decarbonisation and access for all

- Transformation of the global energy system to align with the Paris-Glasgow Agreements



- 840 milj. people without electricity

Nature based  
solutions  
support  
decarbonisation  
without  
destroying  
biodiversity

Social  
innovations

Sustainable  
technologies exist ->  
the challenge within  
application and  
distribution



# Urban and peri-urban development

unsustainable  
use of natural  
resources

pollution

inequalities

- Evidence based planning and governance of cities
- Active citizenship
- polycentrism
- Co-creation with all actors

Nature based  
solutions & new  
human-nature  
relationship



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# The health of humans and planet are interconnected

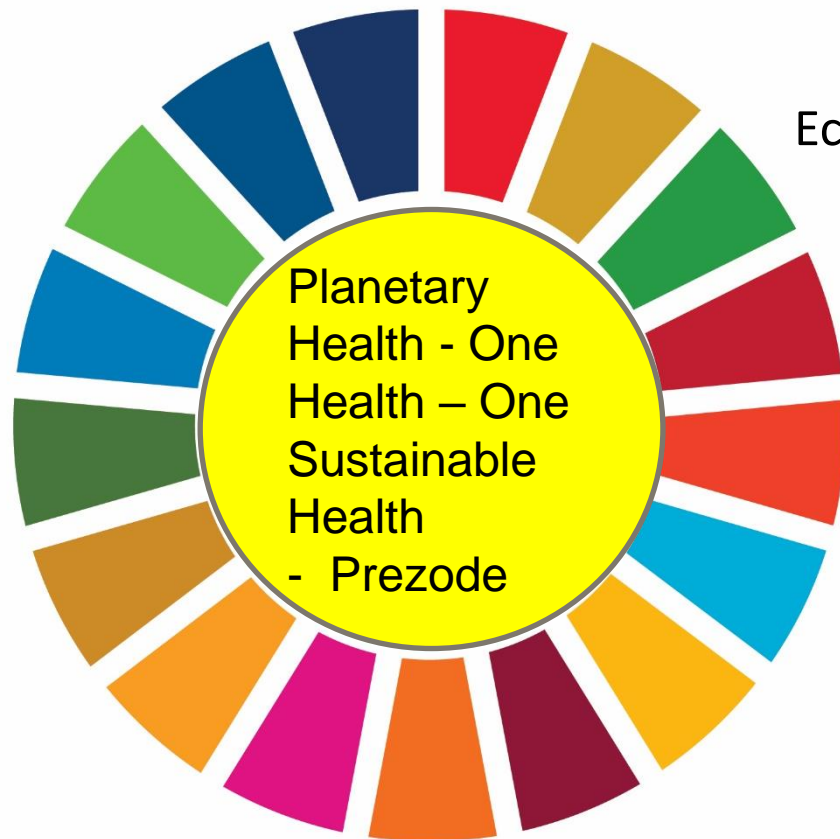


Driving forces for disconnection: urbanisation and modern lifestyles

# Sustainability transformation in natural ecosystems helps to deal with health challenges

## Health challenges

- allergies, asthma, 1-diabetes, mental health,
- ADHD, autism
- respiration deseases,
- heatstress
- obesity
- fitness

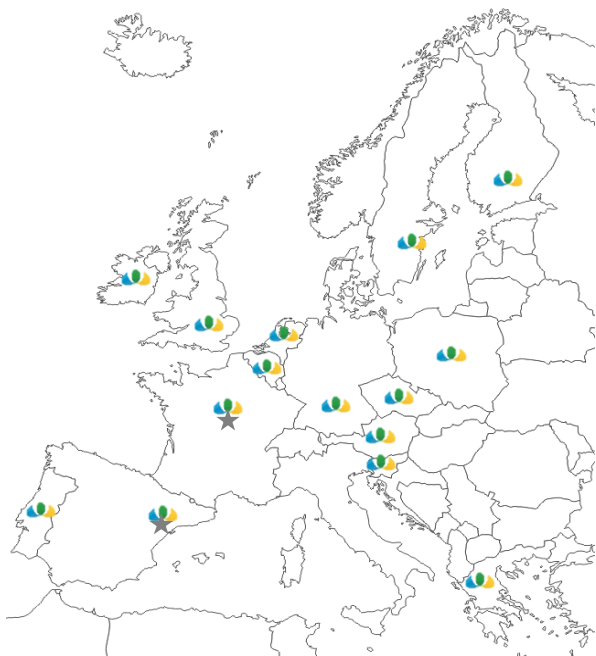


## Ecological sustainability

- biodiversity loss: from microbes to ecosystem level
- climate change
- air quality
- contacts with nature
- mobility

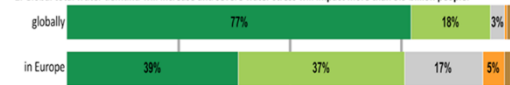


Health Environment Research Agenda for Europe



There will be severe health impacts caused by this trend [...globally and in Europe]

1. Global total water demand will increase and severe water stress will impact more than 3.9 billion people.



2. Environmental and climate-related hazards lead to migration and forced displacement.



3. Oceans will continue to be polluted, acidified and overexploited.



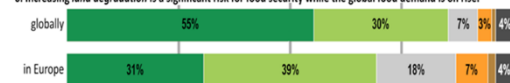
4. Air pollution emissions will increase significantly due to economic activity and energy demand.



