## Innovations for Sustainability: Smart Specialisation and Environmental Commons. 2020 Smarter Conference Smart Specialisation for SDGs

## Nebojsa Nakicenovic

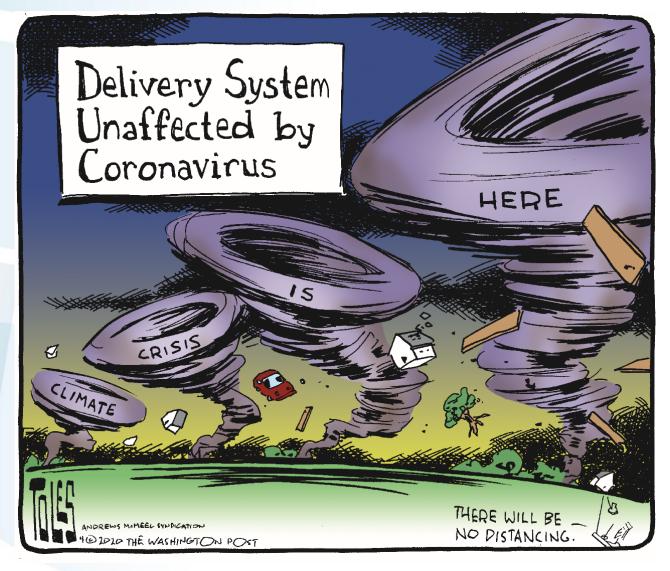
Executive Director, TWI2050 Former Deputy Director General, IIASA Former Tenured Professor, TU Wien







Despite the major immediate threat of the COVID-19, the climate crisis is here and also injustice, inequity, and ever-increasing pressure on Earth systems and global commons.



2020 #2

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The World is at "Crossroads" Explosive development transgressing planetary boundaries but many left behind

- Global economy increased 100 fold, energy 50 fold and CO<sub>2</sub> 30 fold
- Temperature increase over 1°C, about 8 million die due to indoor and regional air pollution
- Achievement of 2030 Agenda would bring multiple co-benefits for people and the planet
  Nakicenovic
  2020 #4

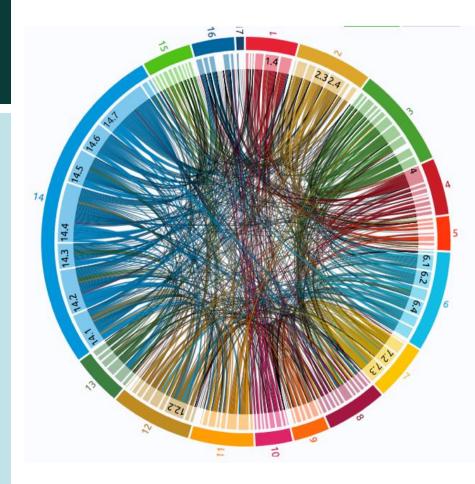
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# Interlinkages among the SDGs

Using knowledge on interlinkages to exploit synergies and minimize trade-offs in the policy process can contribute to overall policy coherence

- Survey of existing publications
- A tool to visualize the cumulated interlinkages from a set of publications
- Meta analysis of the main studies on interlinkages

