The European Green Deal
a Catalyst for Systemic Change?

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A Union that strives for more

My agenda for Europe

candidate for President of the European Commission

Ursula von der Leyen

POLITICAL GUIDELINES FOR THE NEXT EUROPEAN COMMISSION 2019-2024
What do people think?
Most important issues the EU is facing at the moment

Source: Eurobarometer
What do experts think?

Global Risks: social & environmental risks on top

<table>
<thead>
<tr>
<th>Top 10 risks in terms of Likelihood</th>
<th>Top 10 risks in terms of Impact</th>
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</thead>
<tbody>
<tr>
<td>1. Extreme weather events</td>
<td>1. Weapons of mass destruction</td>
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<td>2. Natural disasters</td>
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<td>3. Cyberattacks</td>
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<td>4. Data fraud or theft</td>
<td>4. Failure of climate-change mitigation and adaptation</td>
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<td>5. Failure of climate-change mitigation and adaptation</td>
<td>5. Water crises</td>
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<td>6. Large-scale involuntary migration</td>
<td>6. Cyberattacks</td>
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<td>7. Man-made environmental disasters</td>
<td>7. Food crises</td>
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<td>8. Terrorist attacks</td>
<td>8. Biodiversity loss and ecosystem collapse</td>
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<td>9. Illicit trade</td>
<td>9. Large-scale involuntary migration</td>
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<td>10. Asset bubbles in a major economy</td>
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Issues are very much connected

What does this mean in terms of strategy development and policy making, including research & innovation?

Sustainable Development is therefore more than ticking the boxes of the 17 SDGs
In other words: how to get in the ‘safe and just space for humanity’?
In a world where 
the Global Economy is Shifting East 
& Geopolitics is everywhere

Share of developing Asia in total world GDP 
(constant 2011 international $ PPP)

Source: World Bank

Annual sales of electric vehicles

Source: Joint Research Centre, Bloomberg New Energy Finance
And where **Demographic Trends** will make things even **more challenging**

Source: UN Population
Reflection Paper: Europe’s challenges for the years to come

Europe’s responses

- Education, training, science, technology, research, innovation and digitization
- Finance, pricing, taxation, competition
- Corporate social responsibility
- Open and rule-based trade
- Governance and policy coherence
- The EU as a global trail blazer
How to translate this into the next European Commission’s European Green Deal?

An impressive number of policy initiatives across the board

European Climate Law to enshrine the 2050 climate-neutrality target into law □ Emission Trading System extension □ Carbon Border Tax □ Energy Taxation Directive review □ Industrial and Innovation Strategy with a dedicated SME strategy □ Just Transition Fund □ European Climate Pact □ Strategy for Green Financing □ Sustainable Europe Investment Plan (€1 trillion) and turning parts of the EIB into Europe’s Climate Bank □ Increase the EU target for 2030 to 55% (based on social, economic and environmental Impact Assessments) and lead international negotiations to increase the level of ambition of other major emitters by 2021 □ Biodiversity Strategy for 2030 □ “Farm to Fork” Strategy □ Cross-cutting strategy to move towards a zero pollution ambition and protect citizens’ health □ New Circular Economy Action Plan (textiles and construction) and Single Use Plastics Strategy □ Highest trade standards of climate, environmental and labour protection □ Comprehensive strategies on Africa and the neighbourhood □ Conference on the Future of Europe and a European Democracy Action Plan □ Refocus the European Semester into an instrument that integrates the SDGs □ Action Plan to fully implement the European Pillar of Social Rights
Profund changes are necessary

So, can we **move whole systems** so that they become sustainable?

System Innovation = New System

NOT Partial System Redesign

NOT System Optimisation

Source: Geels
No silver bullet: a mixture of policy tools will have to be activated jointly

Directionality, credibility
- Visions and pathways
- Long-term targets
- Scale and speed
- Foresight

Environment and sectoral policies, e.g.
- Carbon pricing
- Strict regulation
- Removing barriers (e.g. subsidies)

Coordination across sectors, scales
- Policy coherence and consistency
- Mission-oriented innovation
- Polycentric governance
- Stakeholder platforms, networks

Innovation policies, e.g.
- R&D
- Experiments
- Network building
- New entrant support

Industrial policy, e.g.
- Specific visions
- Market creation
- Adoption subsidies
- Backing winners

Welfare, education policies
- Compensating losers
-Offsetting inequities
- Retraining

Source: Geels; Hans Bruyninckx, EEA
Requires a new socio-economic model & a redefinition of what is success

Not a single country has achieved a high human development within planetary boundaries

How to get there?
Sustainability risks are financial risks

Possible impacts of climate-related natural disasters on the economy

- Increased uncertainty for investors/loss of market confidence
- Asset fire sales causes falls in asset prices
- Reduction in lending in unaffected areas
- Reduction in lending in affected areas
- Losses for banks
  - Fall in collateral values
  - Weakening of household & corporate balance sheets
  - Fall in output in affected areas
- Losses for insurers
  - Reduction in insurance in affected areas
  - Limited financing available for reconstruction from physical damage
- Direct damage to banking and payment service facilities
- Insured
- Uninsured

