



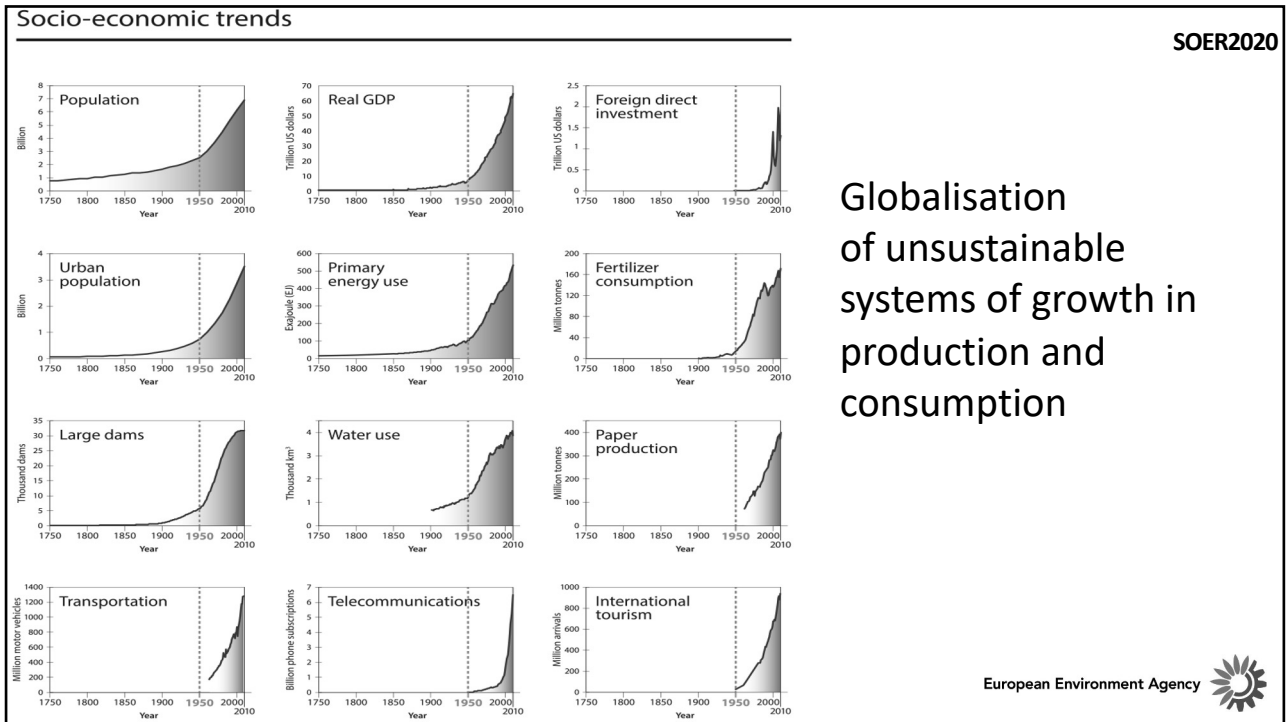
1

### Global context: unprecedented challenges, improved knowledge

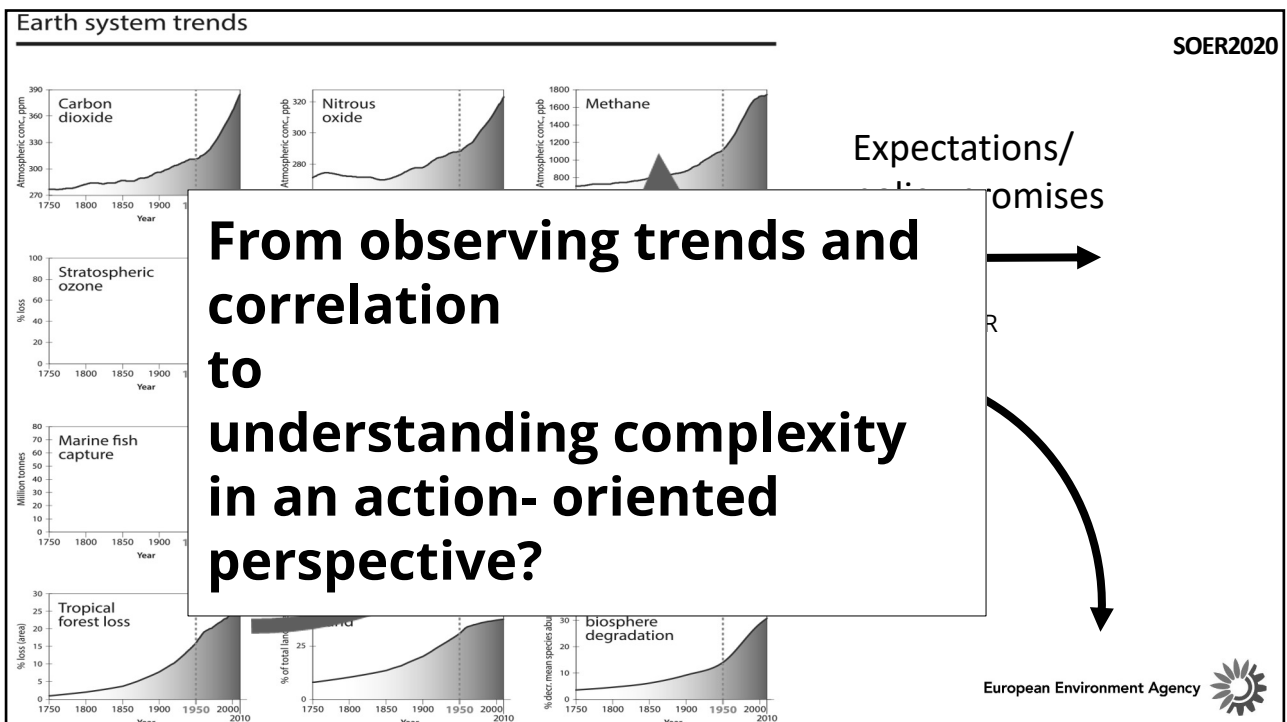
|                                |   |   |                                       |
|--------------------------------|---|---|---------------------------------------|
| 1. IPCC: <b>climate change</b> | 2. IPBES: <b>biodiversity loss and ecosystem services</b> | 3. IRP: <b>unsustainable resource use</b> | 4. WHO: <b>environment and health</b> |
|--------------------------------|---|---|---------------------------------------|

- **Urgency; pivotal decade**
- **Irreversibilities**
- **Tipping points**
- **Interconnected**

2



3



4

## European Green Deal: a paradigm shift in politics/policy?

- First **climate-neutral** continent
- **Biodiversity strategy 2030**
- New **Strong systemic transitions logic**
- **Z** - Link with sectoral policies
- **F** - Interconnected
- **J** - Longer time horizon
- **S** - Social dimension
- **S** - Innovation, digitalization
- Future **Governance agenda** new industrial strat

*"Our most pressing challenge is keeping our planet healthy. This is the greatest responsibility and opportunity of our times."*

---

*"Europe must lead the transition to a healthy planet and a new digital world."*

**Existential Threats'**

**Ambitious, innovative, interconnected, systemic**



5

## Policy making in a VUCA world

|   |  |  |
|---|--|--|
| + | <p style="text-align: center; font-weight: bold;">Complexity</p> <p style="text-align: center;">Multiple key decision factors</p>            | <p style="text-align: center; font-weight: bold;">Volatility</p> <p style="text-align: center;">Rate of change</p>             |
| - | <p style="text-align: center; font-weight: bold;">Ambiguity</p> <p style="text-align: center;">Lack of clarity about meaning of an event</p> | <p style="text-align: center; font-weight: bold;">Uncertainty</p> <p style="text-align: center;">Unclear about the present</p> |

How well can you predict the outcome of your actions?

↑

→

How much do you know about the situation?

European Environment Agency

6

## Let's add to the challenge: wicked problems

SER 2020



Based upon Rittel and Webber (1973)

European Environment Agency



7

## Topping it off: Super-wicked problems?

SER 2020

Super-wicked problems have the following additional characteristics:

1. Time is running out.
2. Policies discount the future irrationally.
3. Those seeking to solve the problem are also causing it.
4. No central authority.

