



Disaster Risk Management models

Workshop on disaster risk management with a focus on social protection

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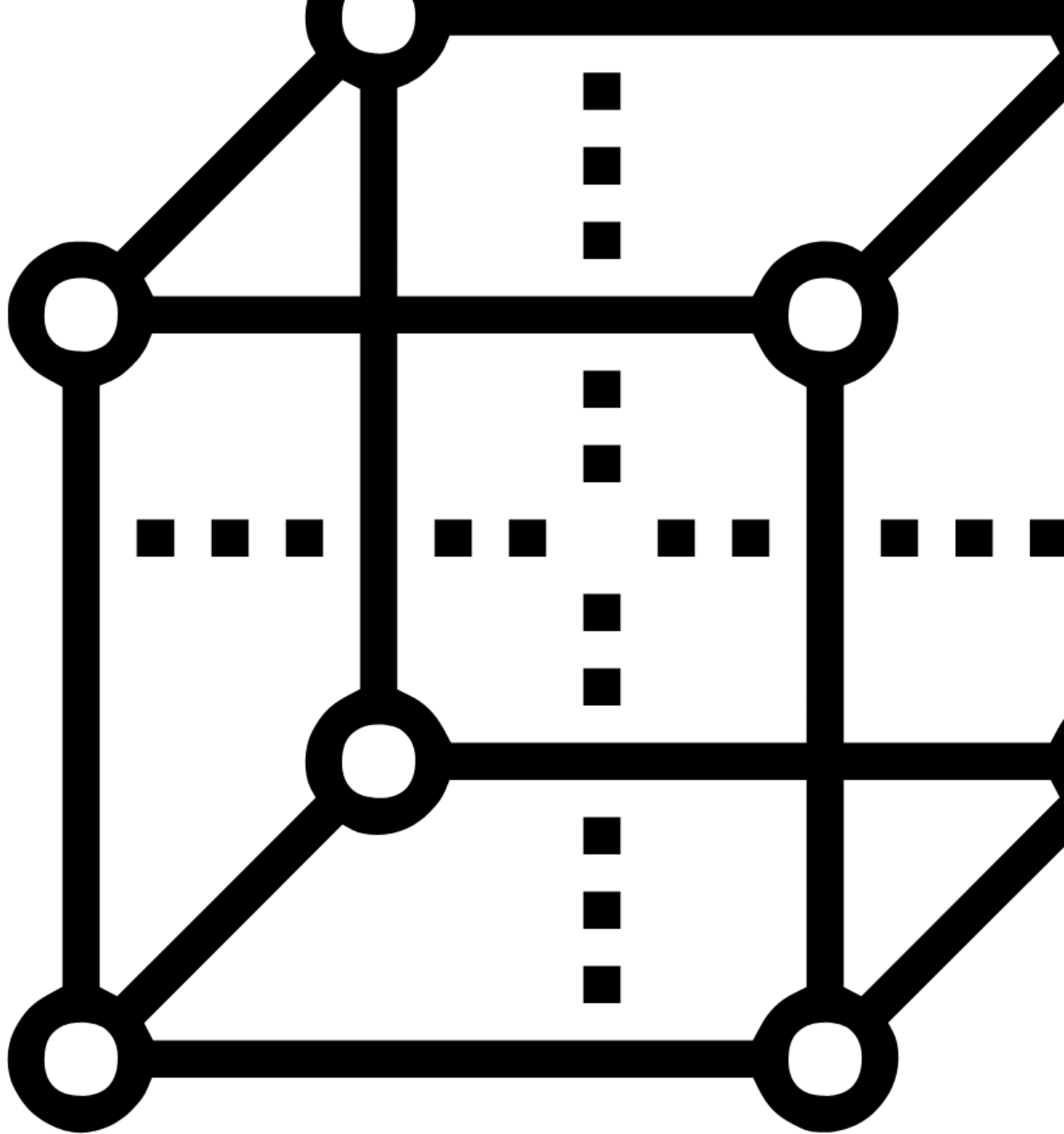
Contents

