

Talking about urban resilience

What changes of cities during a global crisis?

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Delft University of Technology

Event organised by the Politecnico di Torino
By Ombretta Caldarice

Relationship between



..independent but complementary concepts

“Resilience thinking offers a promising framework for framing [environmental] risks posed through the non-linear responses of complex systems to natural and human-induced disturbance pressures”.

Derissen, Quaas, & Baumgärtner, 2010.

Resilience is thought of as “the capacity of a **system to absorb disturbances and reorganize while undergoing change so as to still retain **essentially the same function, structure, identity, and feedbacks.**”**

Walker et al. 2004: 2

“In comparison to other management paradigms the paradigm of resilience assumes:

- 1. the existence of **multiple local equilibriums****
- 2. hysteresis (output of a system depends not only on its input, but also on its history of past inputs)**
- 3. alternative stable states**
- 4. regime shifts”.**

Derissen, Quaas, & Baumgärtner, 2010.

A conservative understanding of resilience often emphasizes the maintenance of a given system state, without reflecting on the characteristics and desirability of possible alternative stable states.

We need criteria to evaluate what states we want or need.

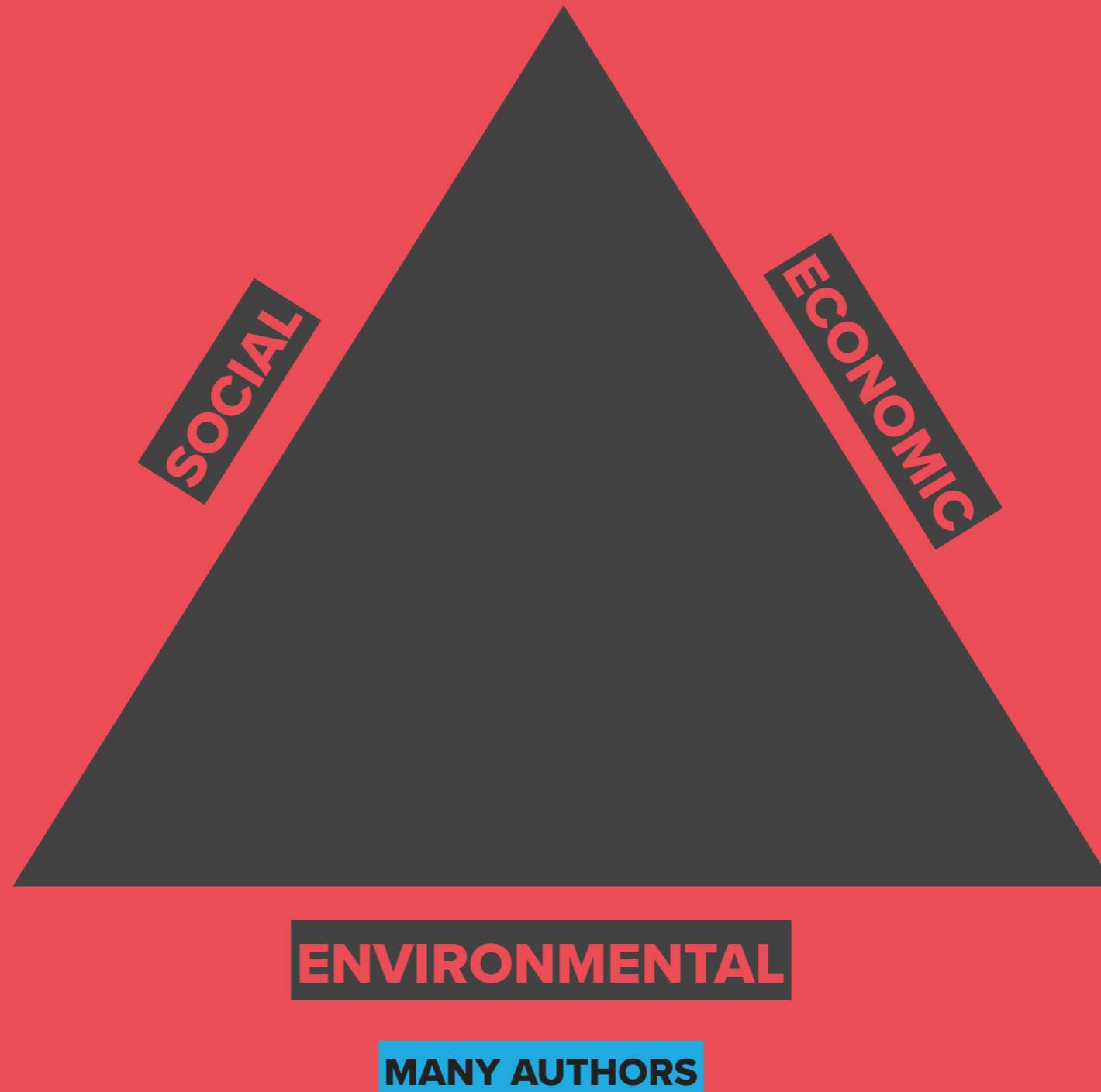
Derissen, Quaas, & Baumgärtner, 2010.