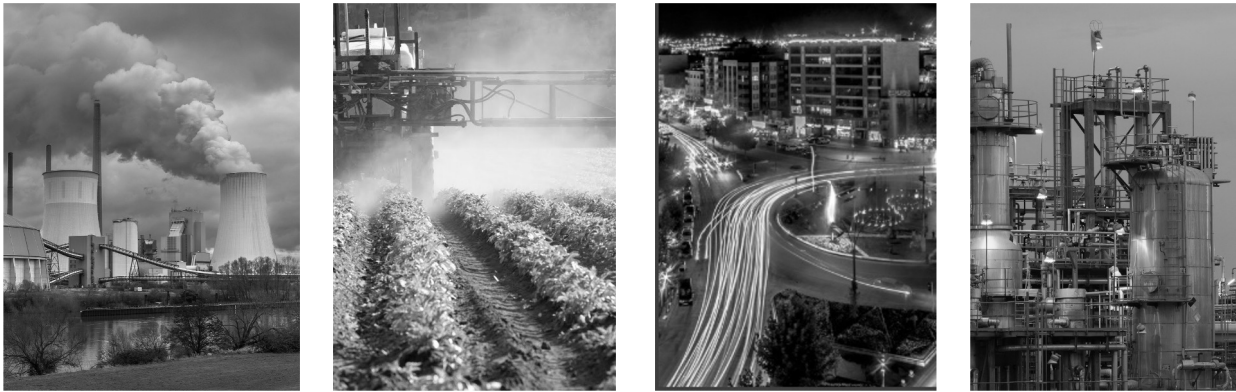
(Kelly Levin, Benjamin Cashore, Graeme Auld and Steven Bernstein, 2012, *Policy Sciences*)

European Environment Agency



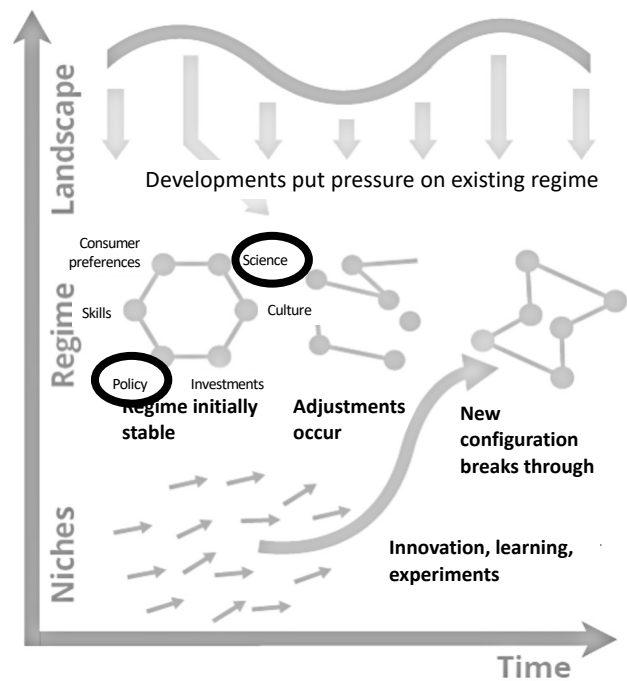
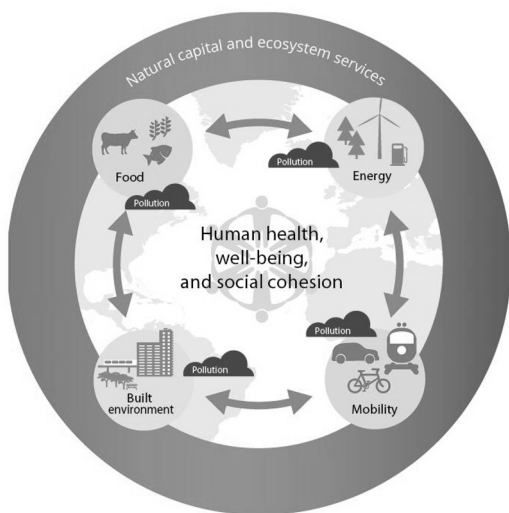
8

