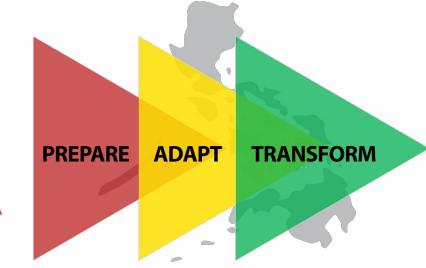




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RESILIENT LOCAL GOVERNMENT UNIT PROGRAM **Adopt-A-City Initiative**

RISK TO RESILIENCE

August 21-23, 2024
Soda Beach Resort, Santa Filomena
Iligan City



National Resilience Council



NRCPhilippines



info@resiliencouncil.ph



nationalresiliencouncil

Insights on the Iligan City Context

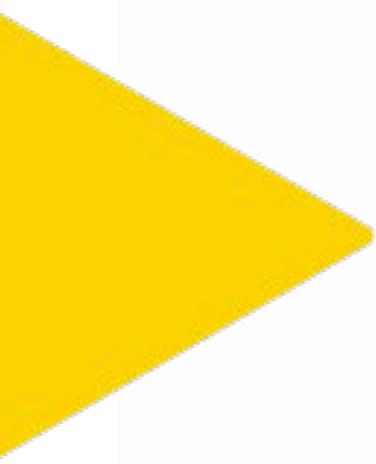
I. I. What is Risk?

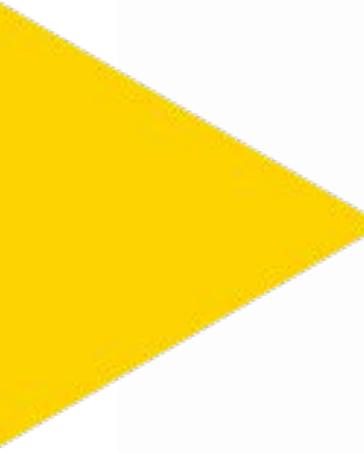
Isulat sa metacard ang inyong tubag ug idikit sa whiteboard



CHOOSE ANSWER FROM THE FOLLOWING CHOICES:

1. DISASTER (KATALAGMAN)
2. VULNERABILITY (KAHUYANG)
3. DISASTER RISK (RISGO SA KATALAGMAN)
4. HAZARD (PELIGRO)
5. EXPOSURE (BANTANG O DAYAG)