1. Disaster models

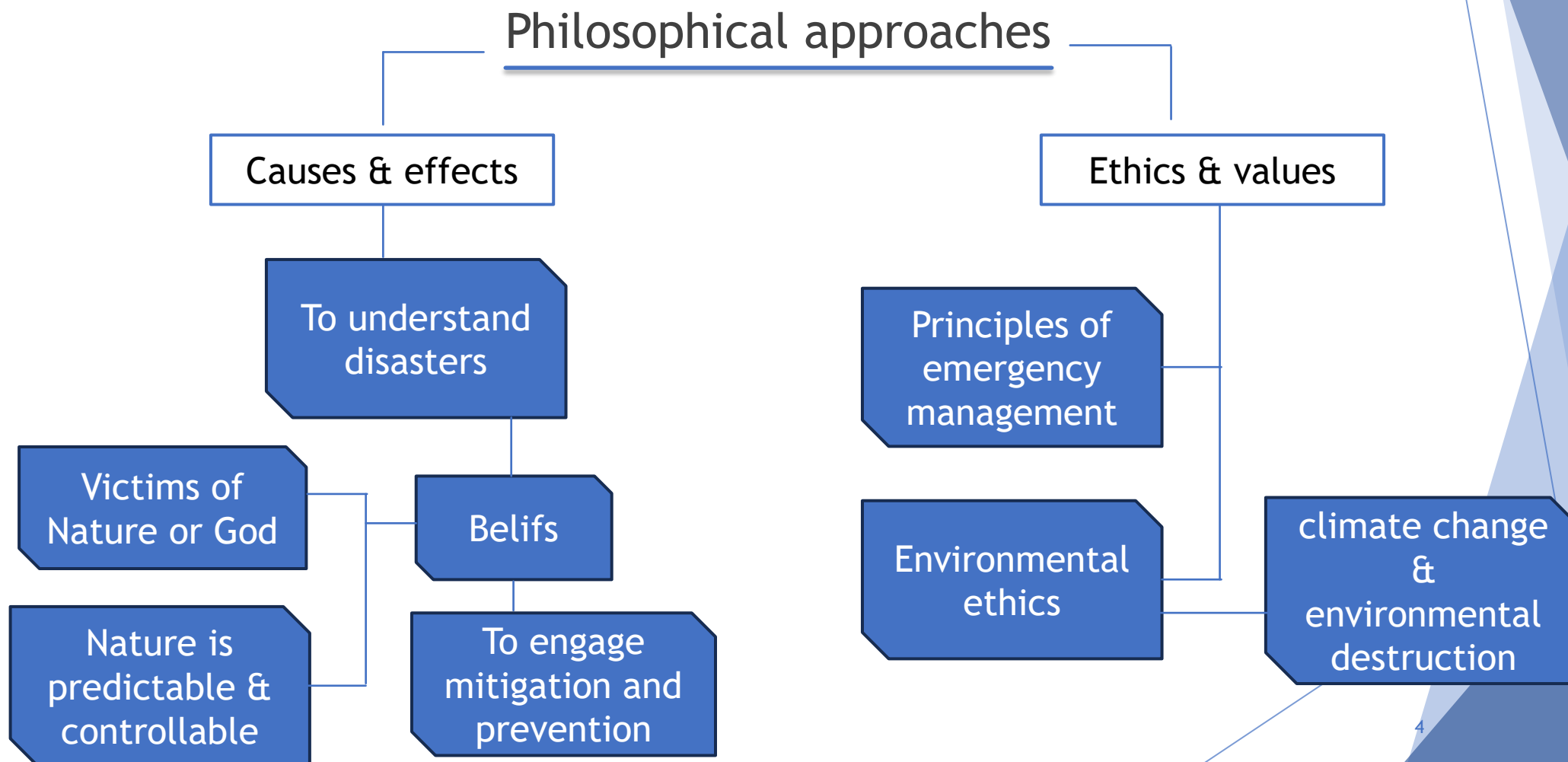
- ▶ What is a model?
- ▶ Philosophical approaches
- ▶ Comprehensive Emergency Management (CEM)
- ▶ Pressure and Release (PAR)
- ▶ Disaster Risk Reduction approach
- ▶ Classification of disaster models
 - ▶ Power & control
- ▶ Closing remarks

What is a model?