#### interlinkages among goals and targets





#### Source: Miola, 2019



# Six Major Transformations (TWI2050.org)

### Digital Revolution

## Smart Cities & Mobility

SDGs: Prosperity Social Inclusion Sustainability

COVID-19

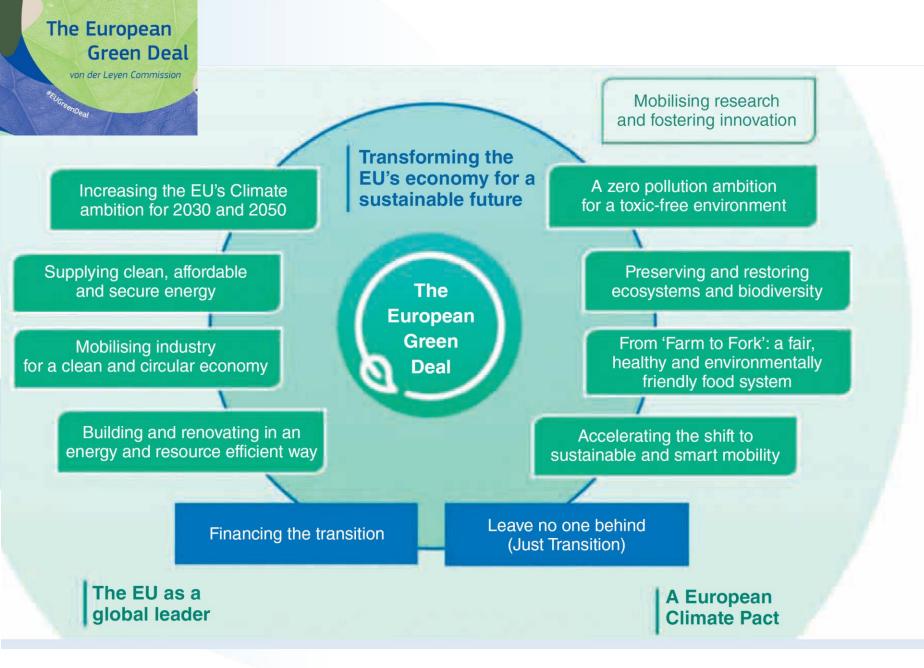
### Human capacity Demography & Health

# Consumption & Production

### Food, Biosphere & Water

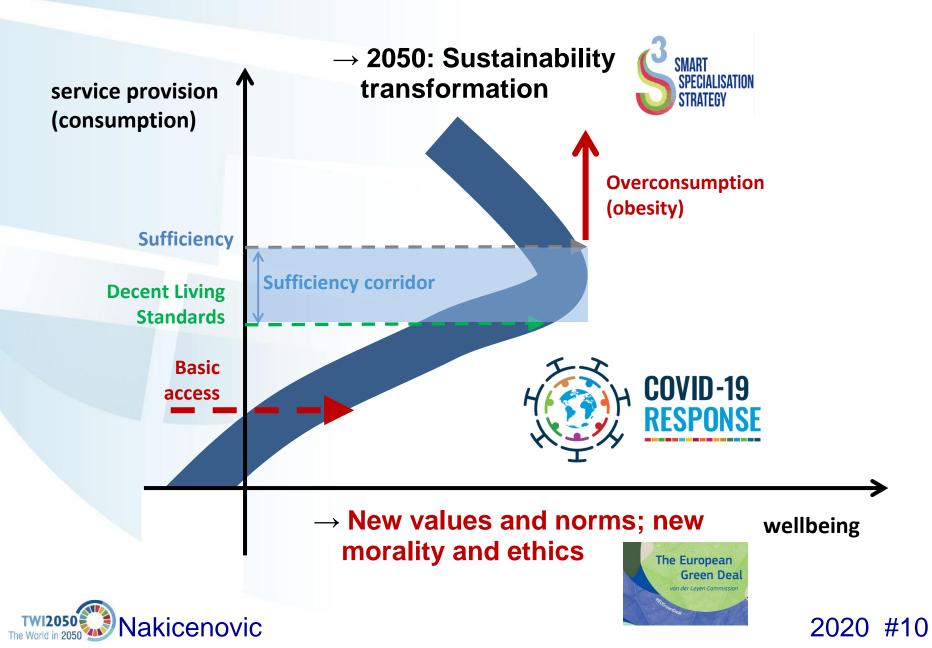


Decarbonization & Energy



The World in 2050 (TWI2050, 2018; Sachs <i>et al.</i> , 2019)	Science for Sustainable Development (GSDR, 2019)	The European Green Deal (EC, 2019)
1. Fluman capacity and health	1. Human well-being and capabilities	1. A zero pollution ambition for a toxic-free environment
2. Consum Stord prothopy Just full	2. Sustainable and just economies	2. Preserving and restoring ecosystems and biodiversity
<ol> <li>Human capacity and health</li> <li>Consumption</li> <li>Consumpting</li> <li>Consumption</li> <li>Consumption</li></ol>	3. Food oftems and Optrition patters of SUST	3. From 'Farm to Fork': a fair, healthy and environmentally friendly food system
4. Food, biosphere and water	and univegal access DIar	Anappending the shift to sustained and smart mobility
5. Smart cities	5. Urban and peri-urbacav development	<ul> <li>4. A generating the shift to sustained e and smart mobility</li> <li>5. Building and renover 0/10</li> <li>6. Mobilising industriates</li> </ul>
6. Digital revolution	6. Global environmental commons	6. Mobilising industrial and circular economy
		7. Supplying clean, affordableand secure energy
		8. Increasing the EU's Climate ambition for 2030 and 2050

## **Basic needs, Decent living & Sufficiency**



# **Smart Specialization Strategy (S3)**

S3 is an important driver of development and prosperity and includes:

- Entrepreneurial discovery (STI)
- Entry and agglomeration (convergence)
- Structural change ("creative destruction")
- Aspirational vision (roadmaps, action plans)
- But not:

Vakicenovic

- "Horizontal" support of all sectors and domains
- "Central planning" by decision makers (public or private)

Source: After Foray, 2012

## **"Doughnut" Perspective on Sustainable Development and Planetary Boundaries**





# THANK YOU

### Innovations for Sustainability

Pathways to an efficient and sufficient post-pandemic future

3<sup>rd</sup> Report prepared by The World in 2050 initiative





TWI2050





IIASA, International Institute for Applied Systems Analysis