5. Global mean temperature will be more than 2°C above pre-industrial levels in 2050.



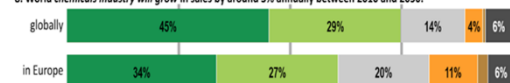
6. Increasing land degradation is a significant risk for food security while the global food demand is on rise.



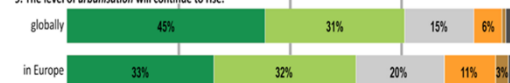
7. Biodiversity will continue to decline severely.



8. World chemicals industry will grow in sales by around 3% annually between 2010 and 2050.



9. The level of urbanisation will continue to rise.



% 0 25 50 75 100





# Human wellbeing and capabilities

- Importance of early childhood
- Education on sustainable development
- Learning to use nature based solutions
- Empathy, connectedness & trust

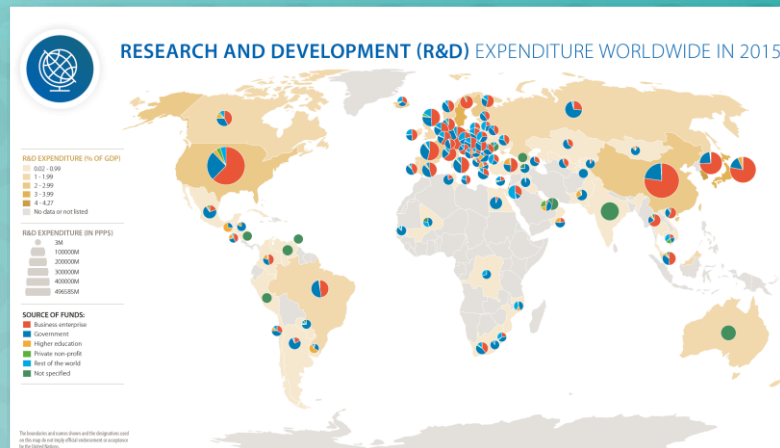
Shared  
wellbeing with  
nature



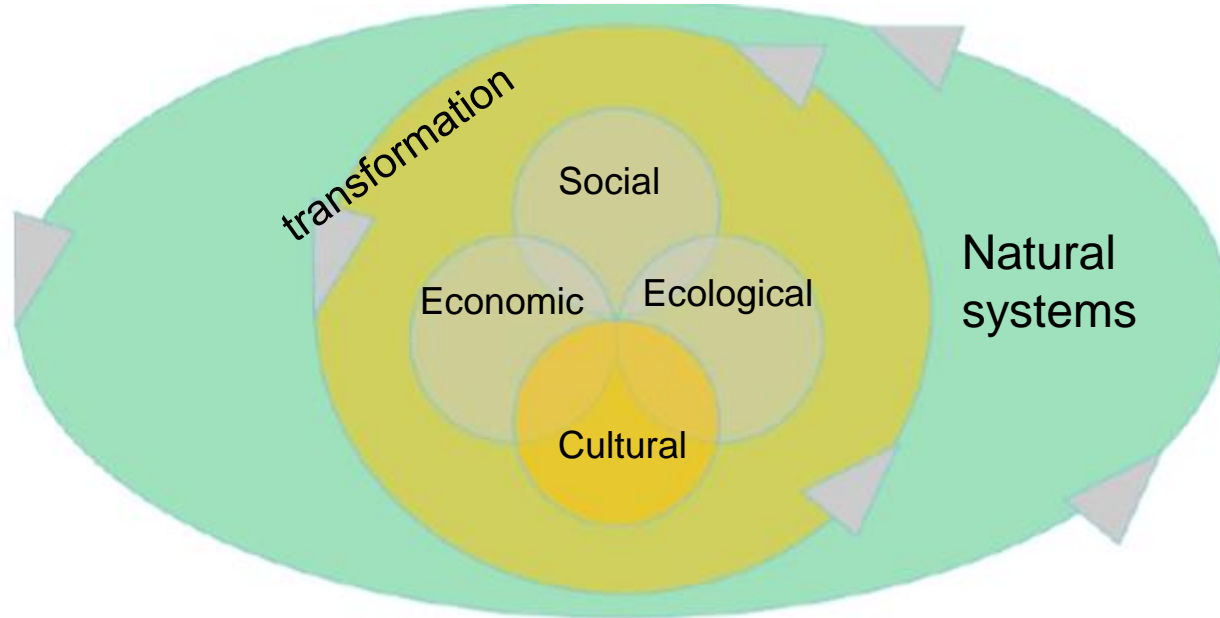


# A 'moon-shot' mission for Sustainability Science

- Mission-oriented research guided by the 2030 Agenda
- Scientific assessment of existing transformation knowledge including non-academic sources
