Building Capacity for Preparedness

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The Challenges of Diagnosis

- Identify **vulnerability surpluses**:
  - -technological shortcomings
  - -organizational complexities
  - -human limitations
- Overcome **uncertainties**
  - how natural sciences can help
  - how social sciences can help

Preparedness-Response-Recovery

Identify **capacity deficits** regarding:

-technological preparedness

-governance issues

It is possible in advance to work out many **unclarities** about mandates, resources, protocols, and accountability issues

Build **trust** over time & across stake-holders

Training through Exercises

Multidimensional ”stress tests” at operational & strategic levels

Expose **cascading effects** across sectors & societies to help identify gaps

Whole of society approach in practice:

Public, private, volunteers in concert

Multil-level & cross-border interconnections and demands on governance

Key tasks for strategic capacity

- **Coordination** across multiple boundaries
- **Meaning making** through communication about risks and about response & recovery efforts
- The joker of the dynamics of social media
- **Learning**: how observed lessons may be turned into enhanced practices

International collaboration is key

Extreme space weather cuts across continental geographies

Cascading effects flow widely and deeply

Preparedness requires a common purpose & a common capacity

Networks of scientists exist

A working level **network of stake-holder organizations** is missing

A Way Forward

Establish expert level working groups on:

1) scientific data on space weather
2) study of extreme space weather
3) clarify and understand the multiple effects of extreme space weather on space- and ground-based infrastructures
4) build trans-boundary preparedness in support of policy objectives