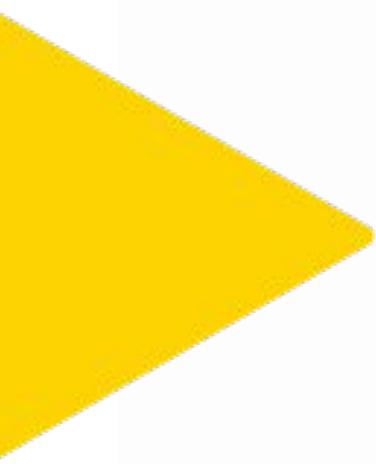


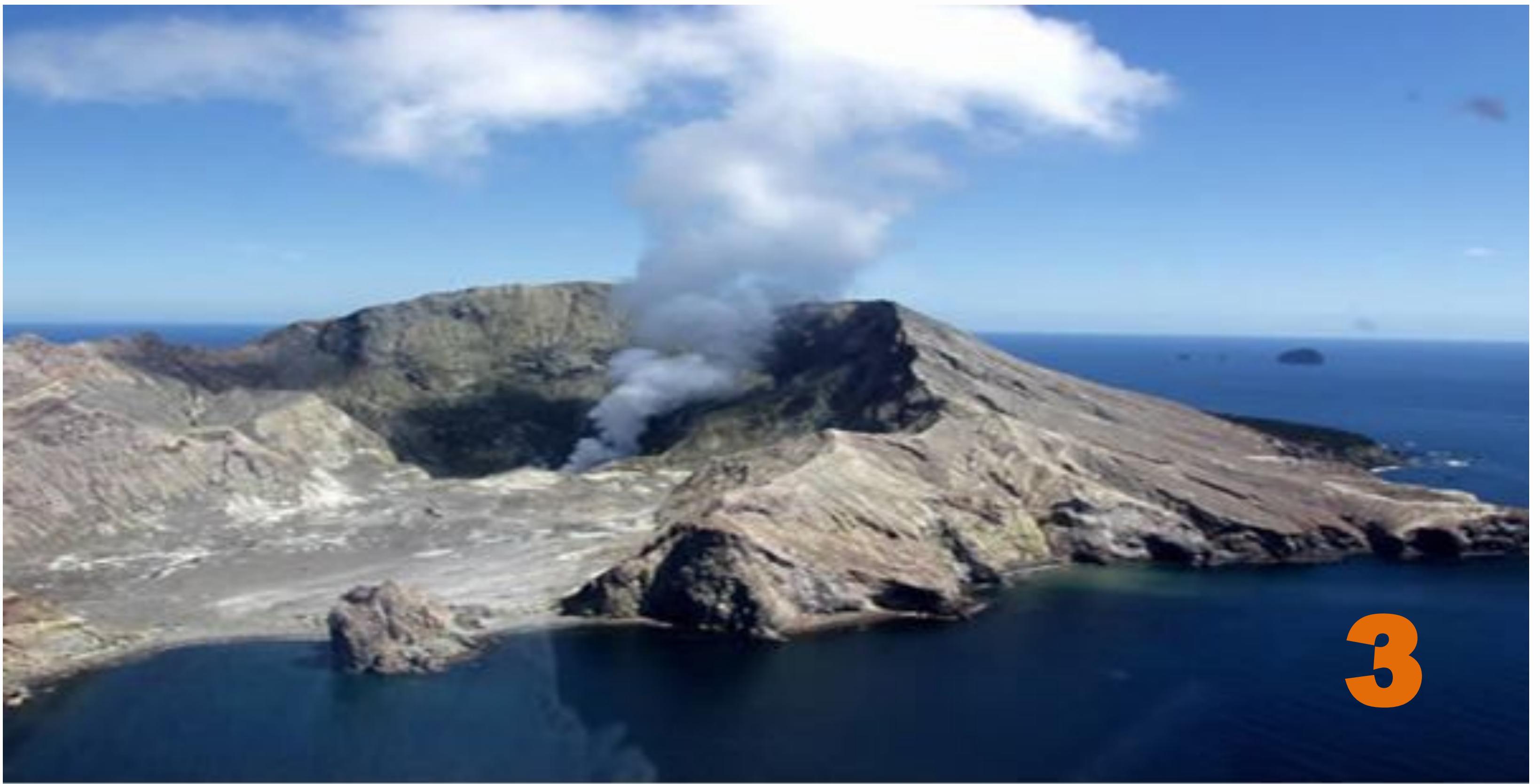


DISASTER RISK

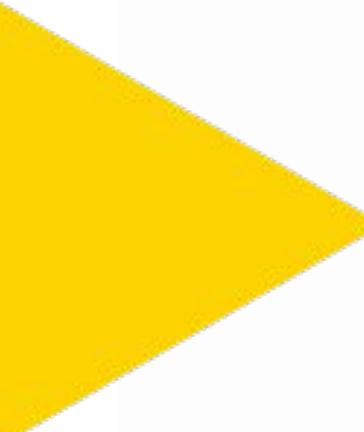








3

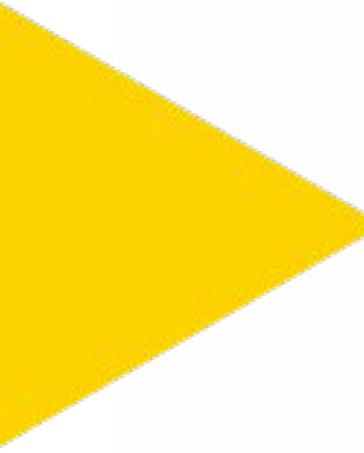


HAZARD





4



VULNERABILITY





5



DISASTER

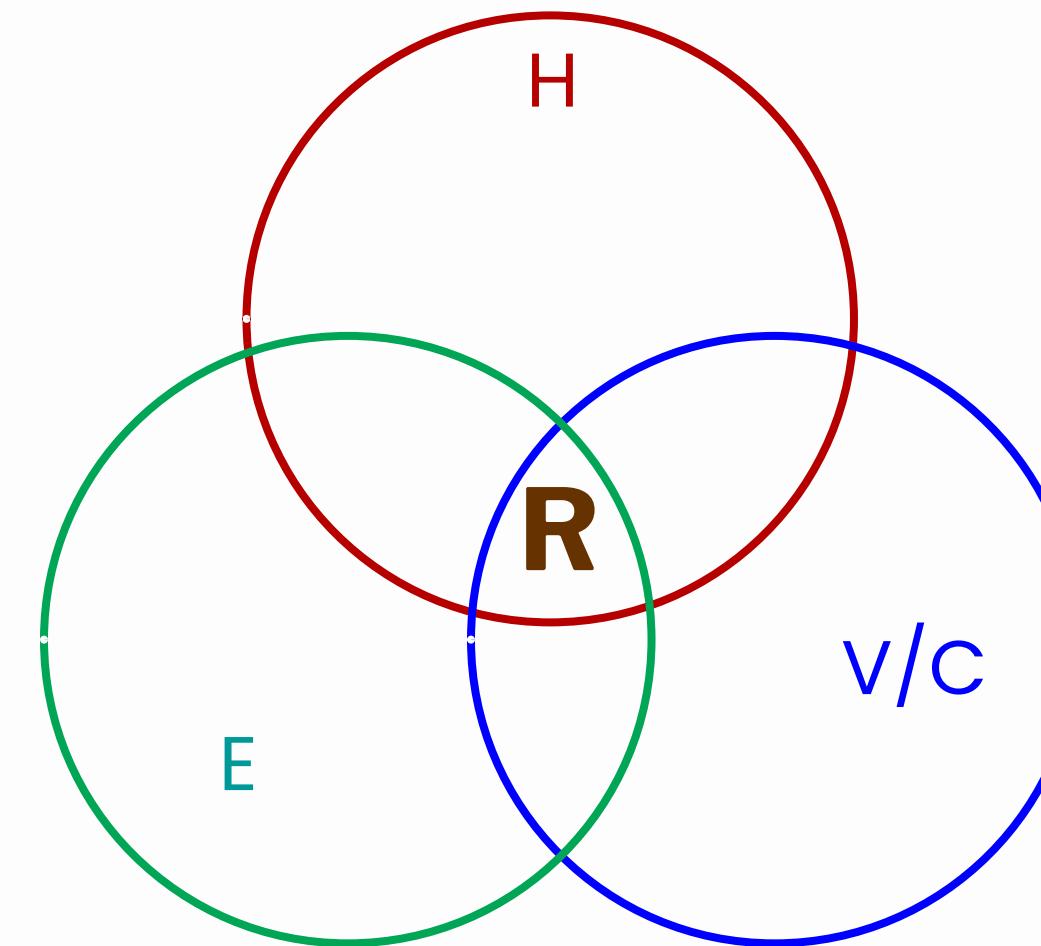


ANSWERS!!

!

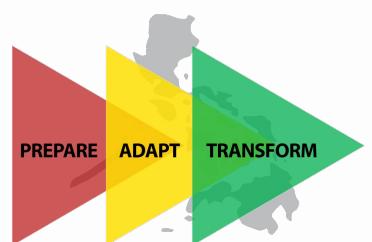
**THANK
YOU!**

GENERAL RISK CONCEPTUAL FRAMEWORK

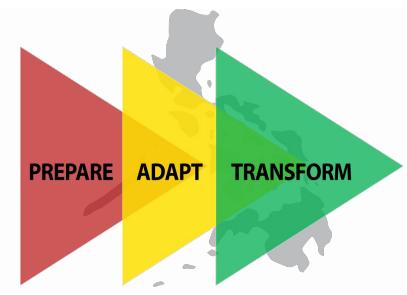


RISK ≈ f (HAZARD, EXPOSURE, VULNERABILITY/Capacity)

(UNDP 2004 and UNDRO 1979, UNDP and UNDRO 1992)



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HAZARD

Hazard refers to a potential source or event that can cause harm, damage, or adverse effects.

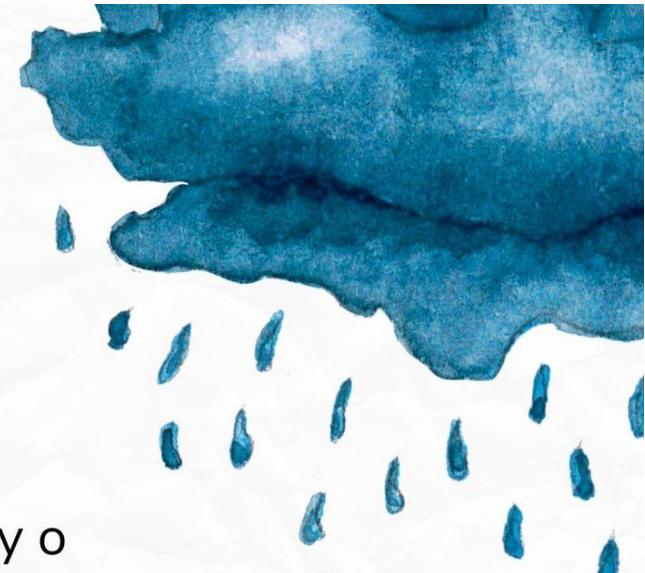
A hazard (typhoon, earthquake, tsunami) will have zero risk, if this occurs in an unpopulated (no exposed population) area.



Bantang Panganib

Ang bantang panganib ay tumutukoy sa anumang bagay o pangyayari na maaaring magdulot ng sákit, pinsala, at perwisyo tulad ng mga bagyo at lindol.

Ang isang hazard ay walang risk kung tatama ito sa isang lugar kung saan walang nakatirang tao.





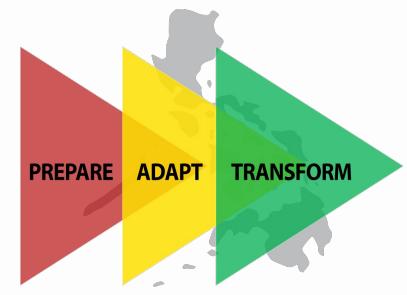
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HAZARD or “Peligro”

Natural or man-made phenomena that may cause:

- Death
- Injury
- Health problems
- Damage to property
- Disruption in social and economic activities
- Environmental degradation

Hazards may be single, sequential, or combined in their origin and effect..



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Table 2.1 Distribution of hazards reported by countries in 2019 in the Sendai Framework Monitor according to OIEWG grouping (UNGA, 2016: p.19).