- Funding schemes & programmes for inter- and transdisciplinary research
- Incentive- and evaluation schemes
- Experimental spaces and transformation labs for next generation science-policy interfaces



# Cultural sustainability transformation should happen in understanding of nature





# Global environmental commons

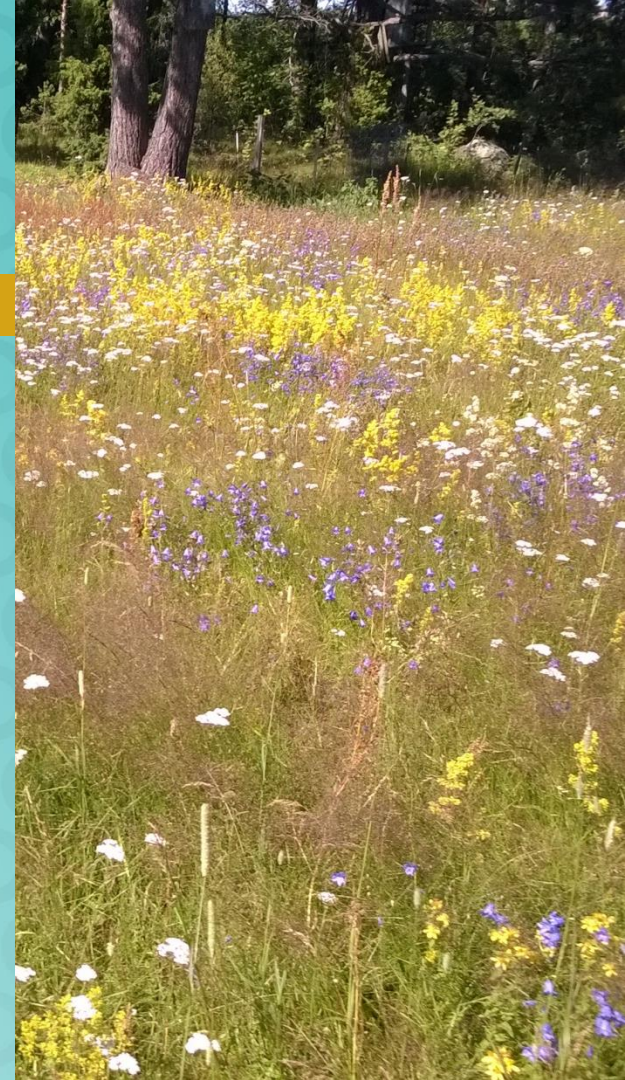
BIODIVERSITY ♥ AIR ♥ OCEANS ♥ LAND

- Earth systems rely on biodiversity
- Functioning ecosystems and biodiversity are of benefit to everyone and for human wellbeing
- Sustainability transformation needed in all the societal systems AND a re-marriage of human – nature relationship (planetary wellbeing)



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# Building sustainable management of environmental commons



## Pathways

Food systems and nutrition patterns

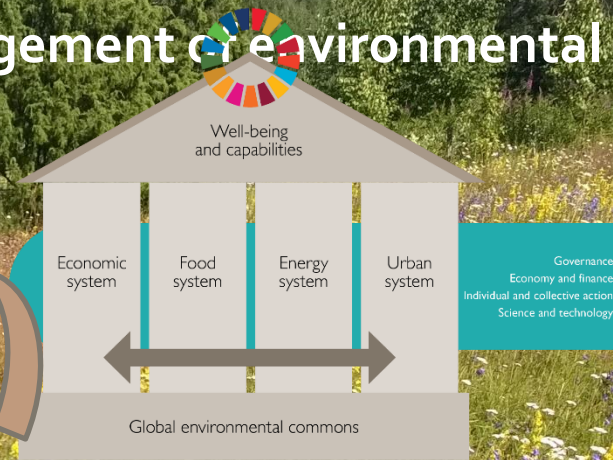
## Levers

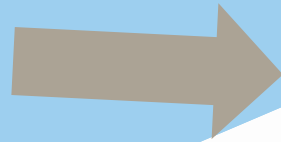
- Build multilateral agreements
- Increase protected area networks
- No net loss in land use planning