## No quick fixes for sustainability transitions: Reconfiguring energy, food, mobility and industrial systems



9


## Transitions logic



10

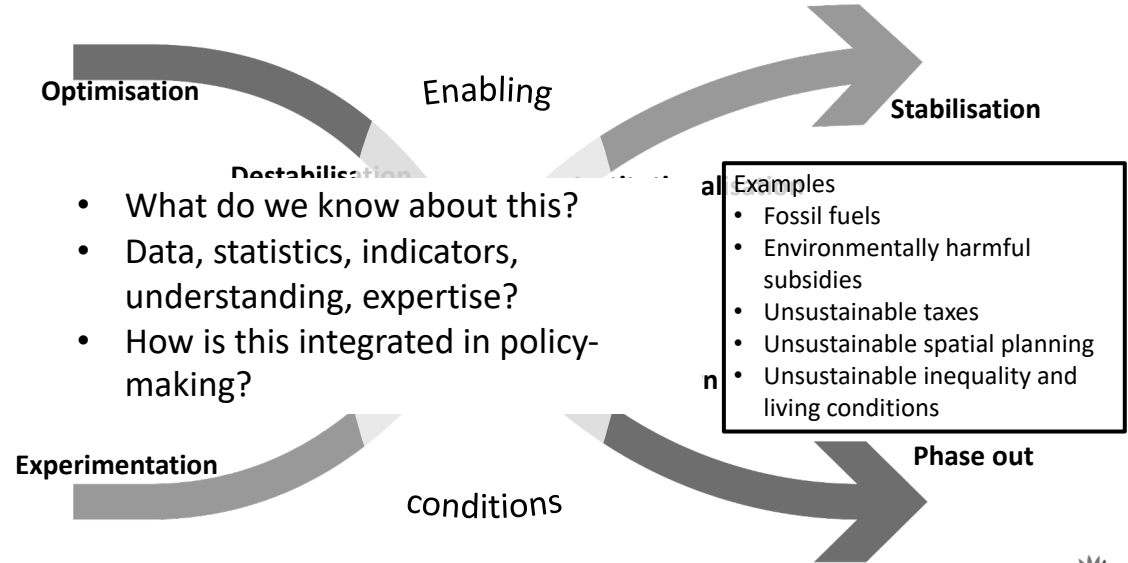
## Recognizing the scope of systemic challenges & transitions

- **Transformations** should be of a **'deep' character**
- **No 'silver bullets'** to solve complex challenges.
- **We are deeply locked-in** and entrenched in **social practices and paradigms**
- **These can become barriers to fundamental change**

European Environment Agency 

11

## Systemic change: knowledge of the full 'x-curve'



**Optimisation**      **Enabling**      **Stabilisation**

**Experimentation**      **Phase out**


**Conditions**

- What do we know about this?
- Data, statistics, indicators, understanding, expertise?
- How is this integrated in policy-making?