Hazard category	Number reported
Biological hazards	34
Environmental hazards	13
Geological or geophysical hazards	44
Hydrometeorological hazards	120
Technological hazards	79
Societal and other uncategorised hazards	28
Total	318

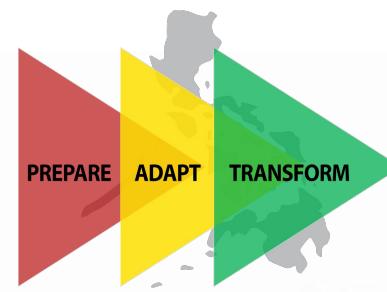
**HAZARD
DEFINITION &
CLASSIFICATION
REVIEW**

TECHNICAL REPORT

SENDAI FRAMEWORK
FOR DISASTER RISK REDUCTION 2015-2030

International
Science Council
The global voice for science

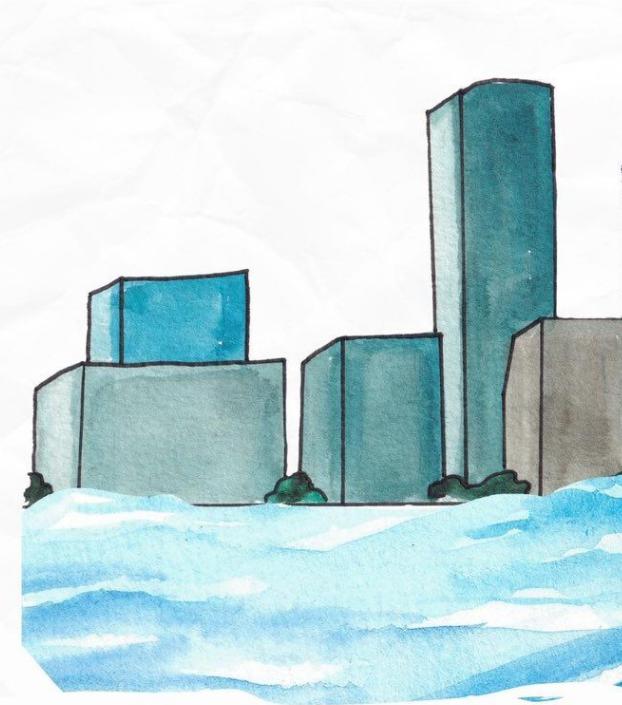
UNDRR
UN Office for Disaster Risk Reduction



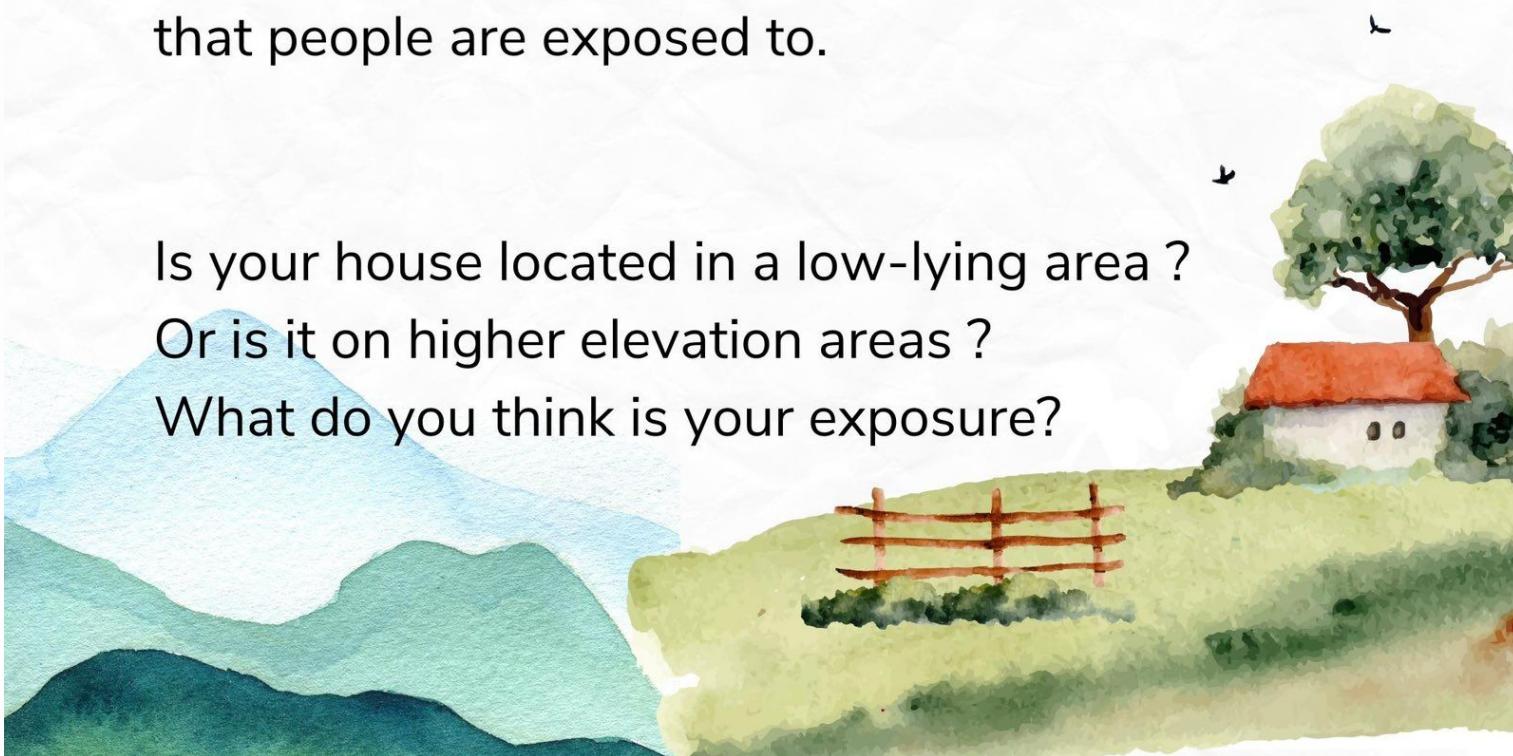
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EXPOSURE

Exposure refers to the different hazards which may occur in a specific area at any point in time. In low-lying coastal areas like some parts of Metro Manila for example, sea level rise and/or flooding are hazards that people are exposed to.



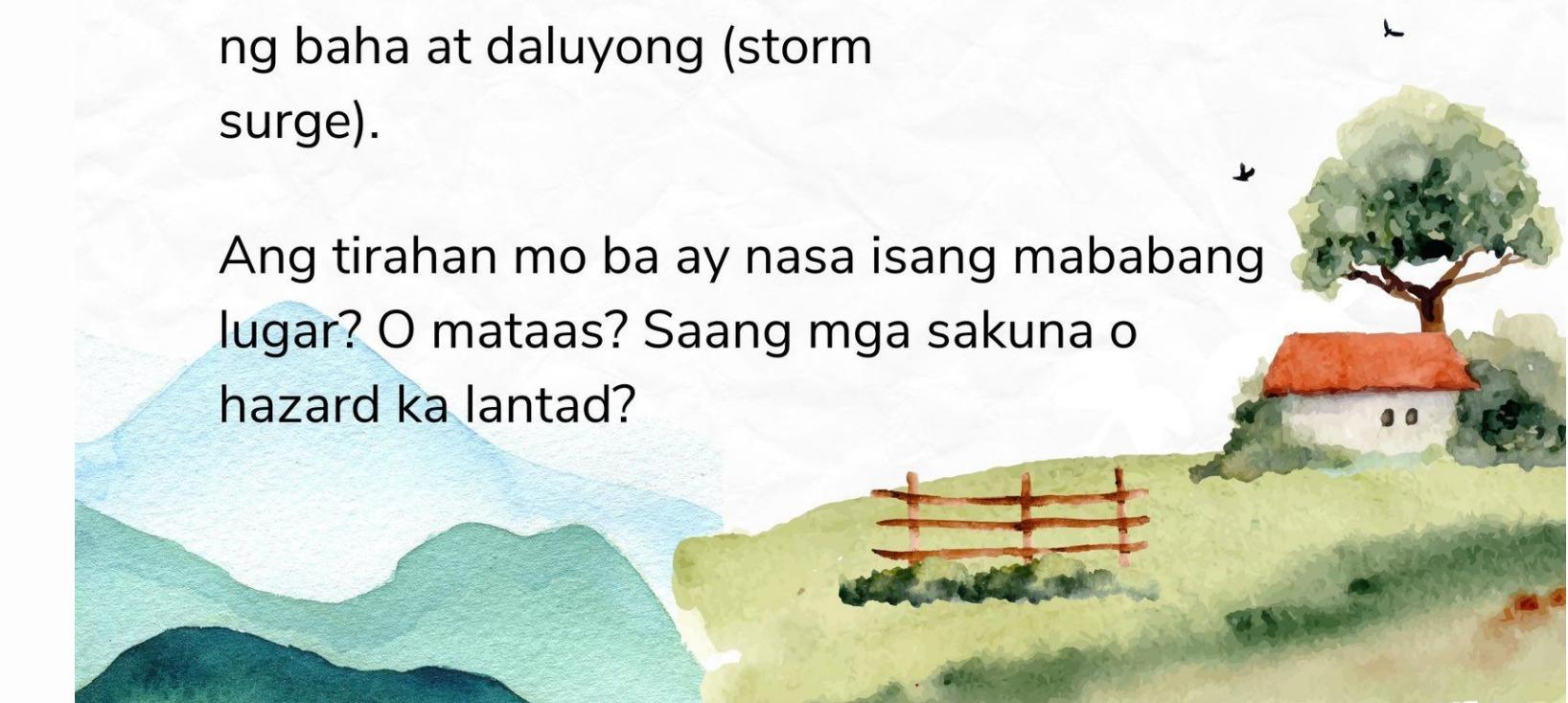
Is your house located in a low-lying area ?
Or is it on higher elevation areas ?
What do you think is your exposure?