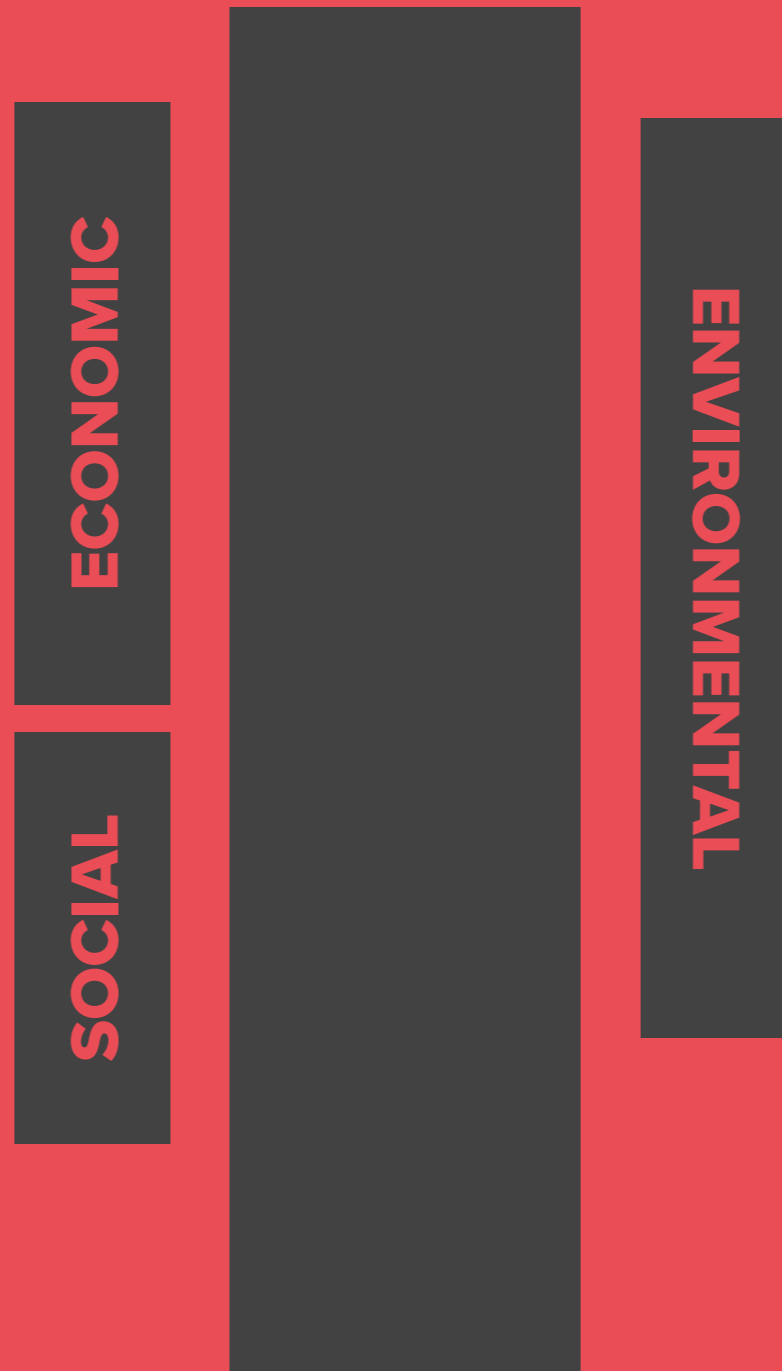
Adopting a sustainability perspective constitutes one way to formulate such criteria.

Derissen, Quaas, & Baumgärtner, 2010.

Alternative models of sustainability



Alternative models of sustainability



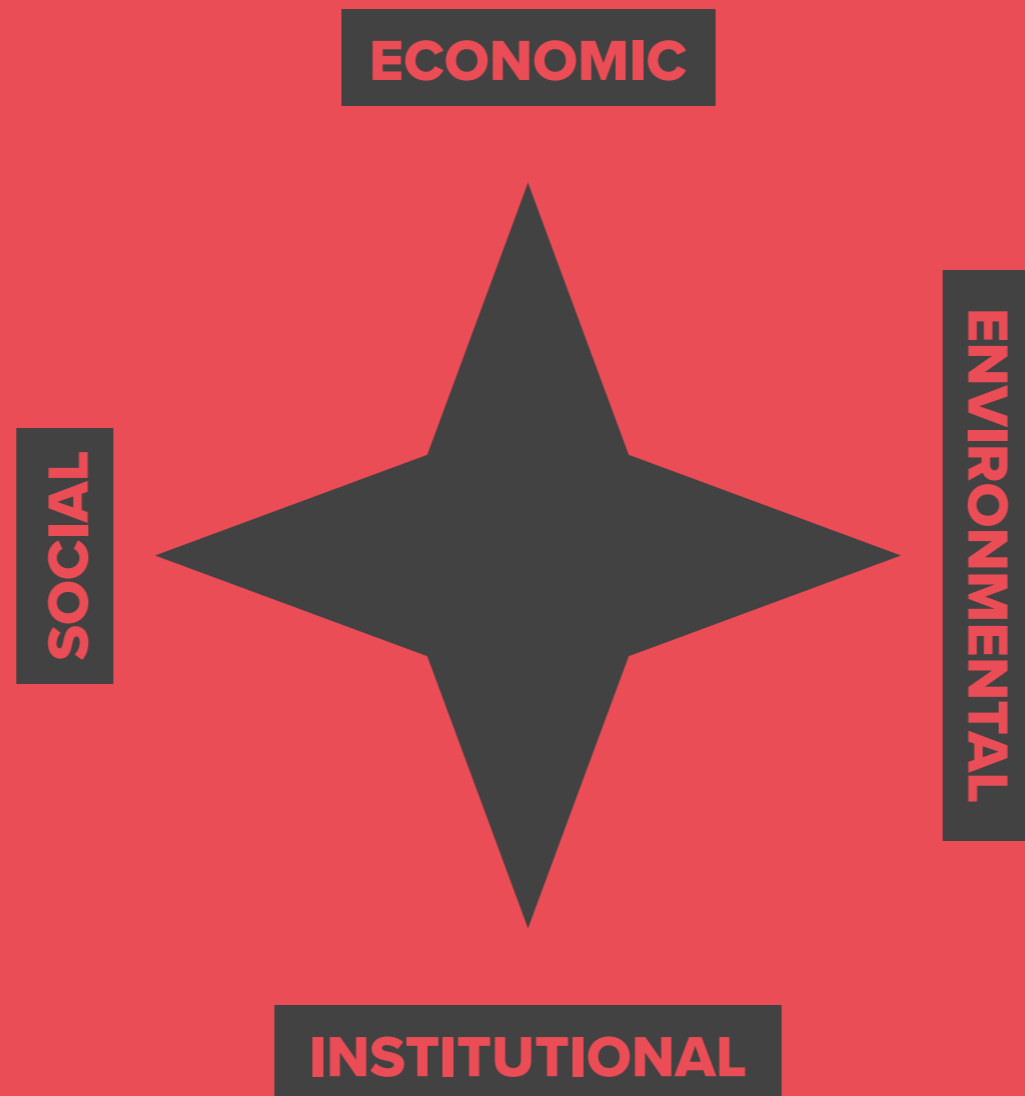
MISSIMER ET AL. (2010)

Alternative models of sustainability



ÅHMAN (2013)

Alternative models of sustainability



(COLANTONIO, 2008)