1. Simplification of reality
2. A tool for management and administration
 - ▶ To make reality manageable
 - ▶ To calculate estimations and projections



Models background



Comprehensive Emergency Management (CEM)

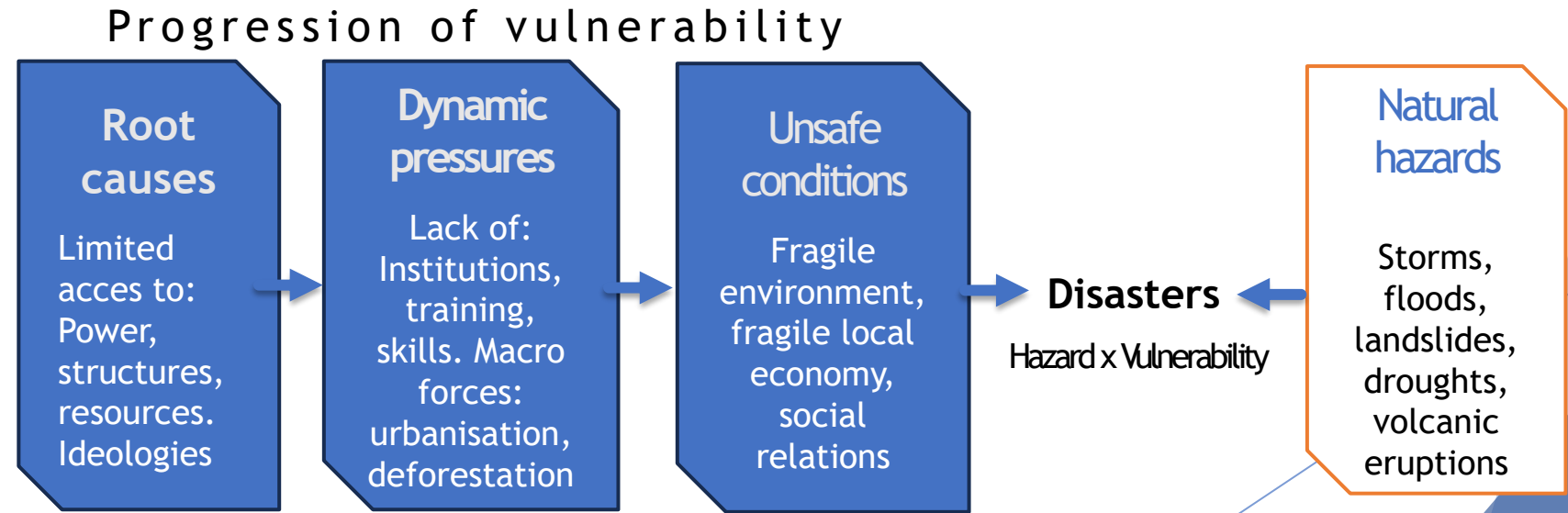
► Five pillars

1. **Prevention.** Actions to avoid adverse impacts
2. **Mitigation.** Actions to reduce risk
3. **Preparedness.** Planning and putting in place the resources
4. **Response.** Actions taken after disaster has occurred
5. **Recovery.** To rebuild and restore



Pressure and Release (PAR)

- ▶ Based on causal factors
 - Socio-economic & cultural
 - Vulnerable conditions
 - Risk = Hazard x Vulnerability



Model disadvantages

Comprehensive Emergency Management (CEM)

- ▶ Pillars are sequential and independent of each other
- ▶ Not explicit reference to capacity, resilience, informal networks, and formal arrangements

Pressure and Release (PAR)

- ▶ Disaster is an external-exogenous event
 - ▶ Hazard progression is not accurate