Source: Coastal Cities at Risk in the Philippines @ccarPH

Pagkalantad

Ang pagkalantad naman ay tumutukoy sa mga hazard na maaaring tumama sa isang espisipikong lugar anumang oras. Sa mga mabababang lugar na tabing-dagat tulad ng ibang bahagi ng Metro Manila, maaaring maaapektuhan ang mga tao ng baha at daluyong (storm surge).



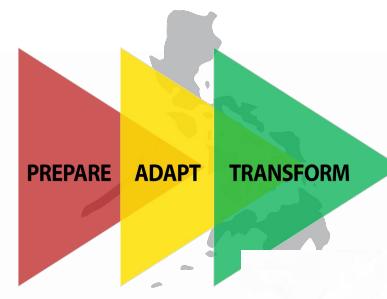
Ang tirahan mo ba ay nasa isang mababang lugar? O mataas? Saang mga sakuna o hazard ka lantad?



EXPOSURE or “Kalantaran” or “Bantang/Dayag”

Concerned with elements in the hazard zone that are subject to potential losses:

- ▷ People
- ▷ Infrastructure
- ▷ Production resources
- ▷ Human resources



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VULNERABILITY

Vulnerability refers to factors which increase a population's exposure to hazards.

People living in crowded, low quality housing located along riverbanks that flood periodically are more vulnerable than those in concrete houses in higher areas.



Bulnerabilidad

Ang bulnerabilidad ay tumutukoy sa mga salik na nakapagpapalala ng kalantaran ng mga tao sa mga hazard.

Mas lantad sa baha ang mga nakatira sa tabing-ilog. Mas nakalantad sila sa baha kung siksikan at yari sa kahoy ang kanilang mga tirahan.



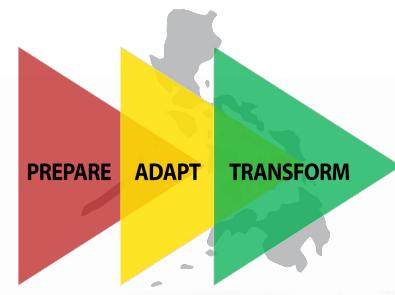


VULNERABILITY or “Kahinaan/Kahuyang”

Defined by several conditions and processes that makes individuals and communities likely more prone to hazards.

- Physical
- Social
- Economic
- Environmental

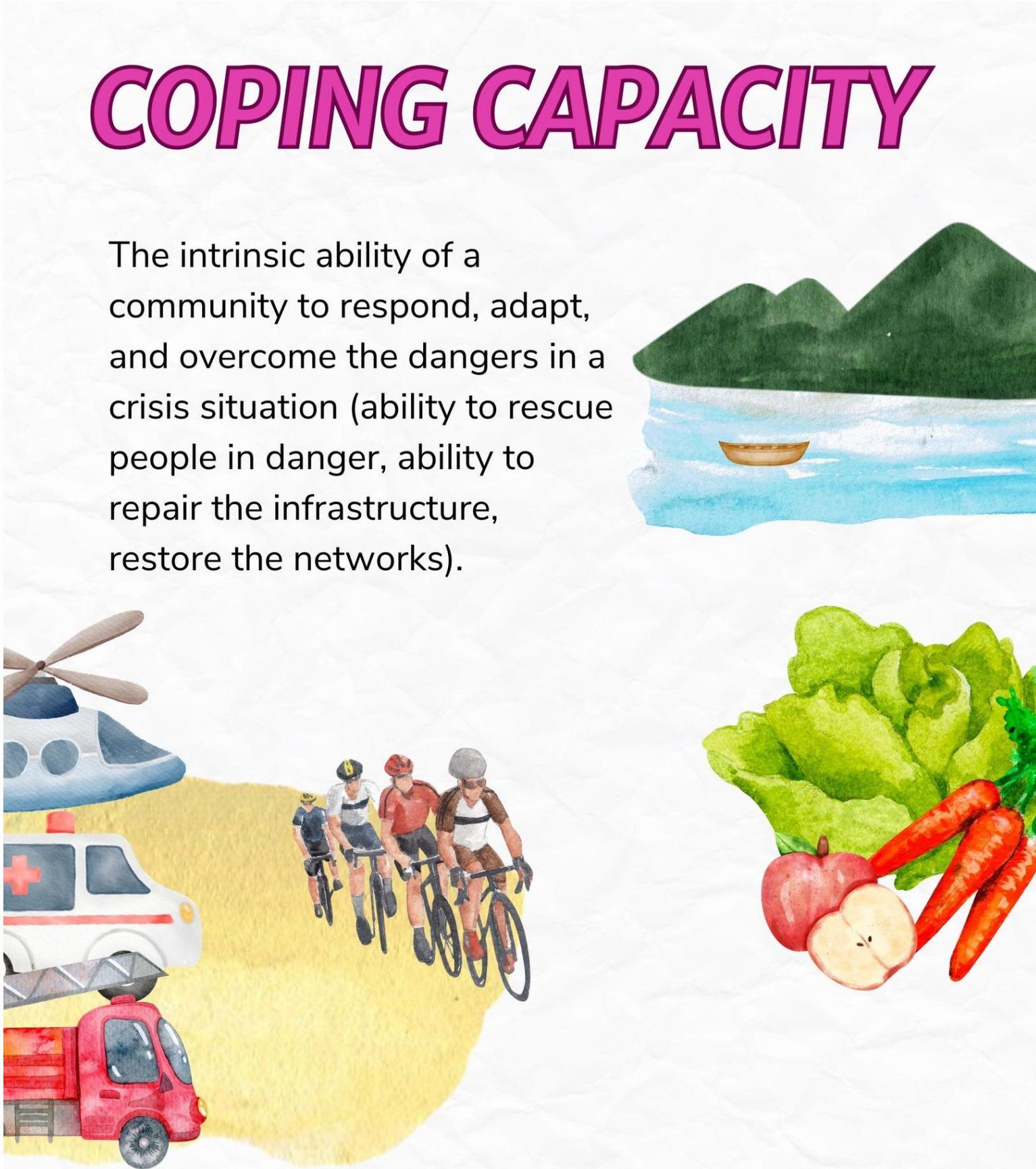
Increases susceptibility to the impacts of hazards



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COPING CAPACITY

The intrinsic ability of a community to respond, adapt, and overcome the dangers in a crisis situation (ability to rescue people in danger, ability to repair the infrastructure, restore the networks).