Alternative models of sustainability

SOCIAL

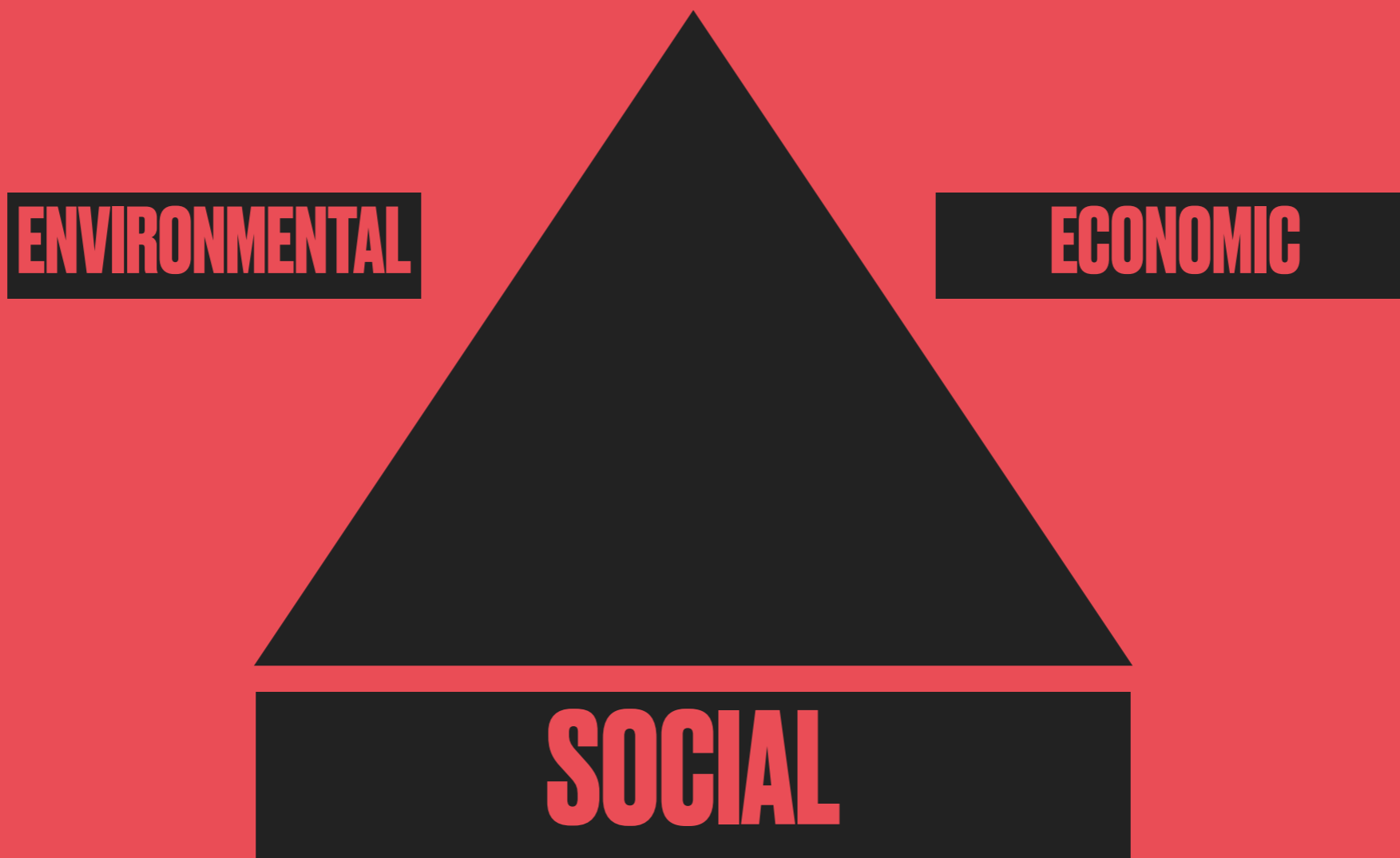
ECONOMIC

ENVIRONMENTAL

INSTITUTIONAL

POLITICAL





"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

"Long term sustainability can only exist when its three crucial dimensions occur simultaneously"

End of second part: 5'



**SOCIAL
SUSTAINABILITY**

?

Postulate:

**Justice is the main
element underscoring
sustainability**

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Brundtland Report, 1987

“...even a narrow notion of physical sustainability implies a concern for social equity between generations, a concern that must logically be extended to equity within each generation”.