Disaster Risk Reduction approach

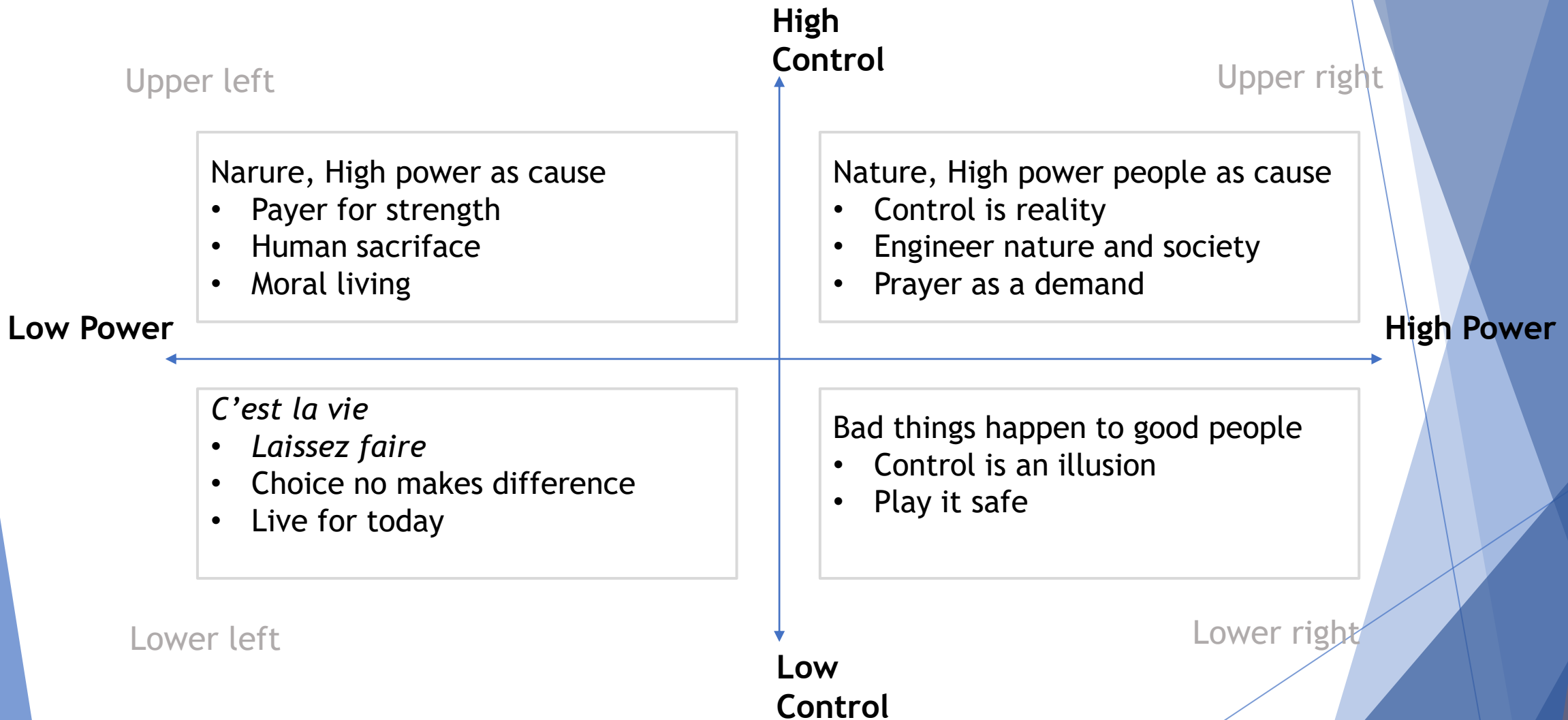
- ▶ Based on causal factors.
 - Understanding disaster risk
- ▶ Emergency management
 - Pillars or phases
 - Social participation. Governance & capacity
- ▶ Pretends:
 - to minimize vulnerabilities & exposure
 - to increase preparedness
 - Resilience societies

DRM models to make reality manageable

Control & power



Classification of disaster models



Elementos principales de los modelos

1. Power - hazards

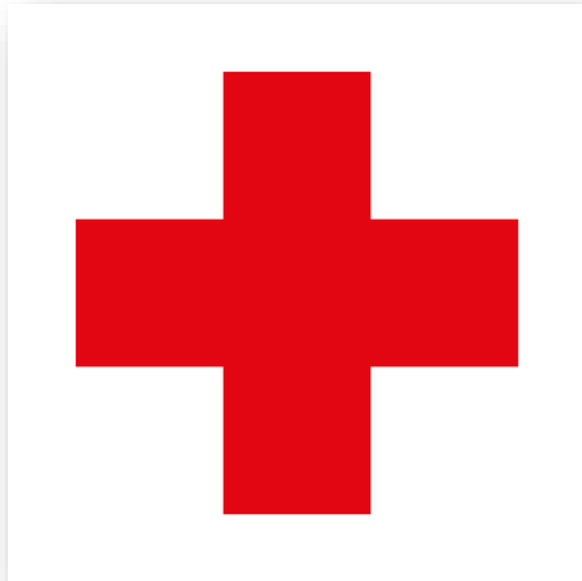
- ▶ High & low
 - Origin - type

2. Control

- ▶ High & low
 - What we defined that is possible to control?
 - ▶ Hazards types
 - ▶ Disasters
 - What control do we have to create the expected results?
 - ▶ Model objectives
 - ▶ Instruments and public policies

