SECTION 2 AGENDA

JUNE 28, 2024

Ministry of Transport, Integrity, Nature and Senior Affairs

NCRC

STIMSON

SECTION 2: **CORVI Aruba** (including CORVI Aruba Partners)

11.00am - 11.05am	**Welcome Stimson Center & CORVI Partners** by Minister Ursell Arends
11.05am - 11.25am	**CORVI Aruba, Stimson Center** by Sally Yozell & Tracy Rouleau
11.25am - 11.55am	**Open discussion / Q&A**
11.55-am - 12.00pm	**Concluding Words** by Minister Ursell Arends

MINISTER URSELL ARENDS

Government of **Aruba**

Arubabank

AUA
ARUBA AIRPORT AUTHORITY

AHATA
ARUBA HOTEL & TOURISM ASSOCIATION

ARUBA PORTS AUTHORITY NV
ORANJESTAD + BARCADERA

ARUBA
Aruba Tourism Authority

CENTRALE BANK VAN ARUBA

ELMAR

MetaCorp
Est. 1920
The oldest company in Aruba

SETAR

WEB
WATER- EN ENERGIEBEDRIJF ARUBA N.V.

UTILITIES ARUBA NV

SALLY YOZELL
DIRECTOR, ENVIRONMENTAL SECURITY

TRACY ROULEAU
NONRESIDENT FELLOW

STIMSON

30 years

CORVI: The Climate and Ocean Risk Vulnerability Initiative

PRIORITIZING ACTION FOR COASTAL COMMUNITIES

Coastal Community Assessments

ORRAA Ocean Risk and Resiliance Action Alliance

OPRI OCEAN POLICY RESEARCH INSTITUTE SASAKAWA PEACE FOUNDATION

Bloomberg Philanthropies Vibrant Oceans Initiative

The Commonwealth Blue Charter

DEPARTMENT OF STATE UNITED STATES OF AMERICA

TAIWAN ICDF

PRINCE ALBERT II OF MONACO FOUNDATION

UKaid from the British people

AXA

Benefits from previous CORVI Assessments

For Governments

- Local adaptation plans (e.g., Mombasa)
- City master planning and infrastructure development (e.g., Chattogram)
- Inform policymaking (e.g., St. Kitts and Nevis)

For Private Sector

- Inform project design (e.g., Kiribati)
- Understand risks to supply chains and operations

For International Financial Institutions

- Inform fiscal planning (e.g., IMF)
- Integrate climate adaptation into development planning (e.g., World Bank, regional development banks)

Coastal Communities Exposed to the Climate Crisis

Assessing Climate Vulnerability at the Community Level

$Risk_x = f(Hazard_x, Exposure_x, \mathbf{Vulnerability_x})$

- Granular data on vulnerability to climate change is often not available

- CORVI maps this vulnerability in social, economic, and environmental systems at the community-level