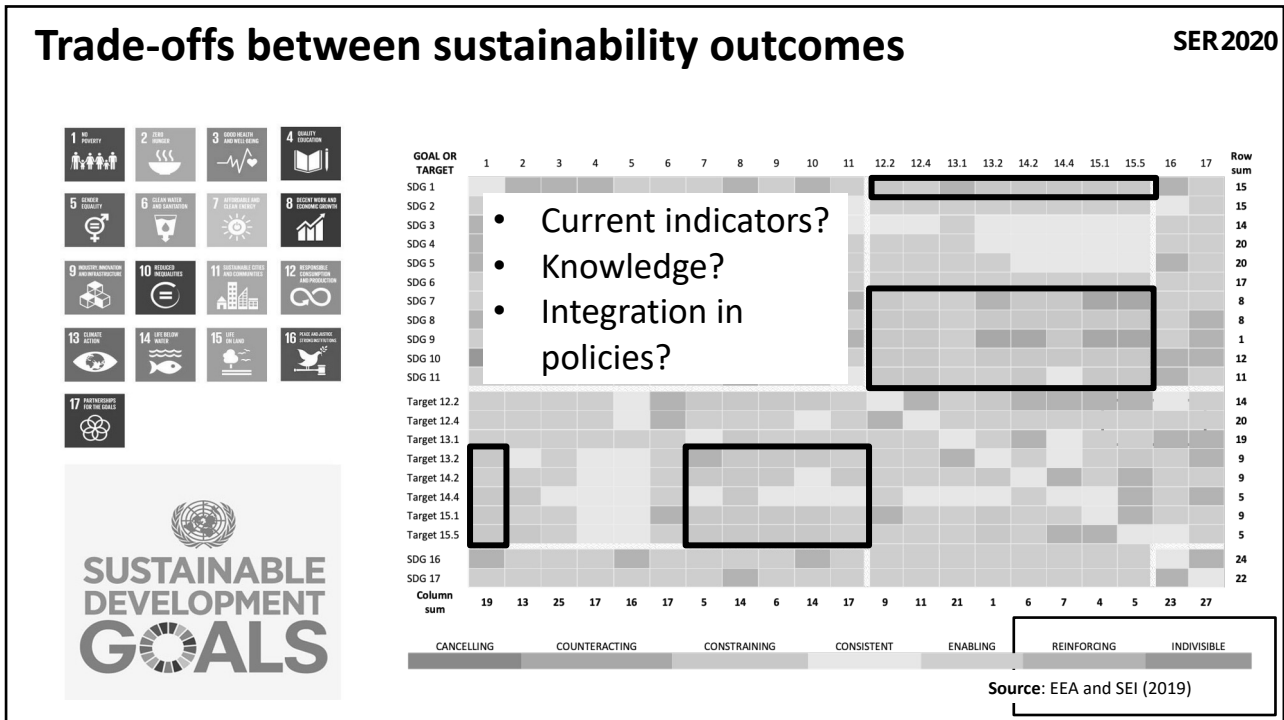
**Examples**

- Fossil fuels
- Environmentally harmful subsidies
- Unsustainable taxes
- Unsustainable spatial planning
- Unsustainable inequality and living conditions

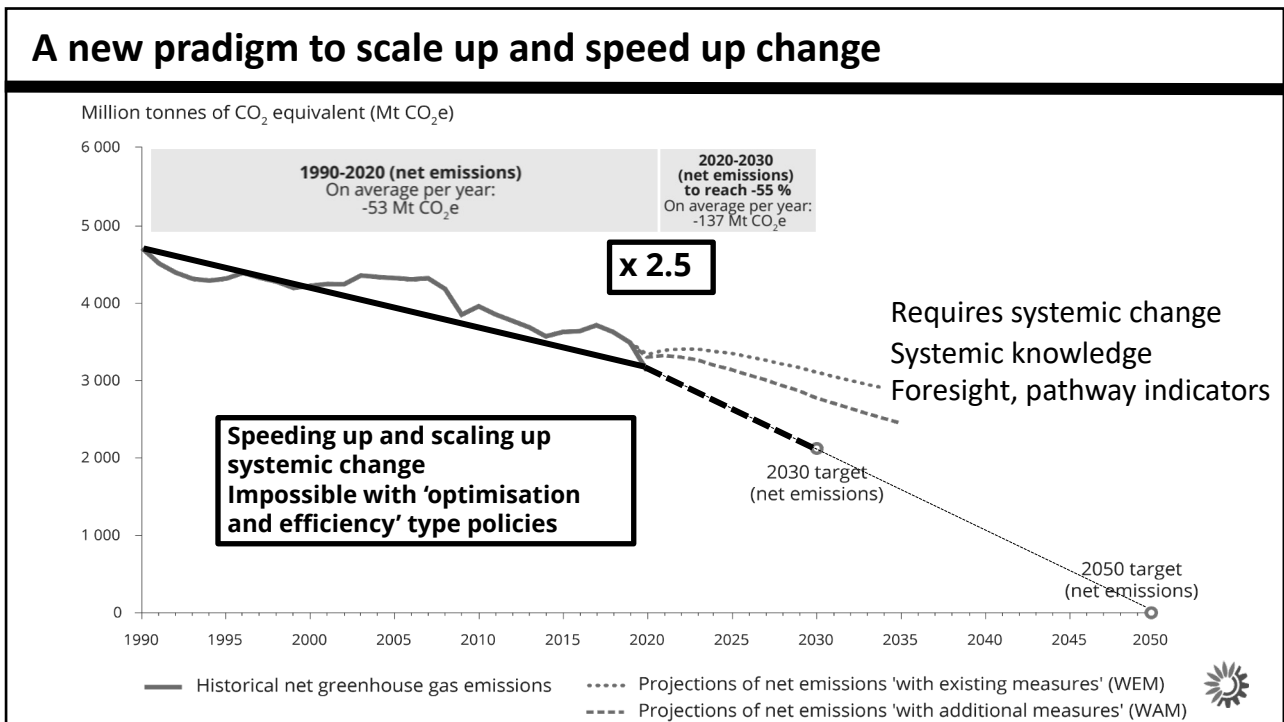
Source: Loorbach et al .

European Environment Agency 

12



13



14



15

## Societal change: vulnerability, resilience and just transition

**The Just Transition Mechanism (JTM) will primarily be most affected by the transition towards**

**THE JUST TRANSITION MECHANISM**  
Helping address the social and economic effects and workers who will face the greatest challenges

**FINANCIAL SUPPORT**

- a new Just Transition Fund of investments;
- InvestEU "Just Transition" scheme, mobilising €45 billion of investment;
- a new public sector loan facility with the EIB backed by the EU budget, mobilising €25-30 billion of investments.

