About UNEP-FI Principles for Sustainable Insurance (PSI)

1. Launched at the 2012 UN Conference on Sustainable Development,

2. Global framework for the insurance industry to address environmental, social and governance risks and opportunities

3. Some recent initiative: NZIA, work on the V20 Insurance Sustainability, development of ESG guides for insurers, the TCFD program

4. TCFD program actively underway at PSI since 2019
Objectives of PSI TCFD program

1. **Develop methodologies** for assessing and disclosing climate-related underwriting risks and opportunities according to TCFD recommendations.

2. Contribute to the creation of an **harmonized approach to TCFD disclosures**.

3. **Signal support** for the FSB work on climate risk transparency through the TCFD recommendations.
Recent initiatives: Increasing focus on regions

1. **Global pilot project**, to drive technical implementation of TCFD recommendations

2. Working on climate issue paper in context of **Life & Health insurance**

3. **Regional engagements** for the implementation of disclosure frameworks
TCFD Pilot of Recommendations
Analytical framework

Combining the various risk sources in an *integrated* approach

<table>
<thead>
<tr>
<th>Climate scenarios</th>
<th>Climate risk mapping</th>
<th>Pathways &amp; financials</th>
</tr>
</thead>
<tbody>
<tr>
<td>4°C</td>
<td>Risk types</td>
<td>5 Case studies</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>Transition</td>
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<td></td>
<td>Lines of business</td>
<td></td>
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<tr>
<td></td>
<td>Non-life</td>
<td>Life</td>
</tr>
<tr>
<td>IEA and IPCC scenarios</td>
<td>6 regions, 85 countries</td>
<td>Economic loss estimates</td>
</tr>
</tbody>
</table>

- Multi-risk approach
- Litigation risk methodology
- Economic impact models
- Global multi-line coverage
Impact pathways analyses

- **Risk**
  - Change of risk:
    - e.g. for PHY: based on hazard, vulnerability and exposure, changing risk profile of typhoons / hurricanes
    - e.g. for TRA: changing market, technology and regulations

- **Sector impact**
  - Economic impact on the sector because of risk:
    - e.g. for HY: severity of damage to property
    - e.g. for TRA: CO₂ pricing or shift in share of renewables/fossil fuels

- **Business line impact**
  - Impact on the line of business and the resulting business impact:
    - e.g. impact on the amount or frequency of claims, AAL, AEP

- **Metrics impact**
  - Potential change in key insurance metrics:
    - e.g. loss ratio, premium profitability, sum insured

- **Strategic impacts**
  - Impact on strategic decisions to be made:
    - e.g. insurability for products, demand

The impact pathway analysis delivers an understanding of the qualitative chain of impact for physical and transition risks on insurance products.
Valuing future loss amounts

Urban flood example

Modeled expected future urban damage due to climate and socio-economic changes against a historic baseline (Financial impact)

Proportion of damage change due to only climate change / climate change and socio-economic change (%)

Scaling factors based on change in storm surge inundation damage due to climate change / climate change and socio-economic change (Ratio)

Future loss amount due to change in inundation related to climate change / climate change and socio-economic change (Financial impact)

Loss amount from current AEP curve at different return periods (Financial impact)

Key:

- Climate data input
- Insurance data input
- Analysis and output

Principles for Sustainable Insurance
Case studies

Multiple perils in various jurisdictions with different products and exposures
Climate change litigation by jurisdiction

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1188</td>
</tr>
<tr>
<td>Australia</td>
<td>96</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>60</td>
</tr>
<tr>
<td>European Union</td>
<td>57</td>
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<tr>
<td>Canada</td>
<td>21</td>
</tr>
<tr>
<td>New Zealand</td>
<td>18</td>
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<tr>
<td>Spain</td>
<td>13</td>
</tr>
<tr>
<td>France</td>
<td>10</td>
</tr>
<tr>
<td>India</td>
<td>10</td>
</tr>
<tr>
<td>Brazil</td>
<td>6</td>
</tr>
<tr>
<td>Germany</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>67</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1551</strong></td>
</tr>
</tbody>
</table>

Two proposed methods

1. Risk management based approach  
   (developed by project group)

2. Stress test scenarios based approach  
   (developed by the Bank of England)

Based on Sabin Center Climate [Litigation Databases](#)
Risk management based approach

Three key factors relevant to assessing litigation risk:

- Likelihood that a litigation will be brought
- Chance that a litigation will rule in favor of plaintiff
- Cost of remedy sought

- Litigation due to fossil fuel production, promotion and GHG emissions
- Litigation pertaining to physical implications of climate change
- Litigation pertaining to breaches of regulatory frameworks
Summary: From risk pillars towards risk integration

- **Physical risk**
  - Geography (country level)
  - Line of business/products
  - Hazard, vulnerability, insurance exposure
  - Materiality of the impact of physical hazards on insurance product lines is evaluated.

- **Transition risk**
  - Line of business/products
  - Economic sector
  - Changes in insurance demand based on the result of how different sectors are affected by transition risk drivers
  - Analysis at intersection of economic sectors and lines of business, as these are affected by sector dynamics
  - Highlighting of relevant geographical economic sector dynamics

- **Litigation risk**
  - Geography/Jurisdiction
  - Line of business/products
  - Key risk and opportunities will be assessed based on the underlying regulatory frameworks and litigation cases
  - Geography/Jurisdiction play a key role
### Opportunities

**Across your insurance portfolio**
- Other lines by risk class
- Life & Health analysis
- Multi-risk correlation analysis
- Portfolio level analysis

**Across scenario types**
- NGFS scenarios
- Increased resolution
- Terms and conditions
- Litigation analysis
- Litigation stress tests
- Exposure, vulnerability futures
- Multi-risk scenarios

**Across your organisation**
- Combine underwriting & investment
- Cross-portfolio level analysis

**Across climate**
- Net-zero underwriting & investment
- Further focus on opportunity side
Thank you!

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Reports

Using hindsight and foresight  
Enhancing the insurance industry’s assessment of climate change futures  
September 2020

Insuring the climate transition  
Enhancing the insurance industry’s assessment of climate change futures  
January 2021