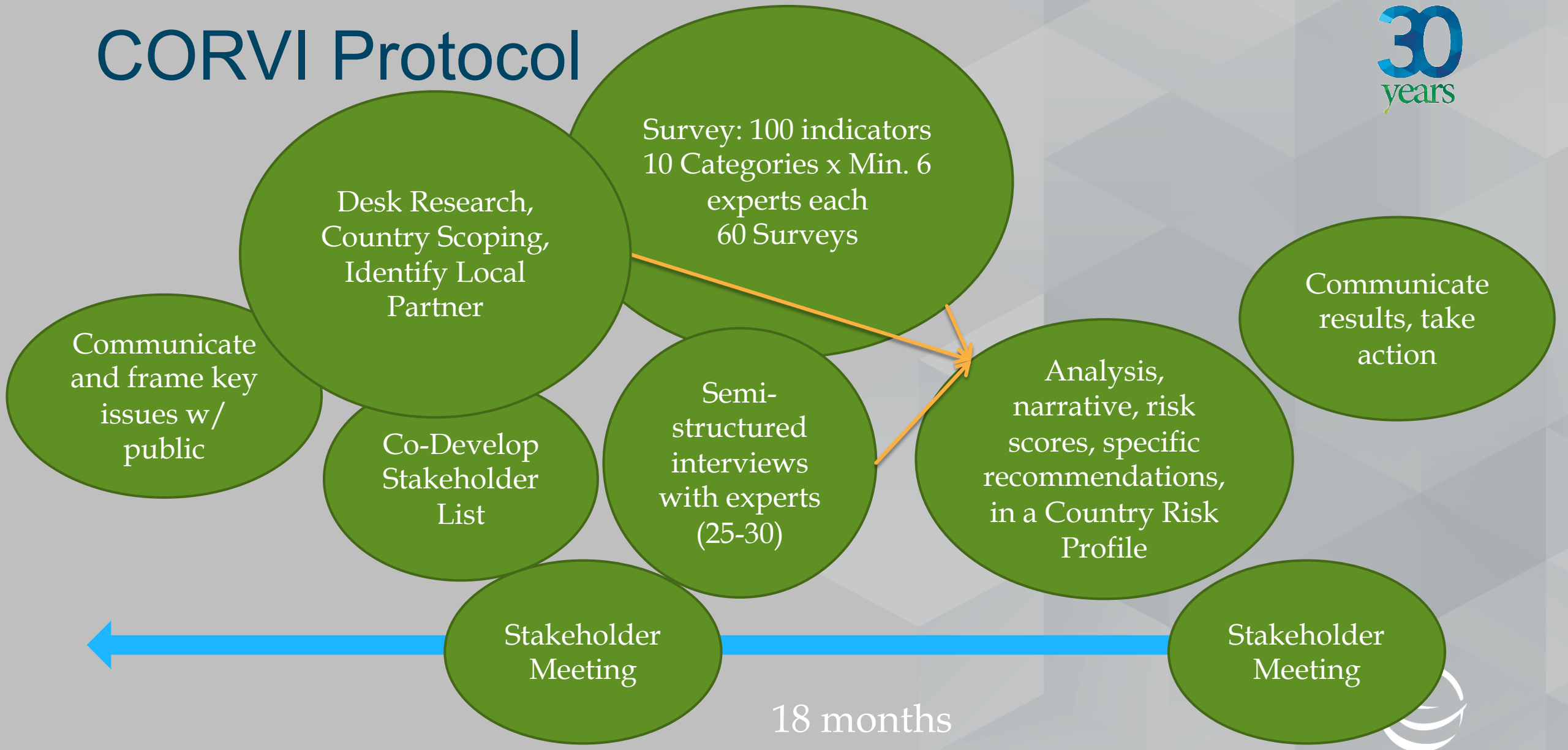
CORVI Framework

- CORVI integrates economic, social, and environmental data to produce a holistic assessment to determine how resilient a coastal community is to climate and ocean risks.
- CORVI is:
  - Three types of risk
  - 10 risk categories
  - ~100 indicators

New Health Category

CORVI Indicators	
Access to Healthcare	Mortality rate attributed to non-communicable diseases
Cases of Infectious Disease Cases	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene
Health worker density and distribution	Percent of population at risk of mental health disorders and stress-related disorders
Mortality attributed to heat	Percent of population experiencing moderate or severe food insecurity

CORVI Protocol



Overview of In-Country Data Collection Process

- **Purpose**: To fill gaps in pre-existing datasets, develop indicator scores, provide understanding of vulnerabilities on the ground
- **Objective**: Quantify and contextualize localized risk when existing empirical data is inadequate
- **Method**: Surveys and Semi-Structured Interviews