Brundtland Report, 1987, p.43

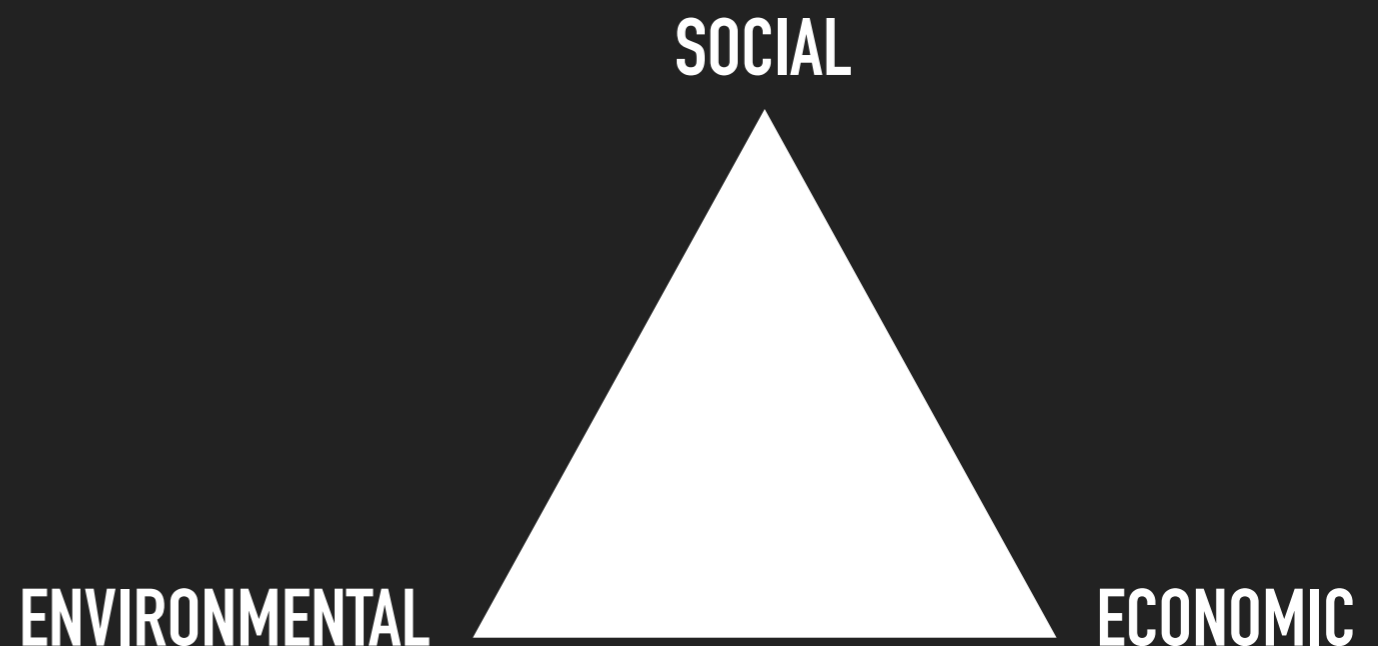


Intergenerational justice



Intragenerational justice

**The integration of justice
is the bedrock for real
sustainability...
and resilience?**



Moral imperative

Acceptability

Support

Compliance

Suitability

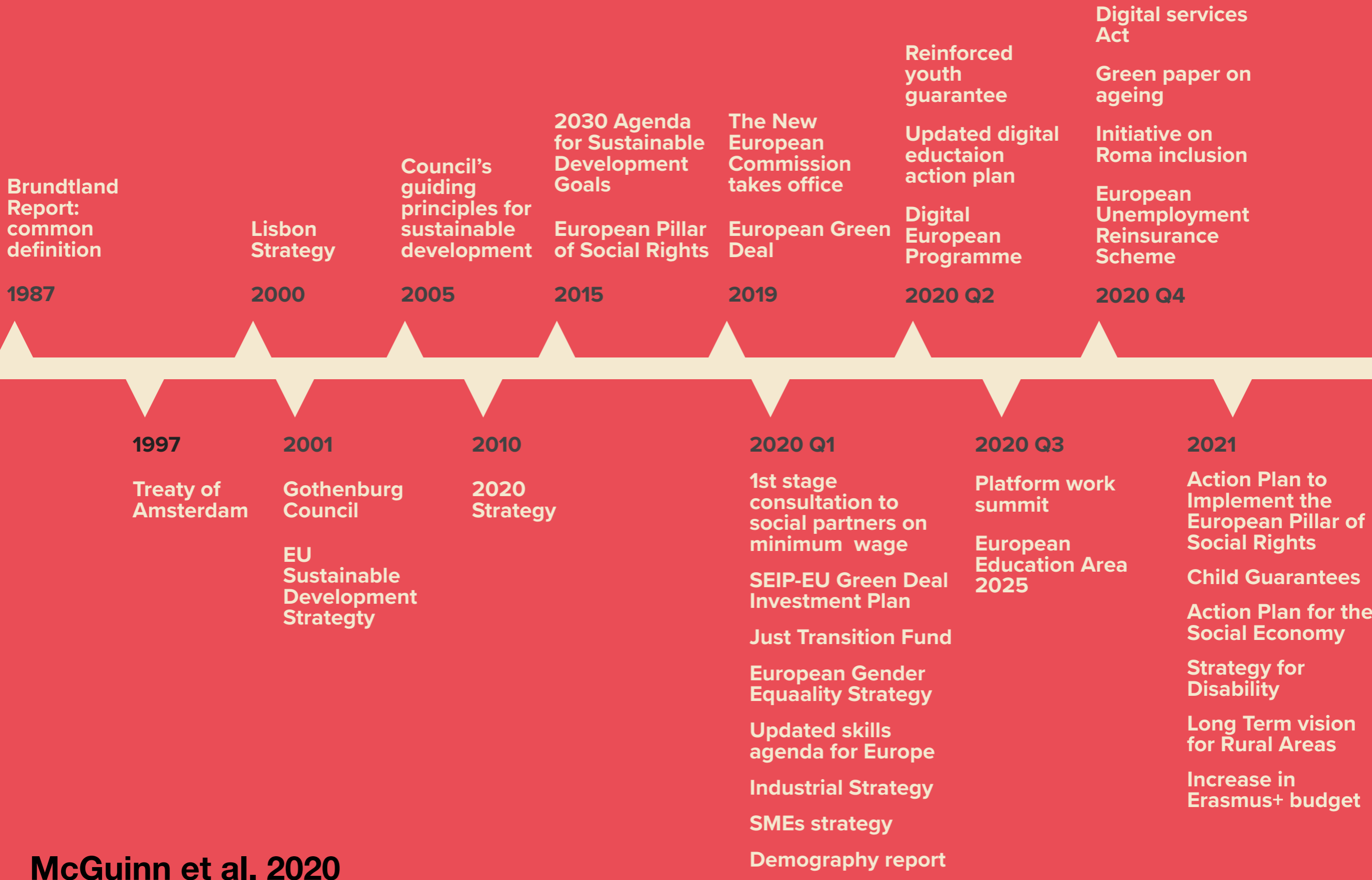
Rationality

Proportionality

Predictability

Spatial planning and design must engage with “two converging, yet distinct social movements: sustainability and social justice”

EVOLUTION OF SUSTAINABILITY IN THE EU



RIO DECLARATION 1992

**Equal importance to environmental,
economic and social sustainability.**

RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT



2030 AGENDA FOR SUSTAINABLE DEVELOPMENT (2015)

- A pathway towards sustainable, equitable, and inclusive development.**



European Pillar of Social Rights (2017) (EPSR)

Transforming the EU's economy for a sustainable future

Mobilising research and fostering innovation



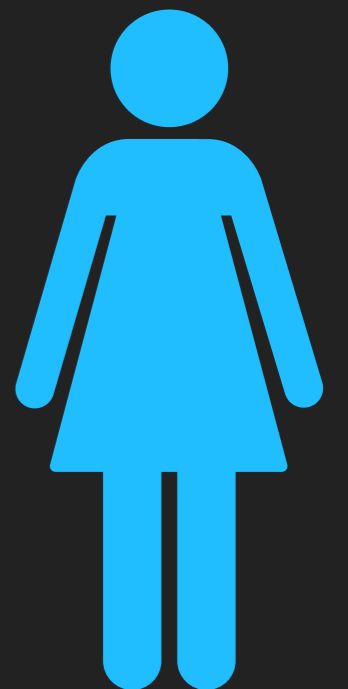
Economy of Well-Being

Policy approach that seeks to put people's well-being at the centre of decision-making, with the goal of fostering EU economic growth, productivity, stability and sustainability in the process.

End of second part: 5'

The tragedy of the commons

Garett Hardin, 1968






Adam Smith's invisible hand

**The unseen forces
that move the free
market economy.
Through rational
individual self-
interest, the best
interest of society, as
a whole, is fulfilled.**



**[Rational choice
theory]**

Adam Smith's invisible hand



“...HE INTENDS ONLY HIS OWN GAIN, AND HE IS IN THIS, AS IN MANY OTHER CASES, LED BY AN INVISIBLE HAND TO PROMOTE AN END WHICH WAS NO PART OF HIS INTENTION ...

...BY PURSUING HIS OWN INTERESTS, HE FREQUENTLY PROMOTES THAT OF THE SOCIETY MORE EFFECTUALLY THAN WHEN HE REALLY INTENDS TO PROMOTE IT.”

An Inquiry into the Nature and Causes of the Wealth of Nations, 1776.