Source: Coastal Cities at Risk in the Philippines @ccarPH

Kapasidad

Ang bawat pamayanan ay may taglay na kakayahang tumugon at malampasan ang mga panganib sa isang krisis. Kasama na rito ang pagliligtas sa mga taong nasa malubhang peligro at pagsasaayos ng mga nasirang imparastruktura.





CAPACITY or “Kakayanan” or kapasidad

Capacities are a combination of physical and intangible strengths in the community that can help manage and reduce risks and strengthen resilience.

These strengths may be exhibited in the following examples:

- Infrastructure
- Institutions
- Knowledge and skills
- Social relationships
- Leadership and management

Disaster: a serious disruption of the functioning of a community or society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope with using its own resources.

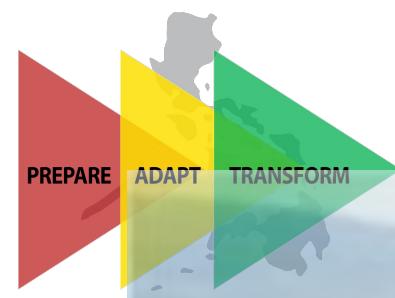
Disaster Risk: The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society, or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

Natural Hazard: Natural processes or phenomena that may [potentially] cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. Hazards may be single, sequential, or combined in their origin and effects. Each hazard is characterized by its location, intensity or magnitude, frequency, and probability.

Exposure: The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.

Vulnerability: The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.

Capacity: The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.



KALAMIDAD - usa ka seryoso nga pagkabalda o paghunong sa paglihok sa usa ka komunidad o katilingban nga naglambigit sa kaylap o lapad na epekto sa katawhan, butang o materyales, ekonomikanhon o kinaiyahan nga milapas na sa abilidad sa komunidad o katilingban aron sagubangon pinaagi sa paggamit sa kaugalingon nga mga pamaagi o kahinguhaan.

DISASTER

RISK

The probability of an event to happen in a specific location over a given period of time that can result to:

- ▶ Death
 - ▶ Injury
 - ▶ Destruction or damage to properties
-

“Risgo”

Nananahan tayo sa isang mundong napapaligiran ng mga risiko, ngunit mayroon tayong magagawa.

Mahalagang kilalanin kung paanong hindi pantay-pantay na hinaharap ng mga tao ang iba’t ibang epekto ng klima.
Magagawa ito sa pamamagitan ng pagtingin sa mga sumusunod:

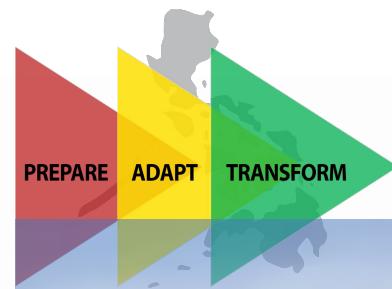




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RISGO SA KATALAGMAN -ang posibleng mahitabo sama sa kabsan sa kinabuhi, kadaot o pagkaguba sa mga kabitangan, nga mahimong moigo sa sistema, katilingban o usa ka komunidad sulod sa usa ka yugto nga higayon nga maoy gitino lagmit susamang binuhatan sa peligro, pagkabantang o pagkadayag, kahuyang ug kapasidad.

DISASTER RISK



NATURAL NGA PELIGRO

-Mga natural nga proseso sa mga panghitabo nga mahimong hinungdan sa pagkawala sa kinabuhi, kadaot o uban pang epekto sa kahimsog, kadaot sa kabtangan, pagkawala sa mga panginabuhian ug serbisyo, pagkaguba sa sosyal, ekonomiya o kadaot sa kinaiyahan. Ang peligro mahimong nag-inusara, sunodsunod o hiniusa sa ilang gigikanan o mga epekto. Ang matag peligro gihulagway kini pinaagi sa lokasyon niini, kakusog o kadako, kanunayon ug kalagmitan o posibilidad

NATURAL HAZARD



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PAGKABANTANG O PAGKADAYAG -hulagway sa kahimtang sa mga tawo, imprastraktura, kababayhan, kapasidad sa produksyon ug uban pang konkreto o makita nga mga kabitangan sa tawo nga nahimutang sa mga lugar nga dool o nahimutangan sa peligro

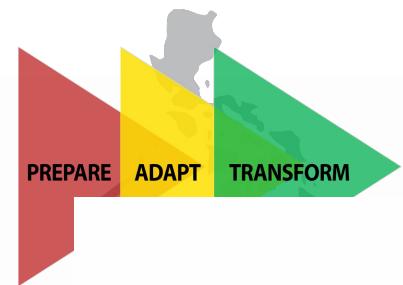
EXPOSURE



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KAHUYANG -ang kondisyon nga gitino sa pisikal, sosyal nga ekonomikanhon ug kinaiyahan nga mga hinungdan o proseso nga magdugang sa pagkadaling maapektuhan sa mga hapak o epekto sa peligro sa usa ka indibidwal, usa ka komunidad, sa mga kabitangan o sistema

VULNERABILITY

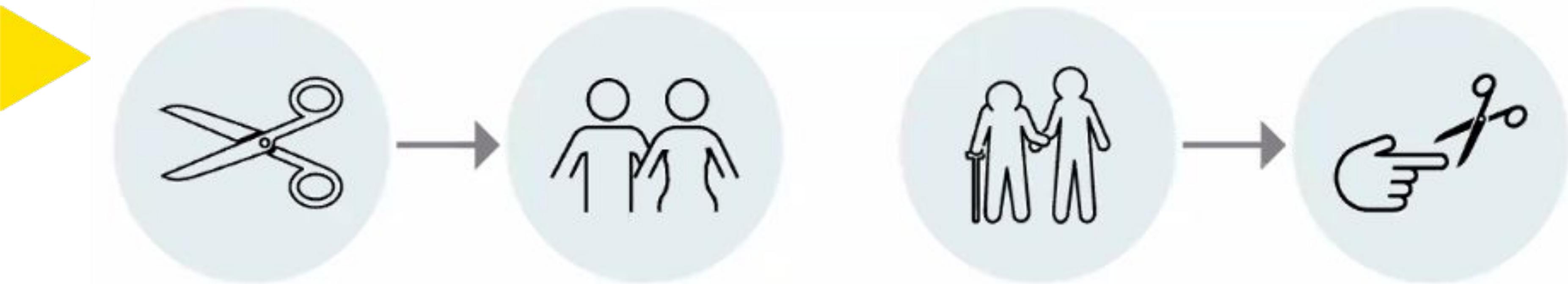


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RESILIENCE

KAPASIDAD -ang kalangkoban sa tanang kusog, kinaiya, ug mga kahinguhaan nga anaa sulod sa usa ka organisasyon, komunidad o katilingban aron sa pagdumala ug pagpakunhod sa risgo sa katalagman ug pagpokusog sa kalig-on

