# IPAC

## Linking the International Programme for Action on Climate (IPAC) initiative on climate change indicators to the Global Set

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# IPAC - International Programme for Action on Climate

**Launched at the OECD Ministerial Council Meeting in May 2021**

**Objective**

◦ Support countries' efforts to progress towards net-zero GHG emissions and a more resilient economy by mid-century

◦ Help countries strengthen and coordinate their climate action through regular monitoring, policy evaluation and feedback on results and good practices

◦ Complement the UNFCCC and Paris Agreement. And so also complementary to the Global Set: IPAC more on international benchmarking and policy advice, Global Set designed to support countries in preparing their own sets according to their individual concerns, priorities and resources

**Two-year pilot implementation under a broader Horizontal Project on Building Climate and Economic Resilience**

**Open to OECD members and selected non-Members**

# IPAC components



Annual
**CLIMATE ACTION MONITOR**

Progress towards
- ✓ National and Regional climate policy goals
- ✓ NDCs
- ✓ NAPs
- ✓ LTS

**COUNTRY NOTES**
- Environmental Performance Reviews
- Policy advice
- Examples of good practices
- Economic surveys
- In-depth energy reviews

**DASHBOARD**
of climate-related indicators

online interactive platform for
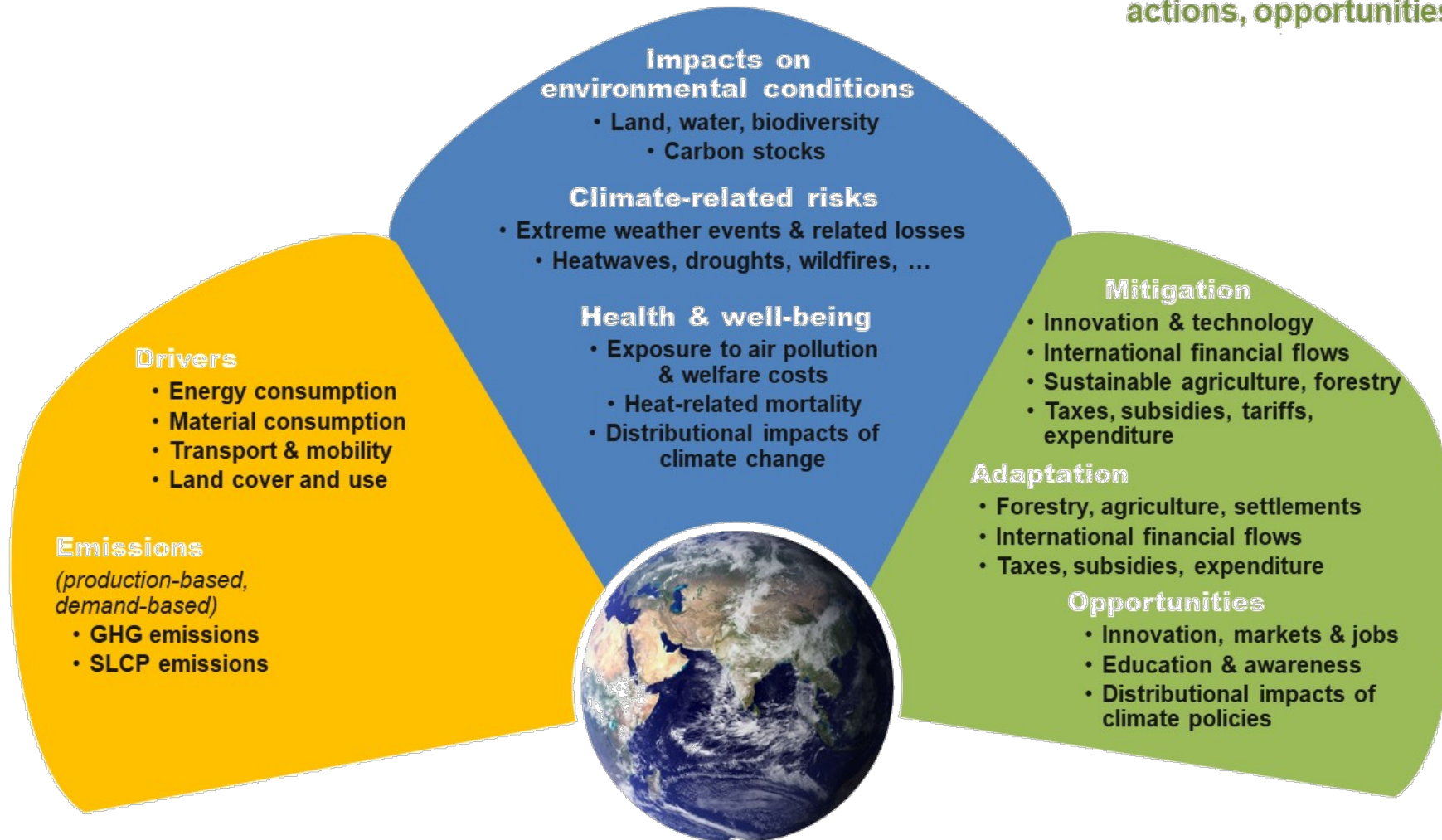**DIALOGUE & MUTUAL LEARNING**
across countries

# Conceptual measurement framework

**Pressure**
Drivers & emissions

**State**
Impacts & risks

**Response**
Policy responses,
actions, opportunities

**Impacts on environmental conditions**
• Land, water, biodiversity
• Carbon stocks

**Climate-related risks**
• Extreme weather events & related losses
• Heatwaves, droughts, wildfires, …

**Health & well-being**
• Exposure to air pollution & welfare costs
• Heat-related mortality
• Distributional impacts of climate change

