



Recap: Day 1 of the Workshop

2nd CEC Virtual Expert Workshop



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**PACIFIC WATER
RESEARCH CENTRE**



Thematic Discussion 2





Thematic Discussion 1: Presentations

- Welcome remarks
 - Renee McPherson (University of Oklahoma)
 - Orland Cabrera Rivera (CEC Secretariat)
- Presentations - CEC flood project preliminary findings
 - Project Overview - Zafar Adeel (Simon Fraser University)
 - Findings from Canada - Hirmand Saffari (Simon Fraser University)
 - Findings from Mexico - Ana María Alarcón Ferreira (Universidad Nacional Autónoma de México)
 - Findings from the United States - Lynn M. Rae (University of Arizona)
 - Common challenges - Xin Wen (Simon Fraser University)
- Questions
 - 1) How do we address these data gaps and knowledge gaps?
 - 2) What are the common lessons for the CEC flood costing project?



Thematic Discussion 1: Summary of Findings

- Data availability across countries (2013-2017)
 - Canada (8 events)
 - Approach: 1) Rough estimates of costs, 2) Collect insured losses, 3) Data disaggregation
 - Challenges
 - » Lack of data and data granularity, including uninsured losses
 - » Scarcity of data from remote areas and Indigenous communities
 - Mexico (7 events)
 - Most complete data availability and index coverage
 - » Data collected in multiple areas including public infrastructure damages, damages and losses in agriculture, industry/sectors, and the environment and health
 - » More than 25 agencies collecting data across Mexico
 - Challenges
 - » Incorporation of private insurance
 - » Increasing transparency and data sharing mechanisms
 - » Need for centralized data platform
 - » Local and regional personnel capacity building for increased data provision



Thematic Discussion 1: Summary of Findings

- Data availability across countries (2013-2017)
 - United States (2 events collected, 7 flood-only events identified)
 - Many federal datasets covering different data areas
 - Data Challenges
 - » Multi-hazard events (e.g., hurricane)
 - » Insured vs uninsured losses, losses based on participation in public program
 - » Differing definitions of loss/damage categories across datasets and CEC method
 - » Market value of loss vs replacement cost
 - » Data access and availability issues
 - » Some state, local, and Indigenous data not currently included
- Database Development
 - Extreme Events Economic Impact Database (E³ID)
 - 105 data indicators but data gaps remain



Thematic Discussion 1: Discussion Points

- Data privacy concerns
 - Tension between increasing granularity and preserving anonymity
 - Security concerns about critical infrastructure
- Missing data
 - Indigenous, highly vulnerable populations, private data, etc.
 - Multi-hazard data not incorporated
- Including multiple scales of data collection
 - Federal but also provincial/state, municipal/county, local data representation and cost-sharing
- Ability to “reverse engineer” damage estimates?
 - Insured to uninsured
 - Federal to local
- Account for costs associated with collecting data
 - Resources limited directly following a disaster
 - Additional resources may be needed, cooperation important, data interpretation needed
- Unique event IDs from WMO’s extreme weather event catalogue - GLIDE
 - National and then global scale



Thematic Discussion 1: Discussion Points

- Representation of Indigenous and Tribal impacts
 - Desire to include important losses that are sometime omitted in official records
 - Need for inclusive, non-extractive, collaborative relationships
 - Requires time, trust, and learning
 - Need a protocol to exchange knowledge and collect data, especially on intangible assets
 - Some Indigenous groups collect data that can be higher quality than is collected nationally
 - Example: Guerrero flood (September 2013, Mexico)

- How best can we include flood damages from the Indigenous communities?
 - Best to empower and allow Indigenous groups in data gathering process
 - Currently have a category but no data
 - Interlink with case study selection



Thematic Discussion 2





Thematic Discussion 2: Presentations

- Welcome remarks
 - Recap of Thematic Discussion 1 - Laura Bakkensen (University of Arizona)

- Presentations – Stakeholder perspectives
 - Federal Government - Nicky Hastings (Natural Resources Canada)
 - Insurance sector perspective - Laura Twidle (CatIQ, Inc.)
 - Indigenous Concepts of Value and Ethical Community Engagement - Maurice Cruz (South Central Climate Adaptation Science Center)

- Questions
 1. How best can we prioritize the various elements of the CEC method?
 2. How can we address knowledge and data gaps?
 3. What are the potential challenges in real-world implementation?



Thematic Discussion 2: Summary of Findings

- A range of federal programs in Canada
 - Flood hazard layer under development
 - Canadian Disaster Database
 - Flood Mapping Framework (priorities, data acquisition, flood estimation/delineation, mapping, risk assessment, flood mitigation) – potential link for the CEC methodology
 - National Human Settlements Model (integrating land use, built environment, census data)
 - Neighbourhood vulnerability profiles (socioeconomic vulnerabilities)
 - Open DRR Platform (open-source GIS modeling / tools)
- Insurance sector insights from Canada
 - Flooding is a relatively new peril
 - Event definition: Catastrophe (>\$25m); Notable Events (\$10-25m)
 - Industry Loss Database (data from participating primary insurers)
 - Industry Exposure Database (provided by companies)



Thematic Discussion 2: Summary of Findings

- Identification of assets in Indigenous communities
 - Ensuring equity, diversity and inclusion
 - Holistic and systematic approach
 - PESTEL model (political, environmental, social, technological, economic, legal/regulatory)
 - Approaches for community input (planning meetings, workshops, semi-structured interviews, community surveys and events, informal communications)
 - Challenges in assessing losses:
 - respectfully identifying and assessing the loss of community values that do not fall under traditional western or colonial definitions of value
 - Lack of asset inventories



Thematic Discussion 2: Discussion Points

- Utility of the CEC methodology to the insurance sector
 - Could be used for benchmarking; exploring niche markets
- Recording transboundary flooding events
 - Need for better tracking transboundary events; using unique identifiers
 - Using GLIDE database maintained by WMO
 - Flexibility present in CEC database
- Community engagement in Mexico
 - Incorporation of additional indicators (children missing school, job loss)
- Respectfully gathering post-flood data
 - Difficult in present circumstances
 - Data gaps for Indigenous communities – encapsulating different asset definitions; difficulties in monetizing impacts
- Case studies as an opportunity to engage Indigenous communities