- Nature criteria for investments
- Improved trade agreements
- Markets for circular economy

- Change in consumption patterns
- Active citizenship
- Nature driven mobility

- Nature-based solutions
- Ecology to (business) education
- Universal sustainability science



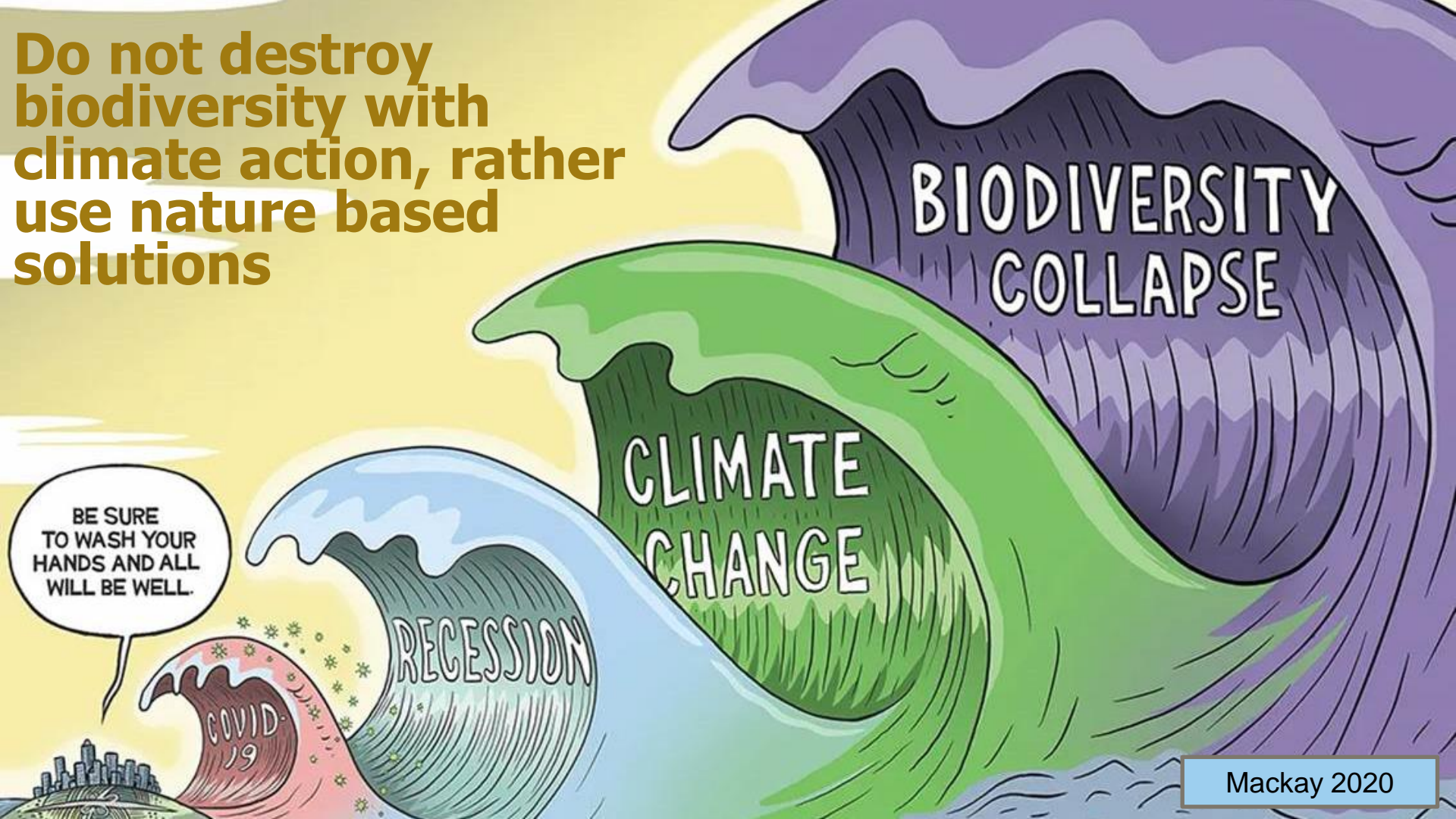


[www.kestavyyspaneeli.fi/en/sv](http://www.kestavyyspaneeli.fi/en/sv)

<https://sustainabledevelopment.un.org/gsd2019>



**Do not destroy  
biodiversity with  
climate action, rather  
use nature based  
solutions**



# Efforts required:

- biodiversity secures human wellbeing
- nature based solutions help ecological sustainability and combats injustice
- production and consumption to minimize their global ecological footprint
- less developed countries need support to implement CBD & Agenda2030