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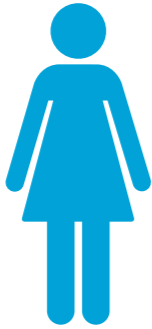
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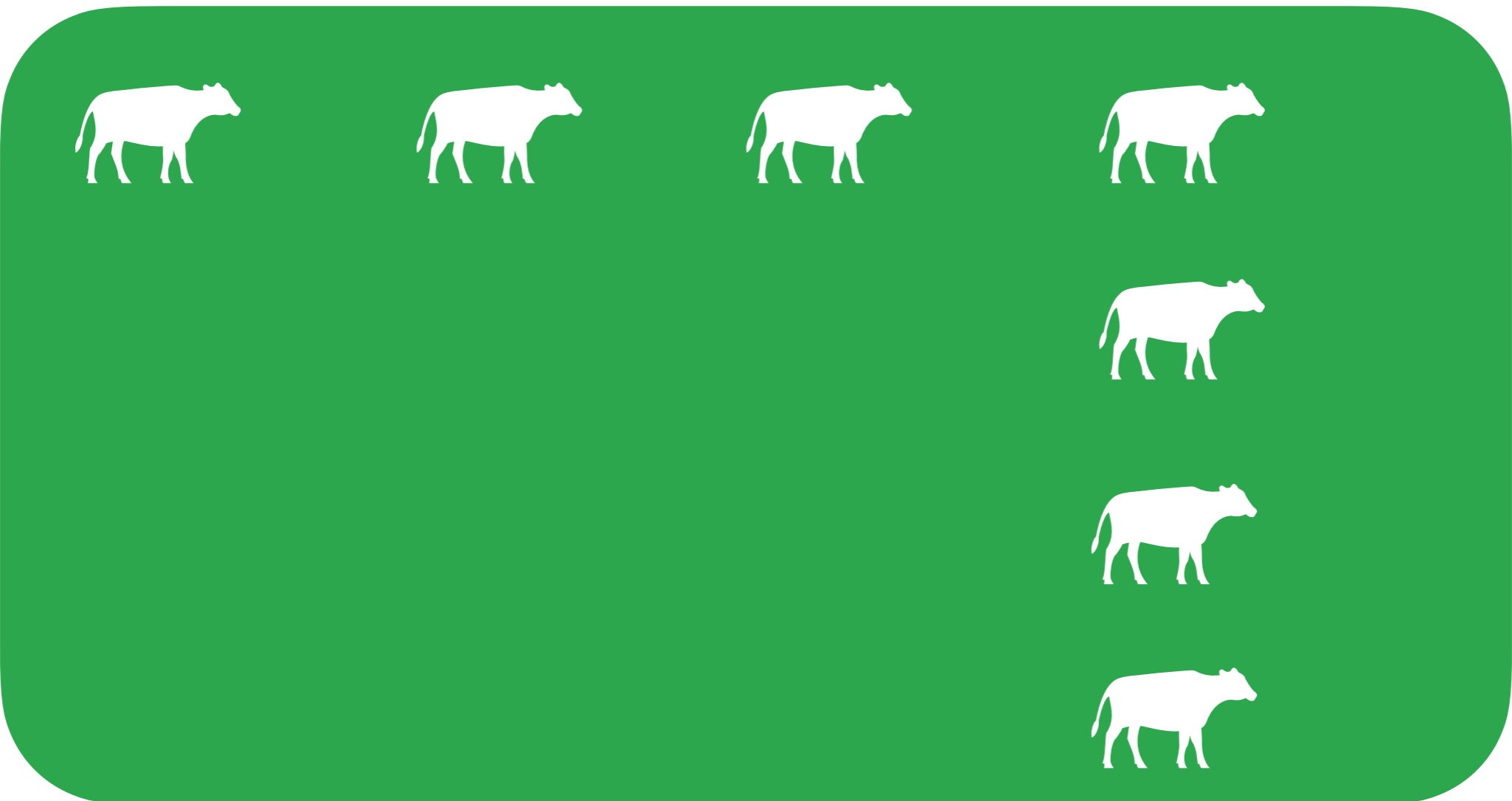
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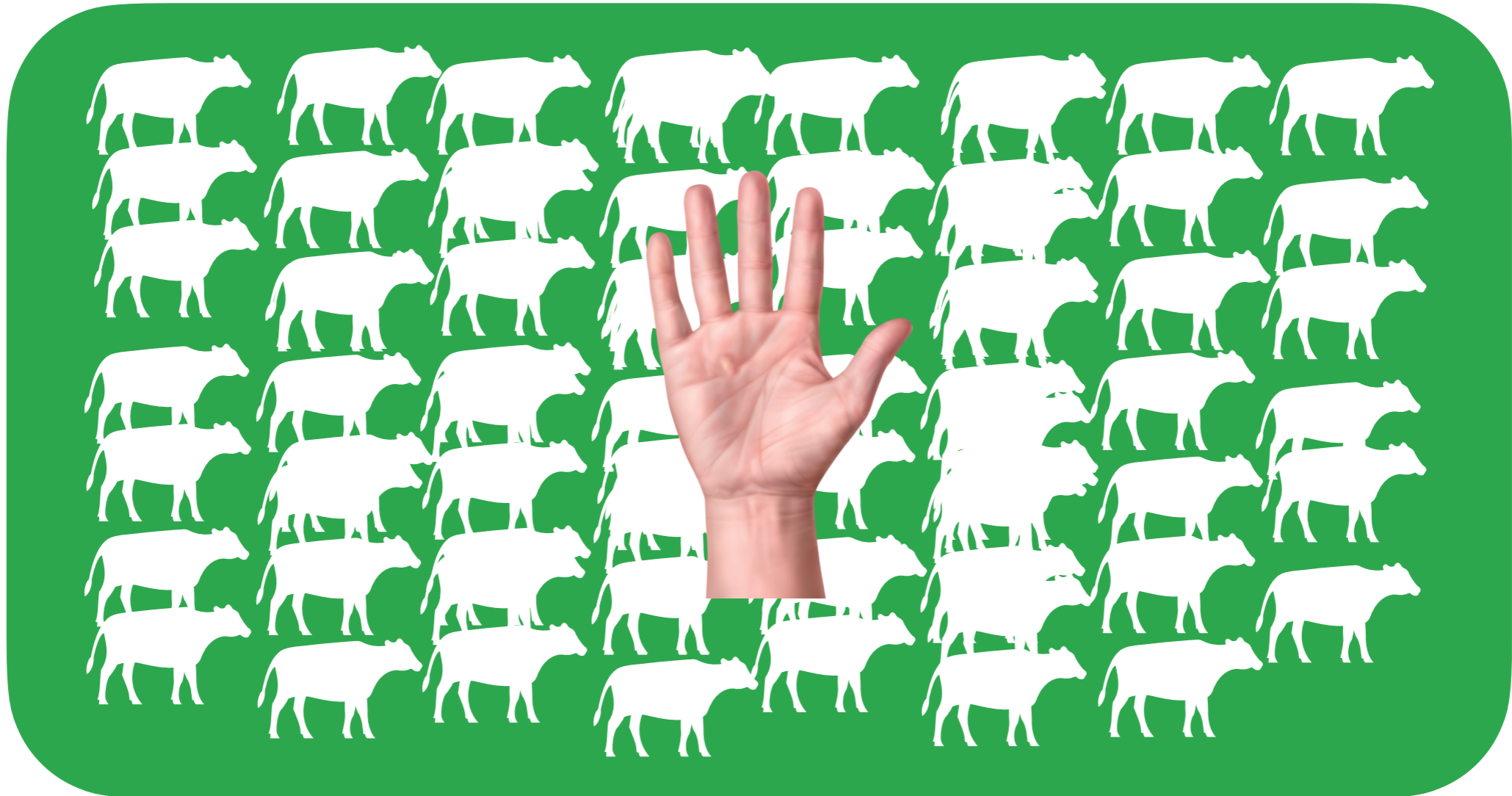
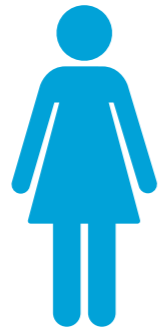
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The bounds of resilience of the ecosystem have been exceeded and no resources will be available for future generations.



