CLIMATE CHANGE AND GOVERNMENT ADAPTATION ACTION

CHALLENGES AND RESPONSES

PETER WELCH

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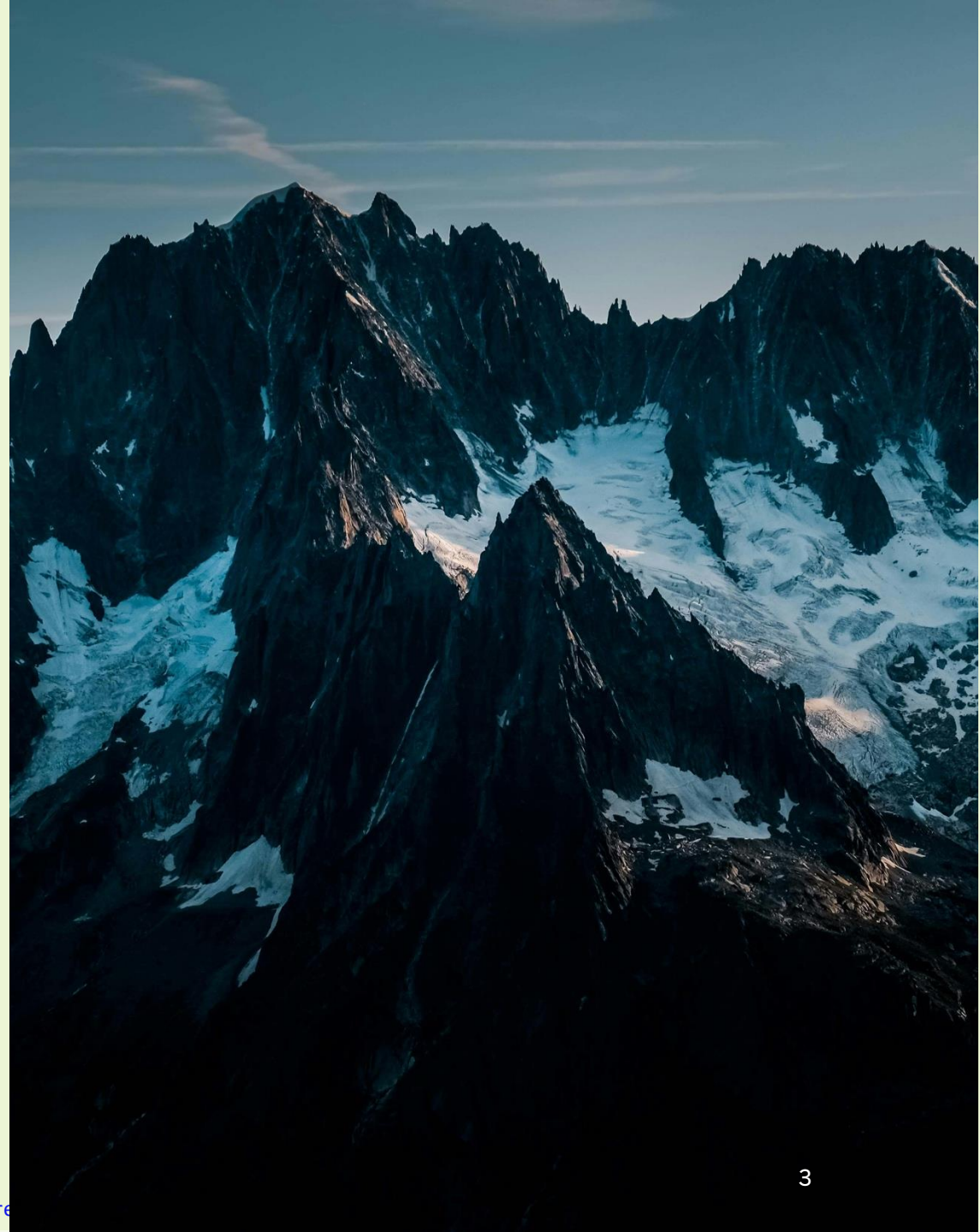
CLIMATE CHANGE IS A GLOBAL CHALLENGE WITH FAR-REACHING IMPACTS ON ECOSYSTEMS, ECONOMIES, AND COMMUNITIES.