DRR background

Disaster response -
Relief



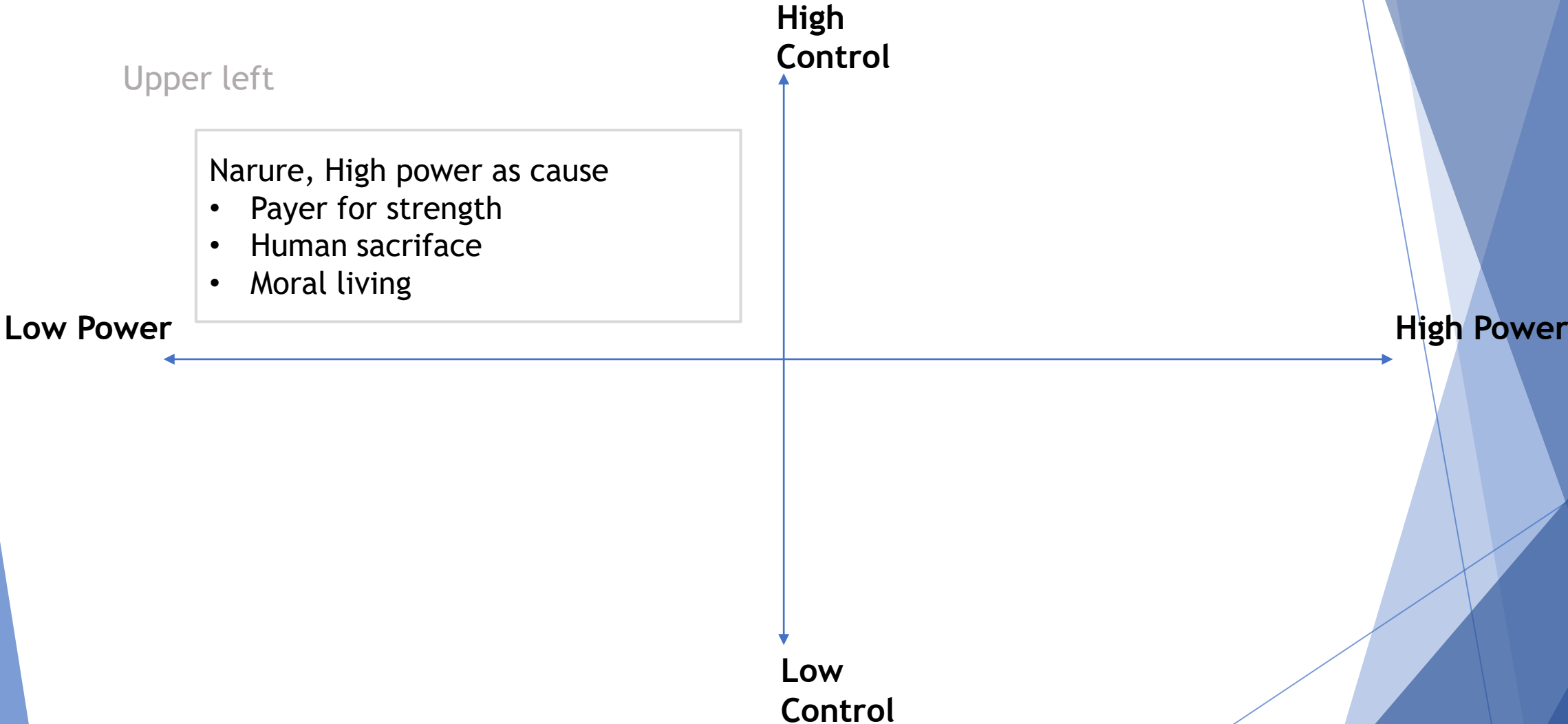
Reconstruction



First
responder

- Civil Defense
- Army
- Red Cross
- Police
- Health Services

Responding approach



Responding approach

Disasters

Planing

Prevention &
coordination

To reduce economic loss, damage and destroy
infraestructura & losses in live

Mitigation approach

Prevention & Mitigation

International Decade for Natural Disaster Reduction



International Decade for Natural Disaster Reduction (1990-1999)