CAPACITY

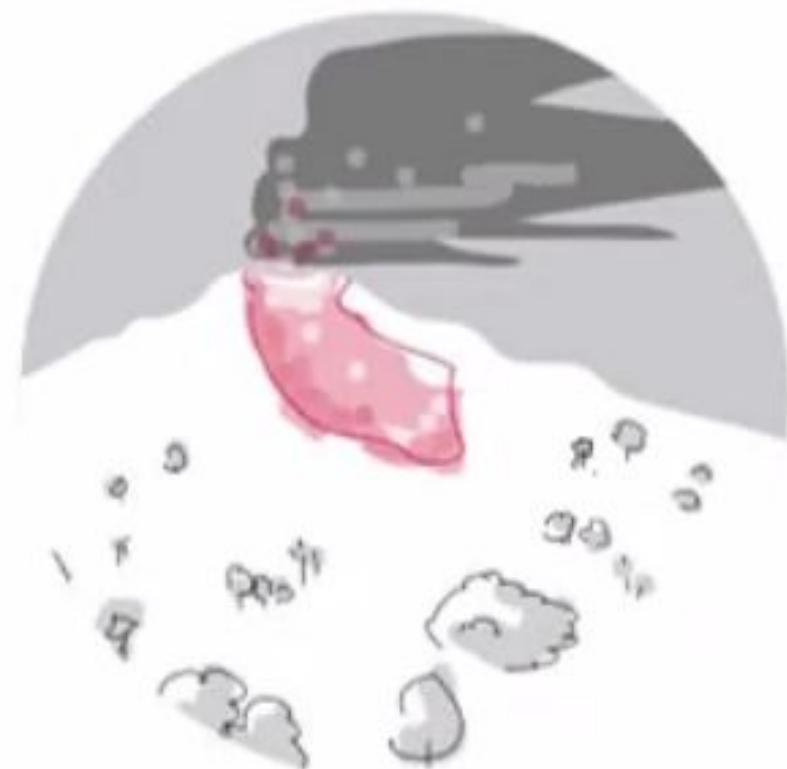
Let's take an example. Think of a pair of scissors lying on the floor. It's a **hazard**, but by itself the scissors will not injure someone. First, a person should come into contact with them – **exposure**. Second, if the person has sufficient **capacity** to identify, understand and prevent this hazard, there would be no injury - **disaster**. However, if a person with particular **vulnerabilities** such as an older person with poor eyesight or a child who cannot understand the danger comes to contact with the scissors, there is a potential for injury – **disaster risk**. (Adapted from WWF's "Flood Green Guide" 2017)



Disaster Risks

Hazards become disasters only when they interact with vulnerable elements, resulting in loss and damage

Risk and the context of hazard, exposure and vulnerability



There is no such thing as a **natural disaster**, only **natural hazards**



We make **choices** as to where we inhabit, how we build and what research we do



Risk is the combination of **hazard**, **exposure** and **vulnerability**



Death, loss and **damage** is the function of the context of hazard, exposure and vulnerability

GROUP EXERCISE:

1. Identify current Hazard, and corresponding Exposures and Vulnerabilities and existing Capacities (HEVC) found in your barangays.
2. Identify support that your barangay may need to address HEV.
3. Discuss with the group and identify Intervention in addressing those HEV with current capacities and support to become a resilient barangay.

TEAM: MT. AMUNGAN

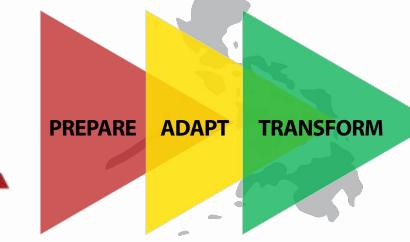
HAZARD	EXPOSURE	VULNERABILITIES	CAPACITIES	INTERVENTION / SUPPORT NEEDED
FLOOD	HOUSE SITUATED IN RIVERSIDE	-HOUSE MADE OF SCRAP & LIGHT MATERIALS -INFORMAL SETTLER FAMILIES	FLOOD CONTROL-	PERMANENT RESETTLEMENT SITE
INCHARGE/INVOLVE OFFICE AND ORGANIZATION				

TEAM: MA. CRISTINA FALLS

HAZARD	EXPOSURE	VULNERABILITIES	CAPACITIES	INTERVENTION / SUPPORT NEEDED
INCHARGE/INVOLVE OFFICE AND ORGANIZATION				



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PRESENTATION OF OUTPUT



National Resilience Council



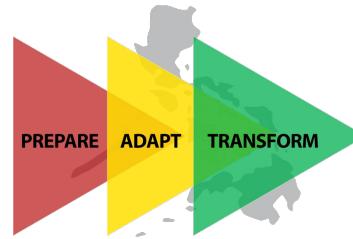
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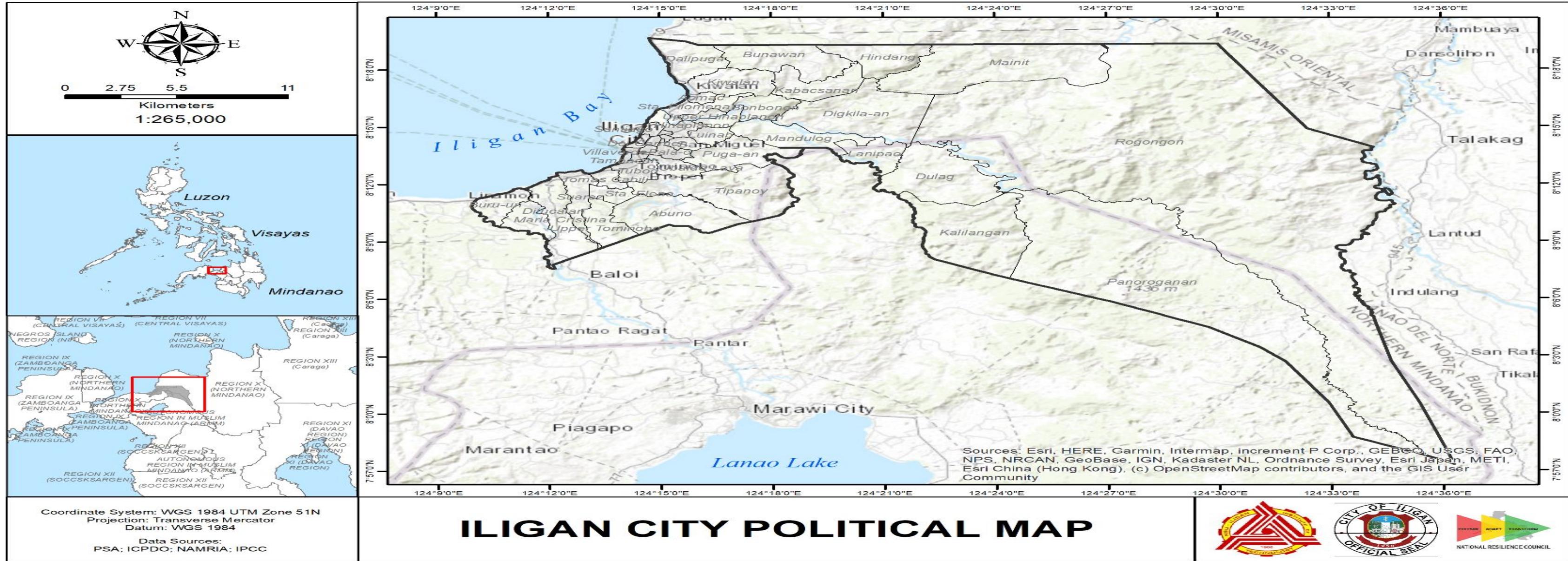


[nationalresiliencouncil](#)



The Philippines is a nation at risk

Risk is a combination of three components: **hazard, exposure, and vulnerability**. Data from each of these categories can be used to paint a picture of risk in a certain location and over time.