Source: Bank of England
Opportunities need to be made visible and captured

Environmental economy growing faster than overall economy

The number of smart homes in the EU is expected to increase tenfold by 2021

Smart homes* in the European Union

- 2016: 8.5 million
- 2021: 80.6 million

*Homes which use digitally controlled lighting, heating, ventilation, air conditioning, security, as well as home appliances

Source: Eurostat, European Commission

Source: European Commission
All actors throughout the finance value chain will have to be on board.
There is the risk of overlooking the intersections between social & environmental policy, thereby compromising both

EU planning well ahead for the transition in coal regions

More Europeans unable to pay their utility bills in recent years

Source: European Commission (DG JRC, DG REGIO).

Source: Eurostat, Energy poverty indicator.
New forms of employment require a reinvention of the Social Contract

**Intergenerational divide:** the incidence of non-standard employment

**At risk of poverty, percent of total**

*Source: World Bank, 2018*

*Source: Eurostat*
Fiscal unsustainability: about demographic ageing and more

The old-age dependency ratio will continue rising across Europe

Source: Eurostat and European Central Bank calculations

Note: This chart shows old-age dependency ratios — defined as the number of people aged 65 or over as a percentage of the working-age population (i.e. people aged 15-64).
Sources of revenue are coming under ever greater pressure

The share of national income paid to workers has been declining in many countries

Evolution of taxes over time, OECD countries, indexed to 2000

Source: OECD

Source: IMF, 2017
What about the outsourcing of unsustainable practices?

China and India produce carbon-intensive products for consumption by Americans and Europeans.

Source: KGM & Associates; Global Efficiency Intelligence, 2018 'The Carbon Loophole in Climate Policy: Quantifying the embodied carbon in trade products’
‘Others should…’: Individual consumption is the elephant in the room

Meat is the most resource-inefficient form of food
Land area needed to produce one unit of protein by food type (in m²)

- 2.1 kg → Insects
- 2 kg → Salmon
- 2.8 kg → Eggs
- 4.5 kg → Poultry
- 9 kg → Pork
- 25 kg → Beef
- 12 kg → Milk

Where one lives also matters
Average carbon emissions per household by selected neighbourhood types (tonnes)

- **Exurban**: 0.7 to 1 dwelling units per acre
  - 8.47 (tonnes)
- **Suburban**: 3 to 4 dwelling units per acre
  - 5.25 (tonnes)
- **Urban average**: 30+ dwelling units per acre
  - 4.2 (tonnes)
- **Carless urban average**: 60+ dwelling units per acre
  - 1.29 (tonnes)

Source: Our World in Data, Clark & Tilman, 2017
Source: Country of Cities
Innovation may not always lead to sustainable outcomes

Total R&D expenditure in billions of current purchasing power standards, 1981-2017

Source: Values extracted by DG Research and Innovation, European Commission, based on data from Eurostat, OECD, UNESCO
Overarching strategy: development & implementation

Strategy Development
Governance mode

Co-conceive a Vision
Sustainable Development for People, Planet & Prosperity

Co-create Levers
Single Market, European Research Area, European Innovation Ecosystem

Coordinate Policy Enablers
R&I Policy, Industrial Policy, Cohesion Policy, Framework Conditions

Impact of Policies

Delivery of functional Levers

Achievement of Objectives

Strategy Implementation
DG RTD: A structure reflecting all dimensions of sustainable development
## Time for systemic change

<table>
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<th>FROM</th>
<th>TO</th>
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<tr>
<td>Natural resource and habitat over-exploitation, fossil-fuel based economy</td>
<td>Respect for planetary boundaries and climate-neutral economy</td>
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<td>Produce-consume-dispose (linear) model</td>
<td>Circular economy (closed loop) and restoration of ecosystems</td>
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<tr>
<td>Focus on GDP growth</td>
<td>Moving beyond GDP to welfare and sustainability oriented metrics</td>
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<td>Society based on growing private resource consumption (cars, unused properties)</td>
<td>Shared public consumption of limited resources (public transport, efficient housing)</td>
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<td>One-size-fits-all environmental policy</td>
<td>Inequality-sensitive policy, multilevel and multi-stakeholder approach</td>
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<td>Labour market ‘insiders’ covered by social protection vs ‘outsiders’ living precariously</td>
<td>Integrating all forms of work into fortified social protection systems</td>
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<td>Minimising fiscal expenditure even in difficult times</td>
<td>Focus on strengthening the revenue base (addressing tax dodging, taxing capital rather than labour)</td>
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<td>Treating emissions as geography-constrained (each country has its own independent targets)</td>
<td>Addressing emissions outsourcing to poorer countries via trade</td>
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<td>Profit-driven innovation and investment</td>
<td>Mission-oriented innovation and sustainable finance</td>
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<td>Box-ticking silos that miss the bigger picture and fail to achieve synergies</td>
<td>System-wide approach to change</td>
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Source: EPSC
Thank you for your attention

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