**TRANSITION PLANS** for beneficiary regions to steer the investments

**ATTRACTIVE CONDITIONS** and risk sharing for public and private investors

**TECHNICAL ASSISTANCE** via a Just Transition Platform to advise and support

**Renovating**

December 2019 #EUGreenDeal

significant amounts of energy and

✓ The current rates of renovation of public and private buildings should at least double

**Better energy performance of buildings**

- Prices of different energy sources should incentivise **energy-efficient buildings**
- Design of buildings should be in line with the **circular economy**
- Increased **digitalisation**
- More **climate-proofing** of buildings
- Strict enforcement of rules on **energy performance of buildings**

**Social dimension:**

- Underdefined
- Poor knowledge base
- Linked to fundamental debate on **distributional issues**
- Linking Europe to the rest of the world

16





17

**Smarter: Foresight and early-warning systems**



**2021 STRATEGIC FORESIGHT REPORT**  
*The EU's capacity and freedom to act*

#StrategicForesight

European Commission

The complex block contains a header section with the text "Smarter: Foresight and early-warning systems" and the Copernicus logo. Below this are two images: the cover of the "2021 Strategic Foresight Report" and an illustration of the Earth with satellite icons. The report cover features the text "2021 STRATEGIC FORESIGHT REPORT" and "The EU's capacity and freedom to act", along with the hashtag #StrategicForesight and the European Commission logo. The Earth illustration shows the planet with several satellite icons orbiting it.

18

## Systemic change: information and insights, knowledge for action



### Fundamental changes in knowledge and governance:

- **Systems literacy:** embracing uncertainty, complexity, foresight, and anticipatory thinking
- **Systemic policies:** looking across domains and scales
- **Participatory:** ambition, creativity of citizens, businesses, and communities
- **Polycentric:** enabling local action
- **Networked knowledge system/architecture**

## Communicating complexity, risk and uncertainty <sup>SER 2020</sup>

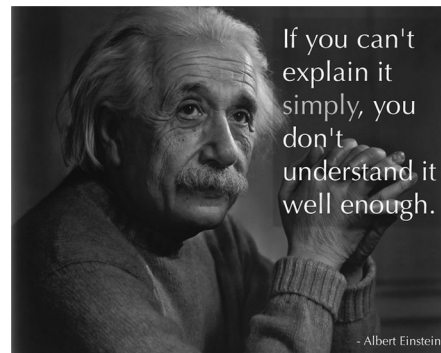
$$\Delta E \approx \frac{hc}{\lambda}$$

The product of these two uncertainties is

$$(\Delta E)(\Delta t) \approx \left(\frac{hc}{\lambda}\right)\left(\frac{\lambda}{c}\right) \approx h.$$

A more careful calculation gives

$$(\Delta E)(\Delta t) \approx \frac{h}{2\pi}$$



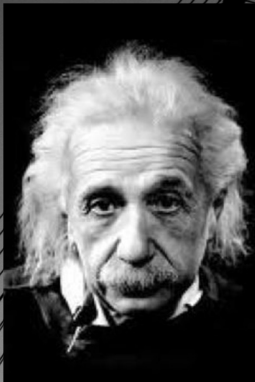
## Transforming the Green Deal into (social) action

- **Fir** Sustainability as a process of societal transitions
- **Bi** • How to improve conditions for well-being?
- **Ne** • Fundamental reflections and policy responses necessary to strengthen social capital, social cohesion, ...
- **Ze** • ... within the limits of our disturbed relationship with natural capital
- **Fa** • Future visioning based on ethical considerations about the future
- **Ju** •
- **Su** • Recognizing that current metrics that dominate the debate about economic performance are part of the problem
- **Fu** • Serious innovation needed in how we understand societal change
  - Finally doing something about this, after decades of theorizing...



21

Thank you



"THE BEST THING ABOUT  
TWITTER IS THAT YOU  
CAN MAKE UP A QUOTE  
AND ASSIGN IT TO  
ANYONE YOU WANT."

— ALBERT EINSTEIN

Hans Bruyninckx | Vereniging voor Milieurecht | 29 September 2022

©Daniel Kusak, My City/EEA

22