[HTTPS://WWW.THEVERGE.COM/2012/5/12/3016254/RUSSIAN-SATELLITE-EARTH-FROM-SPACE-121-MEGAPIXELS](https://www.theverge.com/2012/5/12/3016254/russian-satellite-earth-from-space-121-megapixels)



GARRETT HARDIN

Garrett Hardin was a prolific and controversial writer whose 1968 article “The Tragedy of the Commons” launched him onto the national stage as one of the intellectual leaders of the environmental movement.



About Garrett Hardin

Hardin used his status as a famous scientist and environmentalist to provide a veneer of intellectual and moral legitimacy for his underlying nativist agenda, serving on the board of directors of both the anti-immigrant Federation for American Immigration Reform and the white-nationalist Social Contract Press. He also co-founded the anti-immigrant Californians for Population Stabilization and The Environmental Fund,

Screenshot primarily served to lobby Congress for nativist and isolationist policies.

EXTREMIST INFO

SPLC. (2019). Extremist files: Garrett Hardin.

Retrieved from <https://www.splcenter.org/fighting-hate/extremist-files/individual/garrett-hardin>

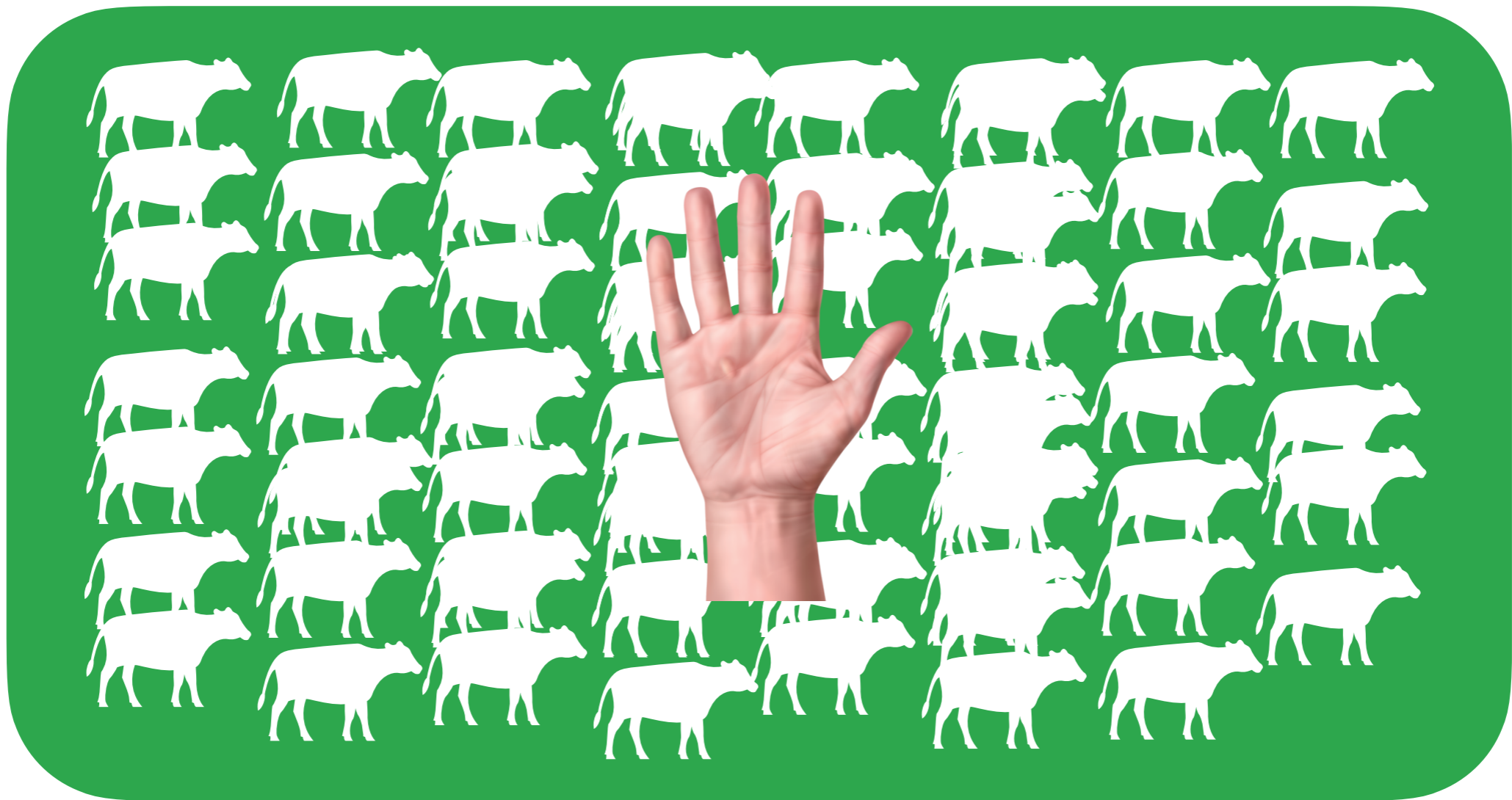
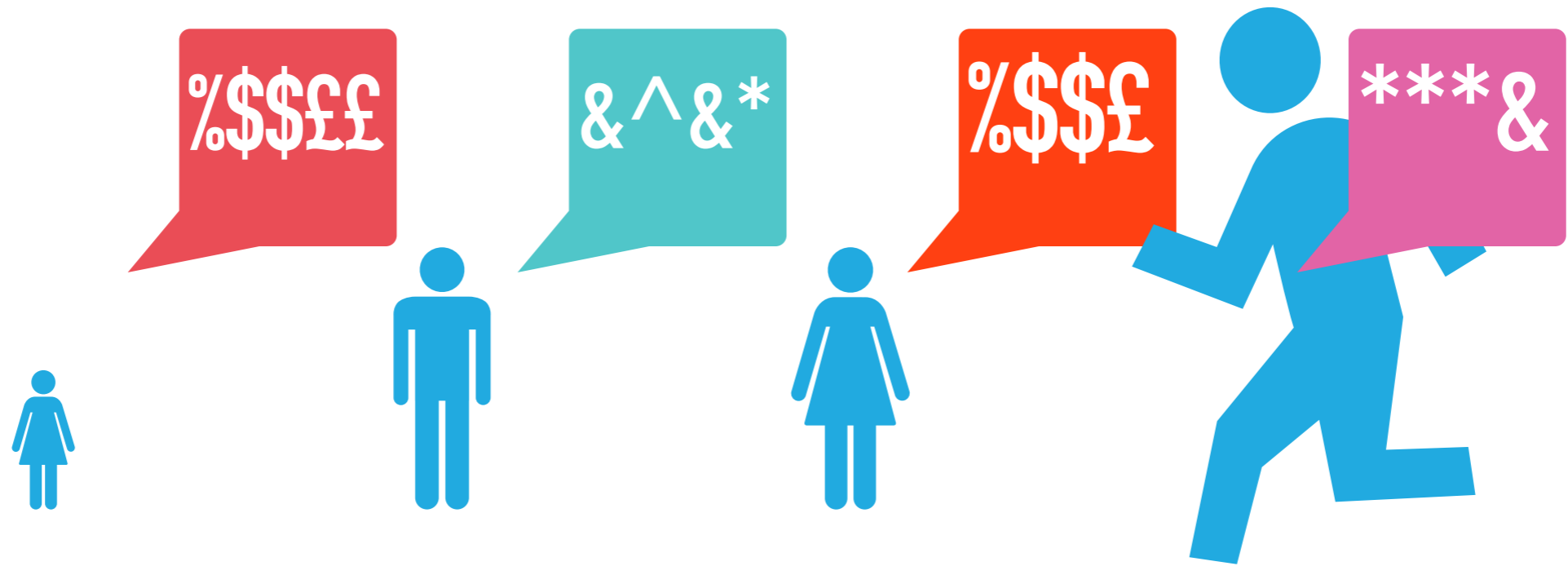
**What are the justice issues
in the management of the
commons?**