- To create National Committees

Mitigation approach

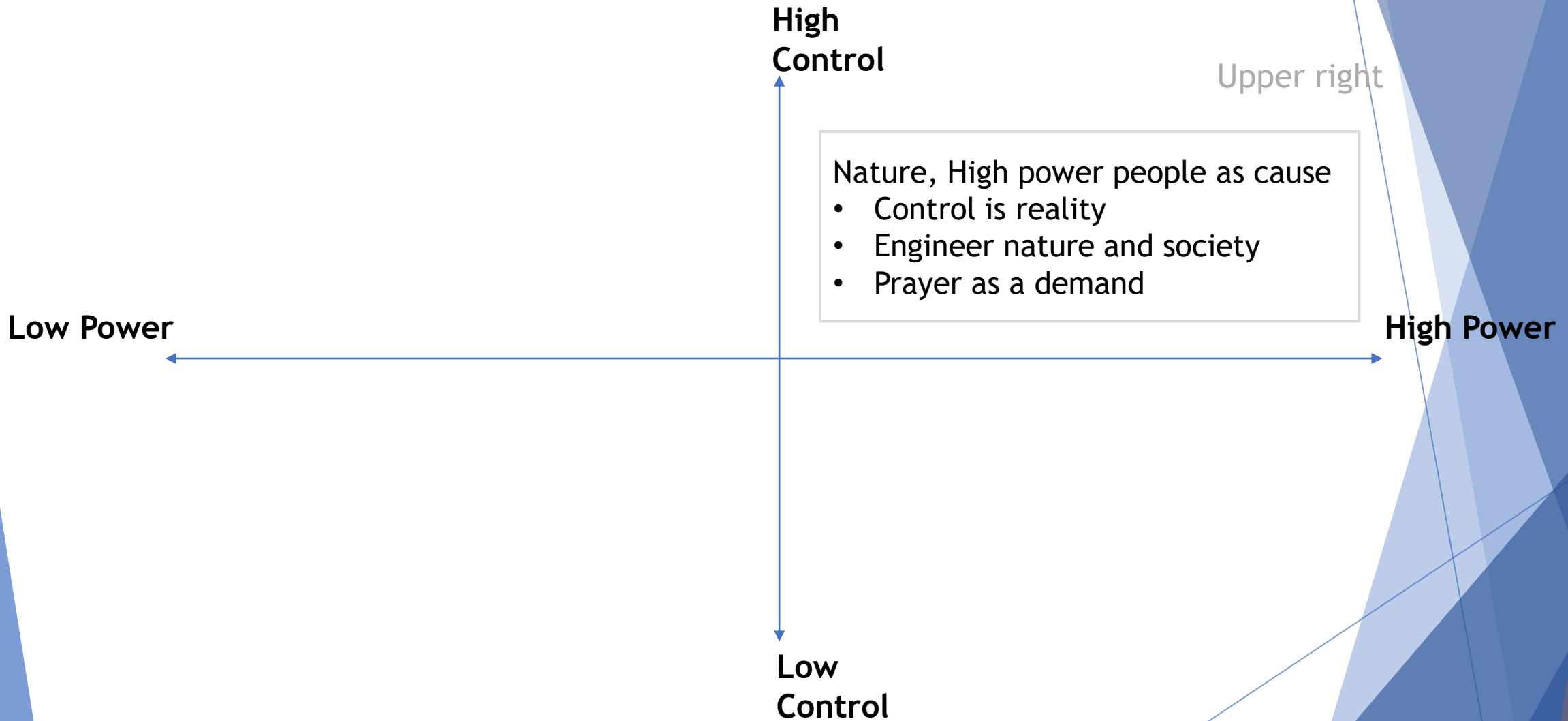
Disasters

Prevention

Mitigation

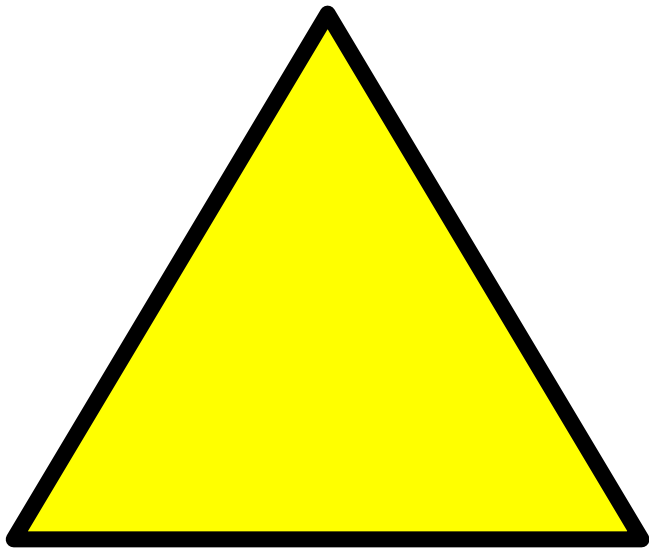
To reduce impact damage in economy & early warning systems

Mitigation approach



Disaster Risk Reduction Approach

Risk Management



Losses in live & economy



Multisectorial -
Governance

- First responder
- National Committees & National-regional risk management systems