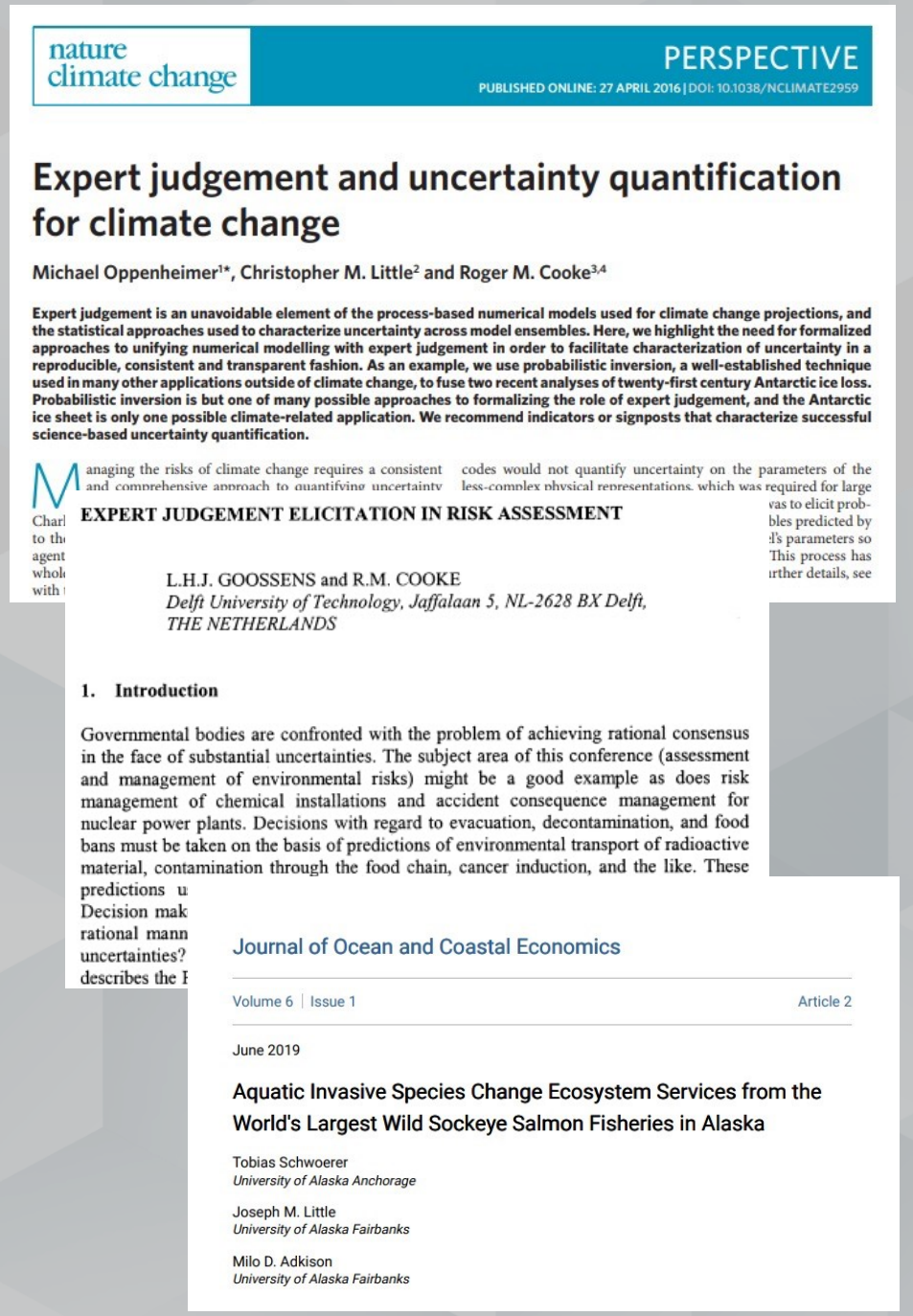
Engaging Stakeholders

CORVI Risk Categories	
Climate Change	**Major Industries**
Ecosystems	**Economics/Finance**
Geology/Water	**Health**
Fisheries	**Social and Demographics**
Infrastructure	**Governance**

- Stakeholders should be identified from government agencies, academia, local business, and non-governmental organizations
- Stakeholders can be difficult to find for some CORVI Risk Categories

What is Structured Expert Judgment (SEJ)?

- Structured expert judgement (SEJ) is a form of expert elicitation that allows for quantitative analysis.
- Data is collected by surveying experts.
- Each response goes through a coherence check – which assigns weights by comparing the survey responses to baseline empirical data.



nature climate change

PERSPECTIVE

PUBLISHED ONLINE: 27 APRIL 2016 | DOI: 10.1038/NCLIMATE2959

Expert judgement and uncertainty quantification for climate change

Michael Oppenheimer[1]*, Christopher M. Little[2] and Roger M. Cooke[3,4]

Expert judgement is an unavoidable element of the process-based numerical models used for climate change projections, and the statistical approaches used to characterize uncertainty across model ensembles. Here, we highlight the need for formalized approaches to unifying numerical modelling with expert judgement in order to facilitate characterization of uncertainty in a reproducible, consistent and transparent fashion. As an example, we use probabilistic inversion, a well-established technique used in many other applications outside of climate change, to fuse two recent analyses of twenty-first century Antarctic ice loss. Probabilistic inversion is but one of many possible approaches to formalizing the role of expert judgement, and the Antarctic ice sheet is only one possible climate-related application. We recommend indicators or signposts that characterize successful science-based uncertainty quantification.