The focus of this presentation:
The key risks posed by climate change.
Government actions and strategies for adaptation

Some Key Risks Posed by Climate Change

- **Rising Temperatures:**
  - Increase in global average temperatures.
  - More frequent and intense heatwaves.
  - Impact on public health, agriculture, and infrastructure.
- **Sea Level Rise:**
  - Melting polar ice and thermal expansion of oceans.
  - Threats to coastal communities, ecosystems, and infrastructure.
- **Extreme Weather Events:**
  - Increased frequency and intensity of storms, floods, and droughts.
  - Greater risk of natural disasters with economic and human costs.
- **Impact on Water Resources:**
  - Changes in precipitation patterns leading to water scarcity or flooding.
  - Impact on agriculture, drinking water supply, and hydropower\
  - Glacier loss.
- **Biodiversity Loss:**
  - Habitat destruction and changing ecosystems.
  - Threats to species survival and ecosystem services.



AT RISK REGIONS

- **Small Island Nations:** Threat of submersion and loss of territory.
- **South and Southeast Asia:** Vulnerability to floods, cyclones, and heatwaves.
- **Low-Lying Coastal Cities:** Risk of sea level rise and storm surges (Jakarta - Nusantara, Dhaka, New York, London, Shanghai, the Hague…)
- **Sub-Saharan Africa:** Droughts, food insecurity, and water scarcity.
- **Arctic and Polar Regions:** Rapid warming and ice melt.
- **Mediterranean Basin:** Droughts and heatwaves.

GOVERNMENT ACTION

- **1. Climate-Resilient Infrastructure:**
  - **Investment in green infrastructure (e.g., green roofs, permeable pavements).**
  - **Development of floating cities and elevated structures.**
- **2. Early Warning Systems:**
  - **Advanced climate monitoring and real-time alert systems.**
  - **Community-based early warning initiatives.**
- **3. Water Management Innovations:**
  - **Implementation of smart water systems and water trading mechanisms.**
  - **Investments in flood defenses and stormwater management.**
- **4. Coastal Protection and Managed Retreat:**
  - **Construction of sea walls, levees, and buffer zones.**
  - **Planned relocation of communities in high-risk coastal areas.**

ADAPTATION IN AGRICULTURE AND FOOD SECURITY

- **Drought-Resistant Crops:**
  - Development and promotion of crops resilient to extreme weather.
  - Focus on regions prone to droughts and temperature extremes.
- **Agroforestry and Sustainable Practices:**
  - Integration of trees into agricultural systems to improve resilience.
  - Adoption of sustainable farming practices to enhance soil and water conservation.
- **Climate-Smart Agriculture:**
  - Use of technology and data to optimize agricultural productivity under changing conditions.
  - Support for smallholder farmers to adapt to climate change.

But note – often significant resistance from those who need to make changes.

ECOSYSTEM-BASED ADAPTATION

- **Restoration of Natural Habitats:**
  - **Protection and restoration of mangroves, wetlands, and coral reefs.**
  - **Ecosystems as natural barriers against climate impacts.**
- **Biodiversity Corridors:**
  - **Establishment of corridors to allow species migration in response to climate shifts.**
  - **Conservation strategies that focus on preserving ecosystem services.**

URBAN RESILIENCE AND CLIMATE-SMART CITIES

- **Urban Planning for Resilience:**
  - Designing cities to withstand extreme weather (e.g., flood-resistant buildings, stormwater parks).
  - Enhancing green spaces to reduce urban heat islands.
- **Climate Action Plans:**
  - Implementation of comprehensive plans that address both mitigation and adaptation.
  - Community engagement in developing and executing adaptation strategies.

Climate Finance and Insurance Mechanisms

- **Climate Bonds and Green Finance:**
  - **Government issuance of climate bonds to fund adaptation projects.**
  - **Leveraging public and private investment in resilience-building initiatives.**

FINANCE

- **Risk Pooling and Insurance:**
  - **Regional insurance schemes to spread the financial risk of extreme events.**
  - **Development of climate insurance products for vulnerable communities.**

Note: there is a risk that this dilutes market signals.

PUBLIC AWARENESS AND EDUCATION

- **Climate Education:**
  - Integration of climate change topics into national education curricula.
  - Public campaigns to raise awareness about adaptation measures.
- **Citizen Engagement:**
  - Climate assemblies and participatory planning processes.
  - Encouraging community involvement in local adaptation efforts.

CHALLENGES AND OPPORTUNITIES

- **Challenges and Opportunities**
- **Challenges:**
  - Financial constraints and competing priorities.
  - Political and social resistance to adaptation measures.
  - Uncertainties in climate projections.
  - Understanding the scale of the challenge
- **Opportunities:**
  - Innovation in technology and infrastructure.
  - International cooperation and knowledge sharing.\
  - Economic benefits of building resilient communities.
  - Positive impacts of some measures on other issues (healthy environments)

THANK YOU!

I WILL TRY TO ANSWER YOUR QUESTIONS…

Peter Welch

Senior Advisor, OECD.

Peter.Welch@OECD.org