Project Conclusions and Recommendations

3rd CEC Virtual Expert Workshop

Dr. Zafar Adeel, Executive Director
Pacific Water Research Centre, Simon Fraser University
26 March 2021

Re-visiting: **Context for Trinational Partnerships**

- Creating sustainable, institutional partnerships to:

  - Improve prediction and forecasting of extreme events

  - Enhance preparedness for creating effective, timely responses

  - Build the resilience of communities to cope with extreme events

- Value-Add for trinational cooperation:

  - Building on existing partnerships

  - Enhanced forecasting and responses by formulating common approaches

  - Real-time sharing of data and information

  - Reduced economic impacts

  - Cost-savings in data gathering and analysis

Re-visiting: **Anticipated Outcomes**

- Incorporation of flood-costing methodology in planning for community resilience
  - Uptake into policies at federal, state/provincial and municipal level

- Communities/regions use the most suitable data and information
  - Improved data and tools to support decision making for flood management at the local and national levels

- Enhanced capacity of local and regional emergency managers
  - Improved information sharing for preparedness and emergency response

Project **Conclusions**

- Flooding causes significant economic impact across Canada, Mexico, US
  - *At least* US$ 17 billion in 2013-2017

- Centralized data gathering creates comprehensive information
  - CENAPRED (Mexico) provisions state-level data
  - Multiple agencies in Canada and the United States make data collection incomplete and complicated

- Flood economic impact data are collected unevenly by various sectors
  - Particularly difficult to find indirect damages and losses

Project Recommendations

Recommendations: **Policy Transitions**

- Create mechanisms for real-time provisioning of economic-impact data
  - First responders (link up with other CEC initiatives)
  - Strategic planners at different levels of government

- Engage Indigenous leaders and researchers in resilience-building mechanisms
  - Apply at different levels of governments

- Increase awareness of the comprehensive costs of flood-related impacts
  - Engage first responders, emergency managers and the public
  - Differentiate between direct damages, indirect damages and additional costs/losses

- Commit financial and human resources to enhance data and create new knowledge

Recommendations: **Enhanced Data Management**

- Streamline data gathering approaches
  - Follow best practices in data collection, management and transparency
  - Particularly applicable to Canada and the United States
  - Fill information gaps, particularly sectoral impacts

- Include Indigenous measures of flood impact in data gathering
  - In-depth engagement with Indigenous communities and leadership

- Create a centralized data repository for the three countries
  - Greater collaboration in joint flood responses and resilience building
  - Analyze continental scale patterns and trends
  - Benefit from economies of scale

- Facilitate flow of data from/to the insurance sector, ensuring confidentiality

- Undertake capacity building and training for data collection, management

Recommendations: **Further Research**

- Investigate methods for interlinking economic impacts of cascading hazards
  - Extend CEC methodology for application to wildfires, droughts, hurricanes, snowstorms, landslides

- Conduct in-depth analysis on spatial representation of data

- Link flood-cost data to flood risk maps at different scales
  - Better design future efforts to build resilience

- Explore best practices to integrate simulation models
  - Focus: Assessing long-term indirect economic impacts