Managing the risks of climate change requires a consistent and comprehensive approach to quantifying uncertainty codes would not quantify uncertainty on the parameters of the less-complex physical representations, which was required for large

EXPERT JUDGEMENT ELICITATION IN RISK ASSESSMENT

L.H.J. GOOSSENS and R.M. COOKE
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1. Introduction

Governmental bodies are confronted with the problem of achieving rational consensus in the face of substantial uncertainties. The subject area of this conference (assessment and management of environmental risks) might be a good example as does risk management of chemical installations and accident consequence management for nuclear power plants. Decisions with regard to evacuation, decontamination, and food bans must be taken on the basis of predictions of environmental transport of radioactive material, contamination through the food chain, cancer induction, and the like. These

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Aquatic Invasive Species Change Ecosystem Services from the World's Largest Wild Sockeye Salmon Fisheries in Alaska

Tobias Schwoerer
University of Alaska Anchorage

Joseph M. Little
University of Alaska Fairbanks

Milo D. Adkison
University of Alaska Fairbanks

Project Outputs

- Financial Risk scores for CORVI Dagupan
- High risks (red) across 8 of 29 indicators
- Medium-high risks (orange) across 17 indicators
- Accompanied by analytical report

Dagupan: Financial Risk

Each category score comprises multiple indicators.
Low 1 - 2.5 **Medium 2.51 - 5** **Medium-High 5.01 - 7.5** **High 7.51 - 10**

Category		Indicator	
Economics	6.63	Market Losses from Extreme Weather Events	8.29
		Income Inequality	7.84
		National Unemployment Rate	7.52
		Level of Informal Economy	7.20
		Debt Ratio (% of GDP)	6.82
		Percent of GDP Generated in Coastal Cities	6.60
		National Youth Unemployment Rate	6.56
		Urban Unemployment Rate	6.03
		National GDP per Capita (Purchasing Power Parity)	2.37
Infrastructure	6.33	Level of Commercial Infrastructure Damage from Extreme Weather Events	8.15
		Level of Housing Damage from Extreme Weather Events	7.74
		Level of Informal or Unplanned Settlement	7.68
		Renewable Energy Share in Total Energy Consumption	7.53
		Percent of People Living Below 5 Meters Above Sea Level	7.42
		Level of Shoreline Development	7.41
		Percent of Low-Income Housing in Relation to Flood Zones	7.37
		Level of Water Distribution Infrastructure Resilience	5.78
		Level of Resilience for Roads	5.51
		Level of resilience for Ports and Shipping	5.32
		Level of Grid Resilience	5.29
		Level of Resilience for Airports	5.03
		Percent of Population with Adequate Access to Electricity	3.73
		Proportion of Wastewater Safely Treated	3.30
Major Industries	6.04	Percent of National Economy Based in Tourism Industry	8.32
		Diversity of Lodging Types	7.31
		Percent of National Economy Based in Near Shore Fishing Industry	6.65
		Percent of National Economy Based in Port and Shipping Industries	5.85
		Percent of National Economy Based in Offshore Fisheries	5.36
		Percent of National Economy Based in Agriculture	2.86

Table: Stimson Center • Created with Datawrapper

CORVI Aruba Timeline

- May – Sept. 2024: Desktop Research (Stimson and Gov. of Aruba)
- June – Sept. 2024: Identify in-country team and develop stakeholder list (Stimson and Gov. of Aruba)
- Sept. 2024: In-country workshop (Stimson, Gov. of Aruba, In-country team)

CORVI Aruba Timeline

- Oct. 2024 – Feb. 2025: In-country data collection (in-country team, Stimson, Gov. of Aruba)
- Feb. – Sept. 2025: Draft assessment report (Stimson, Gov. of Aruba, in-country team)
- June 2025: Presentation at UNOC 2025
- Sept. 2025: In-country dissemination of findings (Stimson, Gov. of Aruba)

Thank you!

Questions?

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THANK YOU