**Distribution
(of resources in space):
Distributive justice**

**How (and by whom) it is
decided:
Procedural justice**

Questions about the distribution of advantages and burdens of economic transactions (negative externalities)

cost that is suffered by a third party as a consequence of an economic transaction



HK Kowloon Walled City



BY IAN LAMBOT - [HTTP://CITYOFDARKNESS.CO.UK/ORDER-PRINT/01-AERIAL-VIEW/](http://cityofdarkness.co.uk/order-print/01-aerial-view/) ALSO FOUND IN THE BOOK CITY OF DARKNESS - LIFE IN KOWLOON WALLED CITY BY IAN LAMBOT (ISBN 1-873200-13-7).

HK Kowloon Walled City



HONG KONG'S KOWLOON WALLED CITY WAS PROBABLY THE DENSEST NEIGHBOURHOOD IN HISTORY, WITH MORE THAN 1,000,000 PEOPLE PER SQ KM. PHOTOGRAPH: ALAMY



Shenzen Hand-shake buildings



HANDSHAKE BUILDINGS IN ONE OF SHENZHEN'S URBAN VILLAGES. [HTTPS://MARRONINSTITUTE.NYU.EDU/BLOG/FORMALIZING-CHINAS-HANDSHAKE-BUILDINGS](https://marroninstitute.nyu.edu/blog/formalizing-chinas-handshake-buildings)

Hong Kong

An aerial night-time photograph of Hong Kong, showing a dense urban landscape with numerous high-rise buildings and illuminated streets. The city is packed with skyscrapers, and the lights from the buildings and streets create a vibrant, glowing effect against the dark sky. The perspective is from a high angle, looking down on the city.

[HTTPS://ISO.500PX.COM/DRONE-PHOTOS-SHOW-THE-CRAZY-URBAN-DENSITY-OF-HONG-KONG/](https://iso.500px.com/drone-photos-show-the-crazy-urban-density-of-hong-kong/)

Haiti deforestation



THE BORDER BETWEEN HAITI (LEFT) AND THE DOMINICAN REPUBLIC (RIGHT), SHOWS JUST HOW DIRE THE SITUATION HAS BECOME. (PHOTO: NASA)

Amazon forest

An aerial photograph of the Amazon rainforest. The scene is dominated by thick, white and grey smoke billowing upwards from a fire, partially obscuring the dense canopy of green trees. The smoke is most concentrated in the upper right and center of the frame, creating a hazy atmosphere. The trees are visible in the lower and middle sections, appearing as dark green silhouettes against the lighter smoke. The overall lighting is somewhat dim, suggesting an overcast or smoky day.

SMOKE BILLOWS DURING A FIRE IN AN AREA OF THE AMAZON RAINFOREST NEAR PORTO VELHO, RONDONIA STATE, BRAZIL, SEPT. 10, 2019. REUTERS/BRUNO KELLY

**But most cities do not
collapse because of the
mindless pursuit of self-
interest**

Why Not?