Disaster Risk Reduction

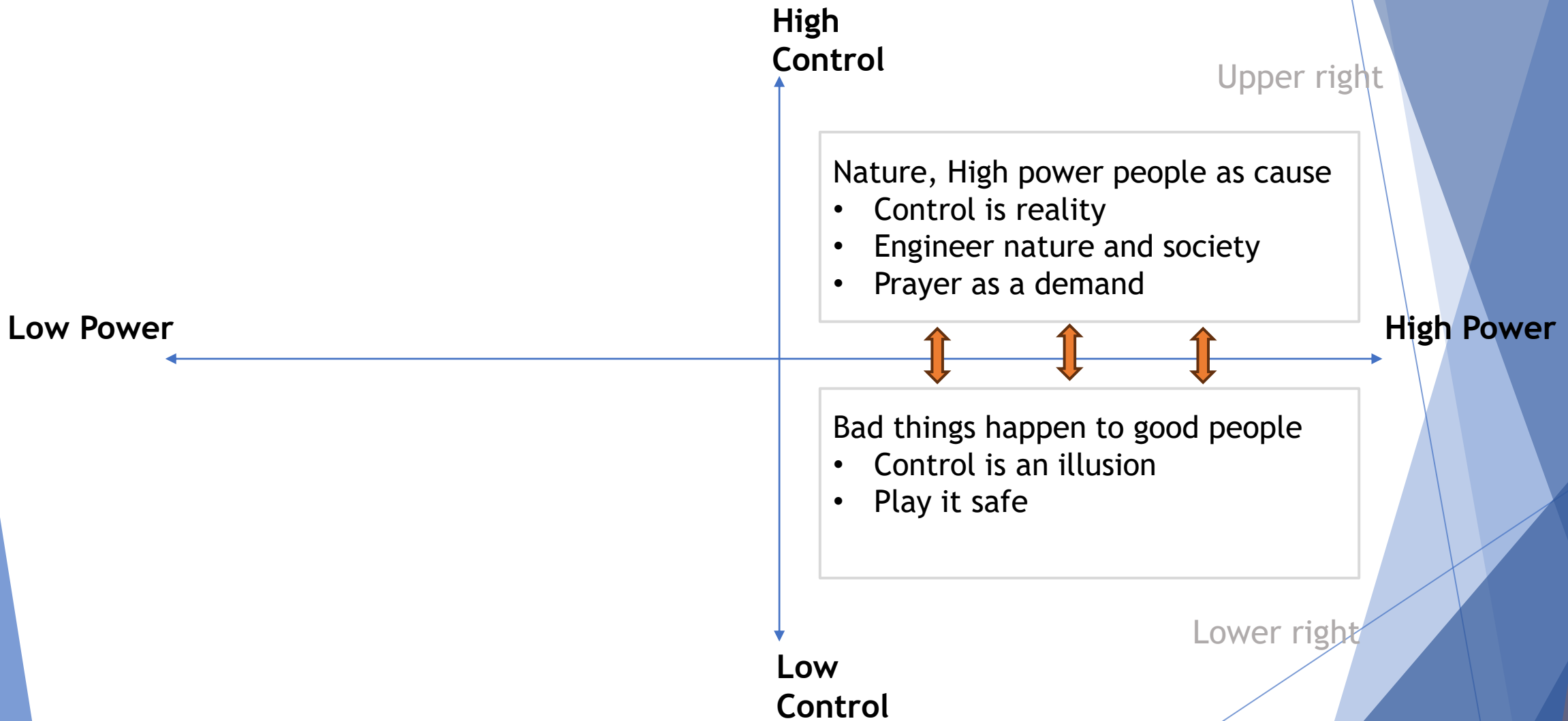
Disaster Risk

Risk Reduction

Resilience

To prevent new disaster risk, reduce existing disaster risk and manage residual risk

Disaster Risk Reduction



Remarks about disaster models

- ▶ The axis moves due to **Capacity**
 - Combination of all the strengths, attributes and resources available to manage adverse conditions, risk or disasters
 - Includes infrastructure, institutions, human knowledge and skills, and collective attributes
- ▶ The axis moves due to **Vulnerability**
 - Conditions which increase the susceptibility to the impacts of hazards
 - Includes physical, social, economic and environmental factors or processes

Closing Remarks

- There is more than one Disaster Risk Management model and each one has advantage and disadvantage
- The effectiveness depends on the model objectives
 - Models are simplification of reality
 - Public policies contribute to adjusted models to the real world
- Disaster Risk Management have moved from Disaster Management (responding approach) to Disaster Mitigation (mitigation approach) and now Disaster Risk Reduction Management (social participation to resilience)