GAR 2019: Where We Need to Be

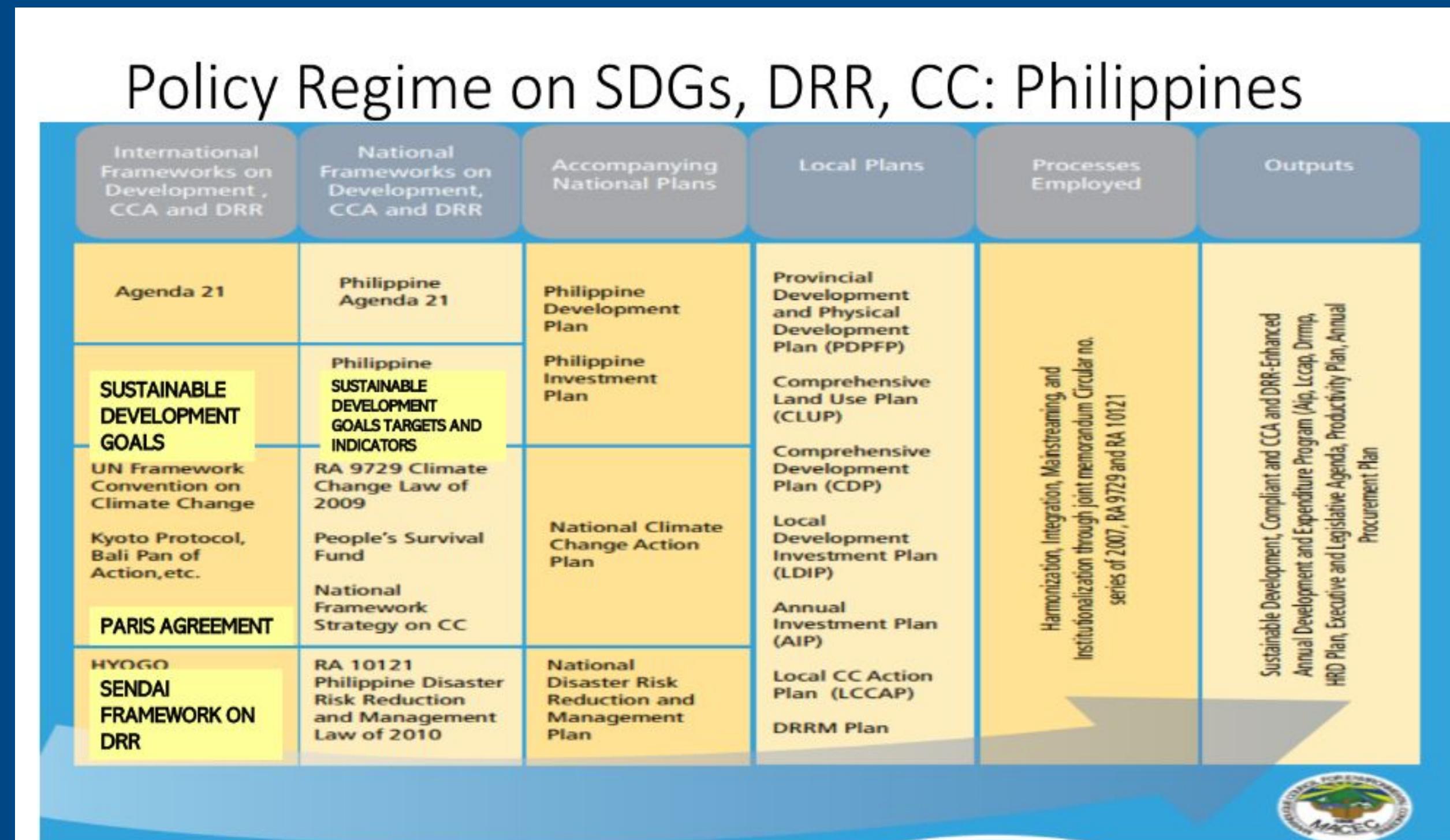


II. What is Resilience?

“Ug makadungog o makakita ka ug termino nga Resilience o Kalig-on unsa ang pinaka-unang ideya ang moabot sa imong hunahuna?”

Isulat sa metacard ang inyong tubag ug idikit sa whiteboard

III. Unpacking Resilience: What now?



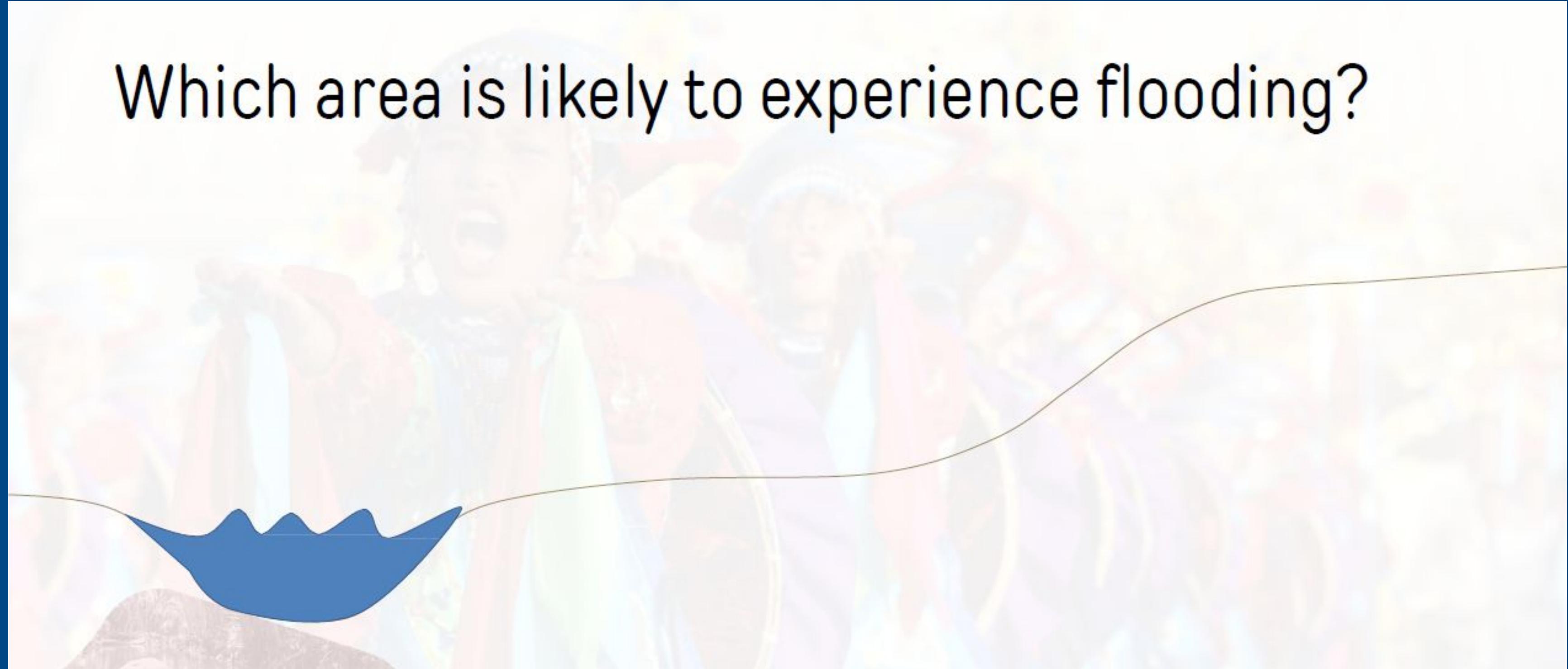
“Ang pagsabot sa risgo, diha lamang matino o mahibaw-an kung unsaon pagtubag o pagsumpo niini”

DESCRIBE THE SCENE



DESCRIBE THE SCENE

Which area is likely to experience flooding?