SUSAN FAINSTEIN



ELINOR OSTROM



- **Symmetric communication**
- **Subsidiarity**
- **Polycentric governance**

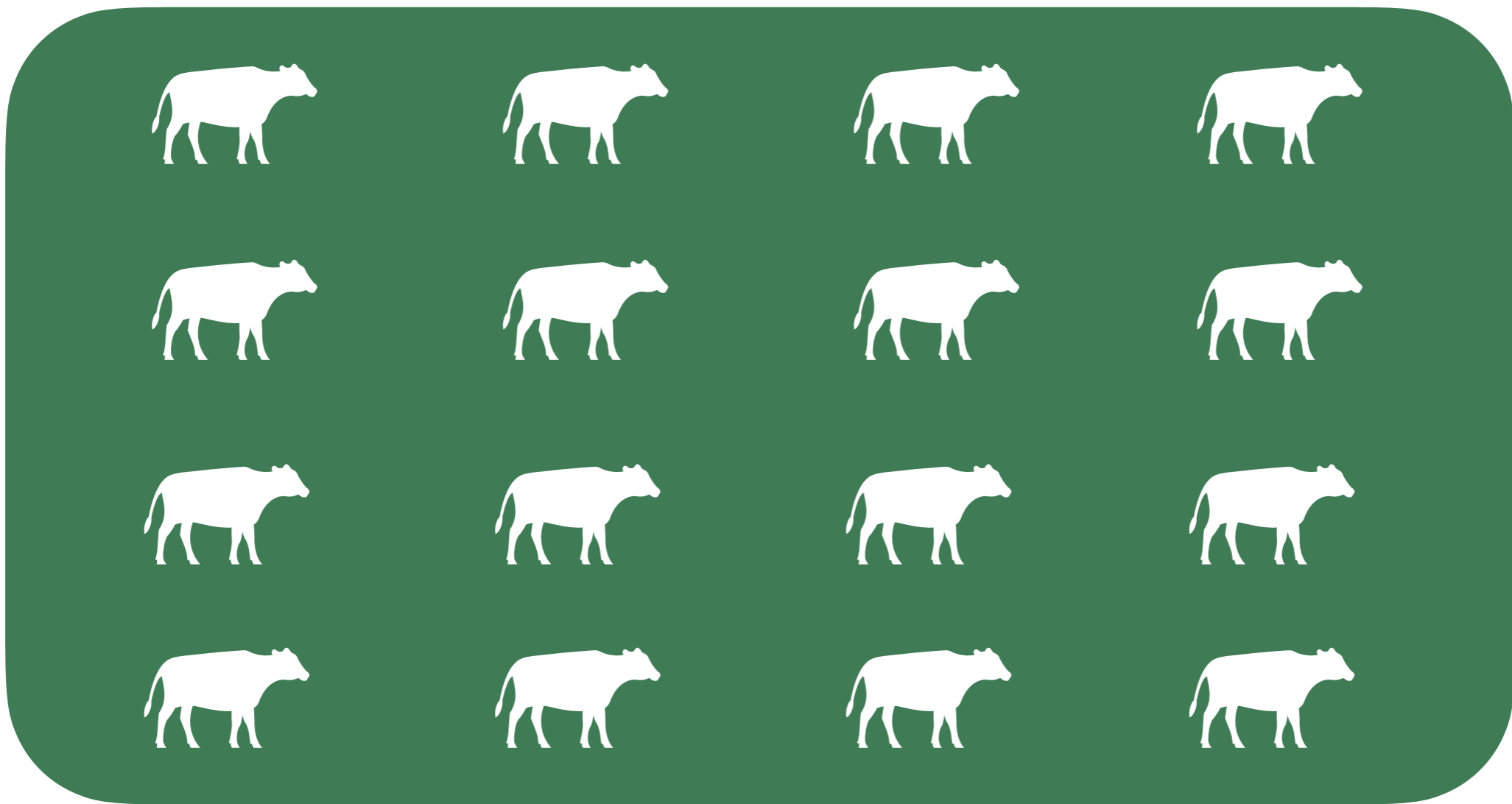
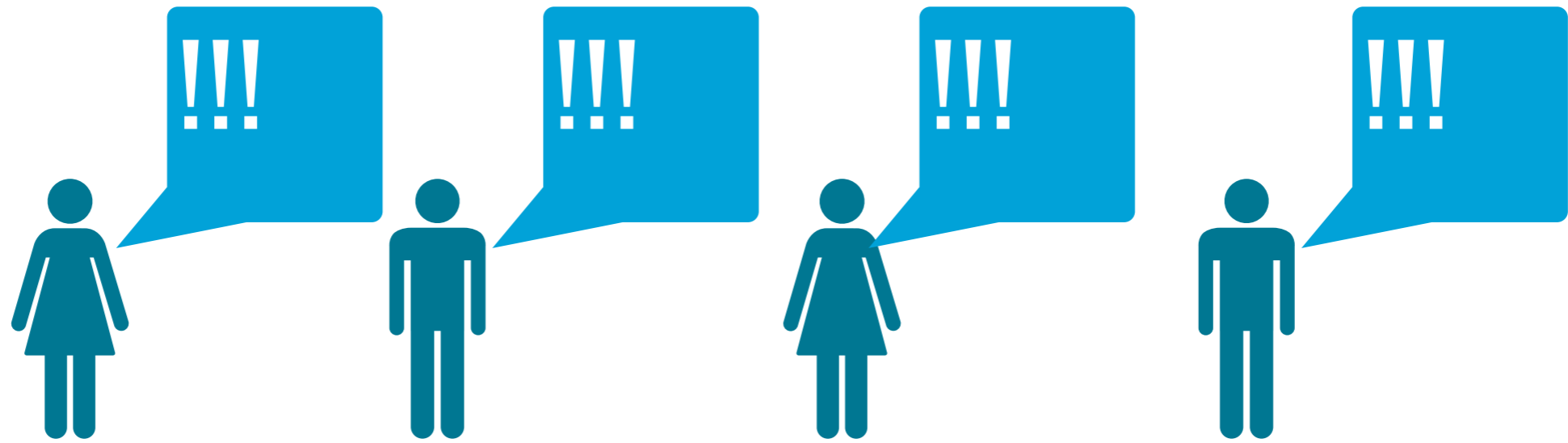
WATCH ME SPEAK HERE: [HTTPS://YOUTU.BE/N8CXGBSQHCA?T=330](https://youtu.be/n8cxgbsqhca?t=330)

SOURCE: [HTTPS://WWW.NOBELPRIZE.ORG/PRIZES/ECONOMIC-SCIENCES/2009/OSTROM/BIOGRAPHICAL/](https://www.nobelprize.org/prizes/economic-sciences/2009/ostrom/biographical/)





- **Democracy**
- **Diversity**
- **Equality**



Spatial Justice



We will discuss spatial justice in the course

**Thanks for
listening**

Questions?

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**WE WILL NOT GO BACK TO NORMAL.
NORMAL NEVER WAS. OUR PRE-CORONA
EXISTENCE WAS NOT NORMAL OTHER THAN
WE NORMALIZED GREED, INEQUITY, EXHAUSTION,
DEPLETION, EXTRACTION...
WE SHOULD NOT LONG TO RETURN, MY FRIENDS.
WE ARE BEING GIVEN THE OPPORTUNITY
TO STITCH A NEW GARMENT.
ONE THAT FITS ALL OF HUMANITY
AND NATURE.**

**- SONYA RENEE
TAYLOR**

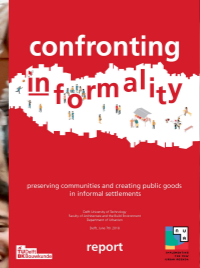
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SONYA

JDI 030 MATCH



- 1 NO POVERTY
- 2 ZERO HUNGER
- 3 GOOD HEALTH AND WELL-BEING
- 4 QUALITY EDUCATION
- 5 GENDER EQUALITY
- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 8 DECENT WORK AND ECONOMIC GROWTH
- 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
- 10 REDUCED INEQUALITIES
- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 14 LIFE BELOW WATER
- 15 LIFE ON LAND
- 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
- 17 PARTNERSHIPS FOR THE GOALS



TU DELFT SUMMERE SCHOOL PLANNING AND DESIGN WITH WATER

[HTTPS://SUMMERSCHOOLTUDELFT.ORG](https://summerschooltudelft.org)

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