**Drivers**
• Energy consumption
• Material consumption
• Transport & mobility
• Land cover and use

**Emissions**
*(production-based, demand-based)*
• GHG emissions
• SLCP emissions

**Mitigation**
• Innovation & technology
• International financial flows
• Sustainable agriculture, forestry
• Taxes, subsidies, tariffs, expenditure

**Adaptation**
• Forestry, agriculture, settlements
• International financial flows
• Taxes, subsidies, expenditure

**Opportunities**
• Innovation, markets & jobs
• Education & awareness
• Distributional impacts of climate policies

**Coherent with UN frameworks for**
• **Climate change related statistics and indicators (UNECE)**
• **Global Set of Climate Change Statistics and Indicators (UNSD)**

Note: selected examples

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# Preliminary IPAC Dashboard

| TYPE | INDICATOR | SUB-INDICATORS | LINK TO UN GLOBAL SET |
|---|---|---|---|
| **Pressure** | (1) GHG emission trends and intensities, and distance to targets | **1) Total GHG emissions**; % change and distance to NDC targets<br>**2) GHG emissions by sector**; distance to targets if in NDC<br>**3) $CO_2$ emissions from fuel combustion: production-based; demand-based**<br>**4) GHG emission per unit of GDP and per capita; level and % change** | **Total GHG emissions covered, but not the other indicators (GHG by sector, fuel combustion, and GHG intensities)** |
| | (2) Net-zero emission trajectories | | **Not in the global set** |
| **State** | (3) Climate-related impacts | **5) Mean temperature anomaly** | **Covered in the global set** |
| | | 6) % of land area suffering from unusually wet or dry conditions | **Covered in the global set** |
| | | 7) Change in country's mean sea level | **Covered in the global set but unclear if at country level** |
| | (4) Extreme weather events | 8) Number of annual events or number of days per year<br>9) Number of deaths and missing persons per 100,000 population<br>10) Direct economic loss | **Covered in the global set** |
| | (5) Climate-related vulnerabilities and impacts on well-being | PLACEHOLDER | **Covered in the global set (large array of socio-economic indicators)** |

# Preliminary IPAC Dashboard

| TYPE | INDICATOR | SUB-INDICATORS | LINK TO UN GLOBAL SET |
|------|-----------|----------------|----------------------|
| **Response** | (6) Energy mix | **11) Energy mix in total energy supply** | **Covered in the global set, but not all energy sources** |
| | | **12) Energy mix in electricity production (excluding electricity trade)** | **Not in the global set** |
| | | 13) Distance to target (if in NDC; including biomass in renewables) | **Not in the global set** |
| | (7) Carbon pricing (ECR) | **14) Share of CO$_2$ emissions priced, by price (0, 30, 60, and 120 EUR/tonne)** | **Not in the global set** |
| | (8) Climate related taxation | **15) Climate related tax revenue as % of total tax revenue** | **Partly covered in the global set** |
| | | **16) Climate related tax revenue as % of GDP** | **Not in the global set** |
| | (9) Innovation | **17) RD&D expenditure in renewables and other low-carbon technologies as % of total public energy RD&D** | **Not in the global set** |
| | | **18) Patent applications in climate mitigation technologies as % of total technologies by inventor's residence** **19) Patent applications in climate mitigation technologies as % of total technologies by patent office** | **Covered in the global set** |
| | **(10) Climate policy index** | PLACEHOLDER | **Not in the global set** |
| PLACEHOLDERS: Adaptation measures - Climate budgets, expenditure, finance - Labour market developments | | | **Covered in the global set (adaptation and expenditure, but not finance and labour market)** |

# IPAC – The broader indicator set

- **Pressure**: emissions; energy consumption and use; material consumption and use; transport & mobility; land cover and use

- **State**: impacts on environmental conditions (e.g. temperature, moisture, biodiversity), climate-related risks and vulnerability (e.g. exposure to extreme events, casualties; economic losses etc); impacts on health and well-being (e.g. distributional impacts)

- **Responses (mitigation)**: innovation and technology (R&D, patents, start-ups); sustainable agriculture and forestry (carbon sinks, afforestation, sustainable agriculture); international financial flows (ODA, export credits, other flows); taxes, subsidies, tariffs (including FFS and agricultural support); others (climate indices, trade); expenditure and financing (budget, expenditure, financial flows)

- **Responses (adaptation and opportunities)**: international financial flows and expenditure; forestry and human settlements; other adaptation policies; socio-economic opportunities (jobs, education, inclusiveness, distribution)

# Coherence with UNSD Global Set

- High degree of overlap (e.g. drivers, physical impacts, hazards, mitigation measures)

- But global set is larger in scope:
  - Larger set of drivers (e.g. population growth, drained/degraded soils)
  - Larger set of impacts (e.g. crop losses, change in snow cover, water abstractions, distribution and status of species etc)
  - Vulnerability part, e.g. food security, vulnerable species, infrastructure
  - Adaptation, e.g. risk management & early warning systems

- Some indicators of the Global Set aren't directly related to climate change (e.g. waste collection) or may be difficult to measure (e.g. "climate-related diseases"). Thus more precise definitions may be needed and careful interpretation of non-climate-related indicators.

- Clear opportunities of cross-fertilisation in indicator development

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**THANK YOU!**

**OECD work on climate**
https://www.oecd.org/climate-change/

**OECD international repository in support of climate action**
https://www.oecd.org/environment/climate-data/

**IPAC**
https://www.oecd.org/climate-action/ipac/
https://www.oecd.org/action-climat/ipac/

**HP on Climate and Economic resilience**
https://www.oecd.org/env/cc/brochure-horizontal-project-on-climate-and-economic-resilience.pdf