Closing Remarks

- Power & Control are basic elements in Disaster Risk Management, and depends on well-understanding disasters,
- Capacity & Vulnerabilities are related to power and impacts disasters, and to manage risk
- The Capacity refers institutions
 - *What institutions?*
 - All related to prevent new disaster risk, reduce existing disaster risk and manage residual risk. It includes **social safety net institutions**
 - Open to multisectorality coordination

Thank you



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Activity

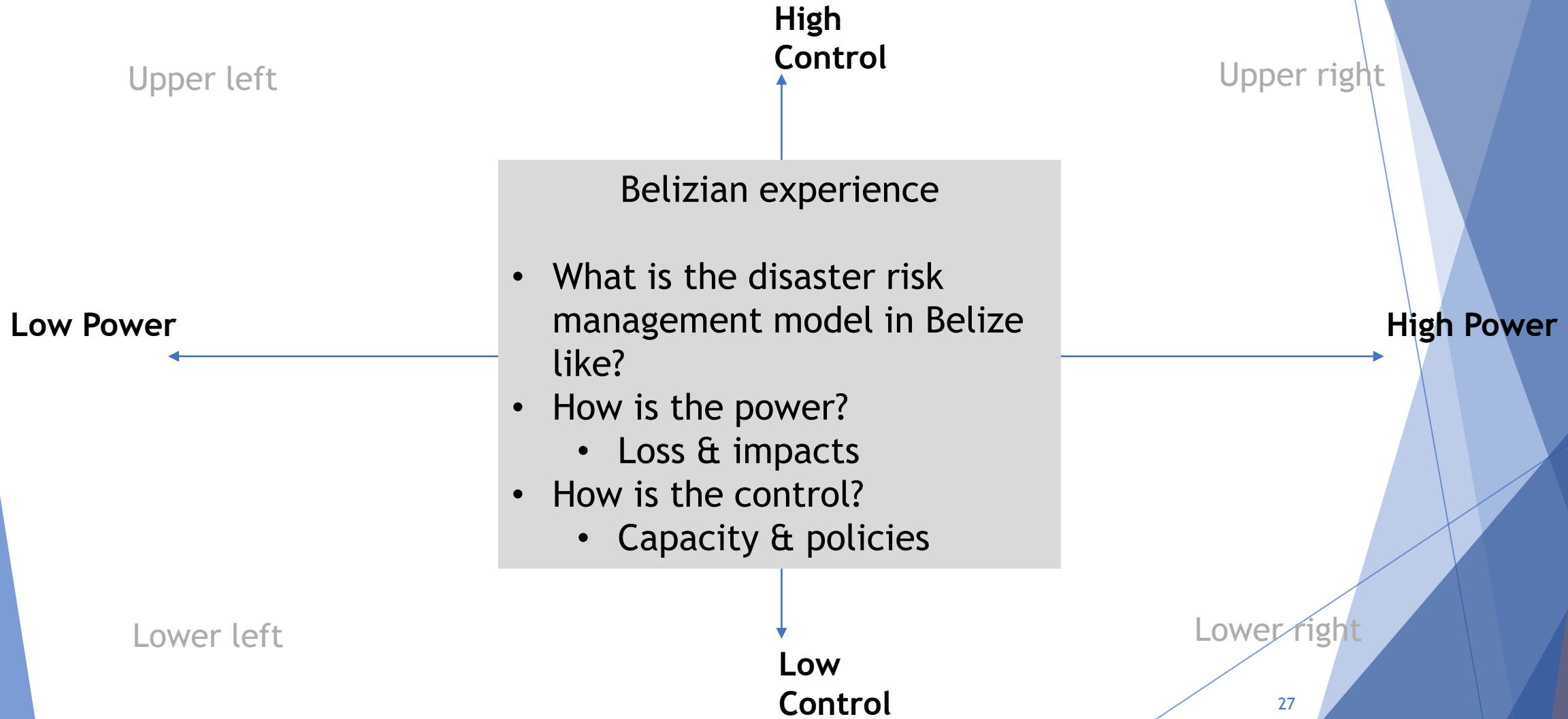
Presentation of the Ministries of Belize and NEMO

Experiences of public policies linked to social protection,
including those implemented during the emergency caused by
COVID-19

Key Questiones

- What have we defined possible to control, what risk - hazards?
- What social policies do we have to make the expected DRR results?

Roundtable



Roundtable