DESCRIBE THE SCENE

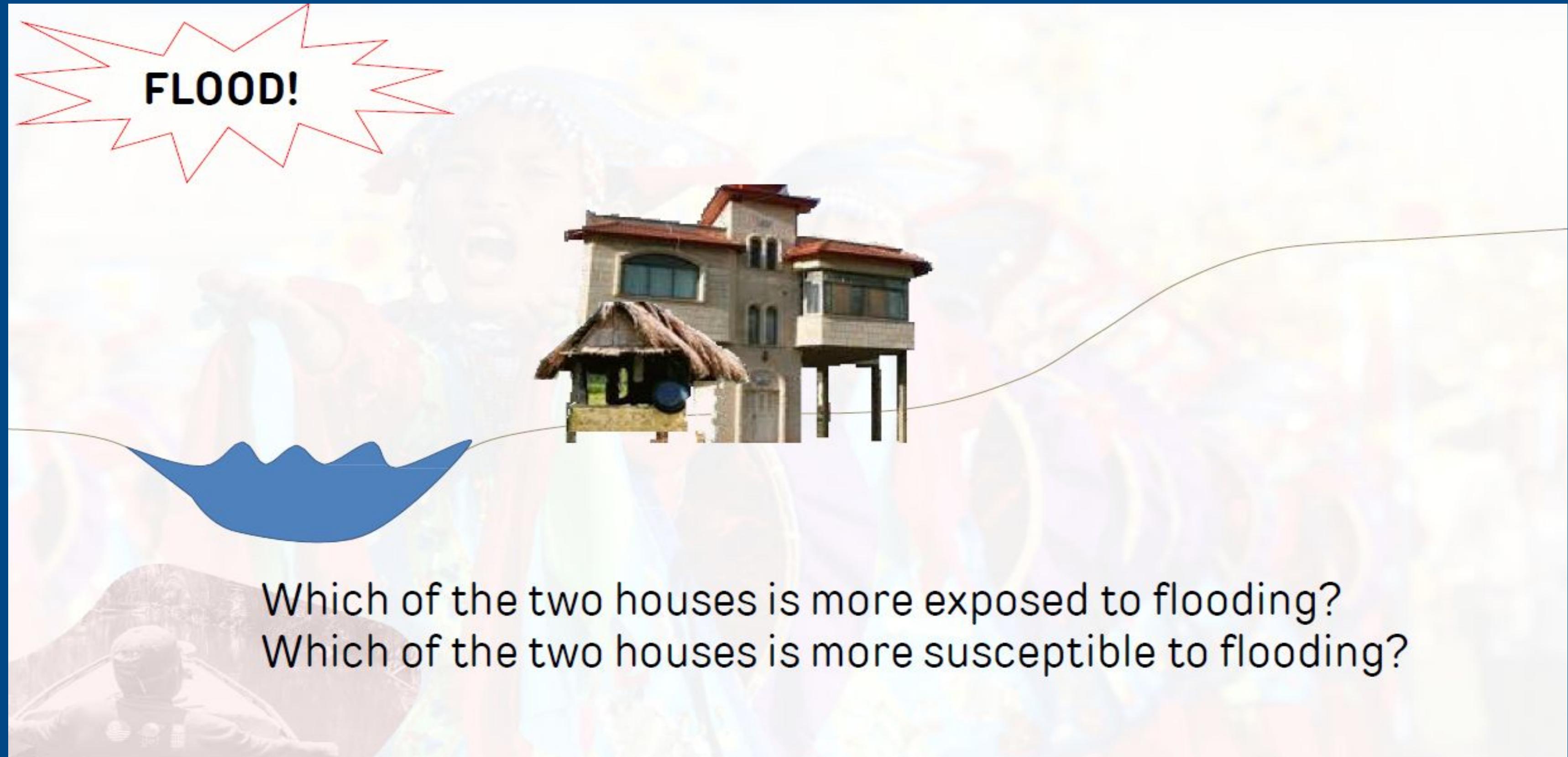


DESCRIBE THE SCENE

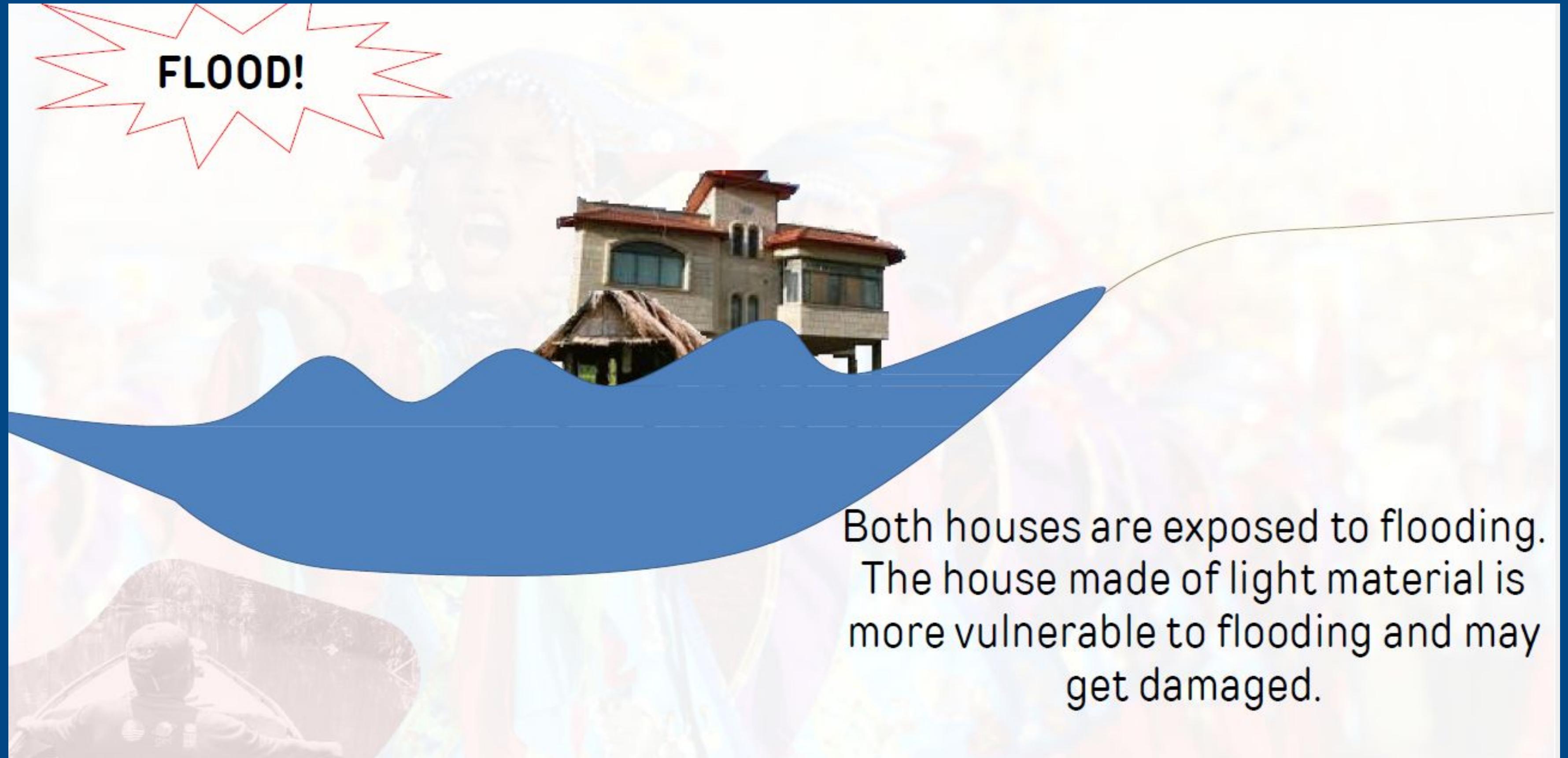
Describe the two houses.



DESCRIBE THE SCENE



DESCRIBE THE SCENE

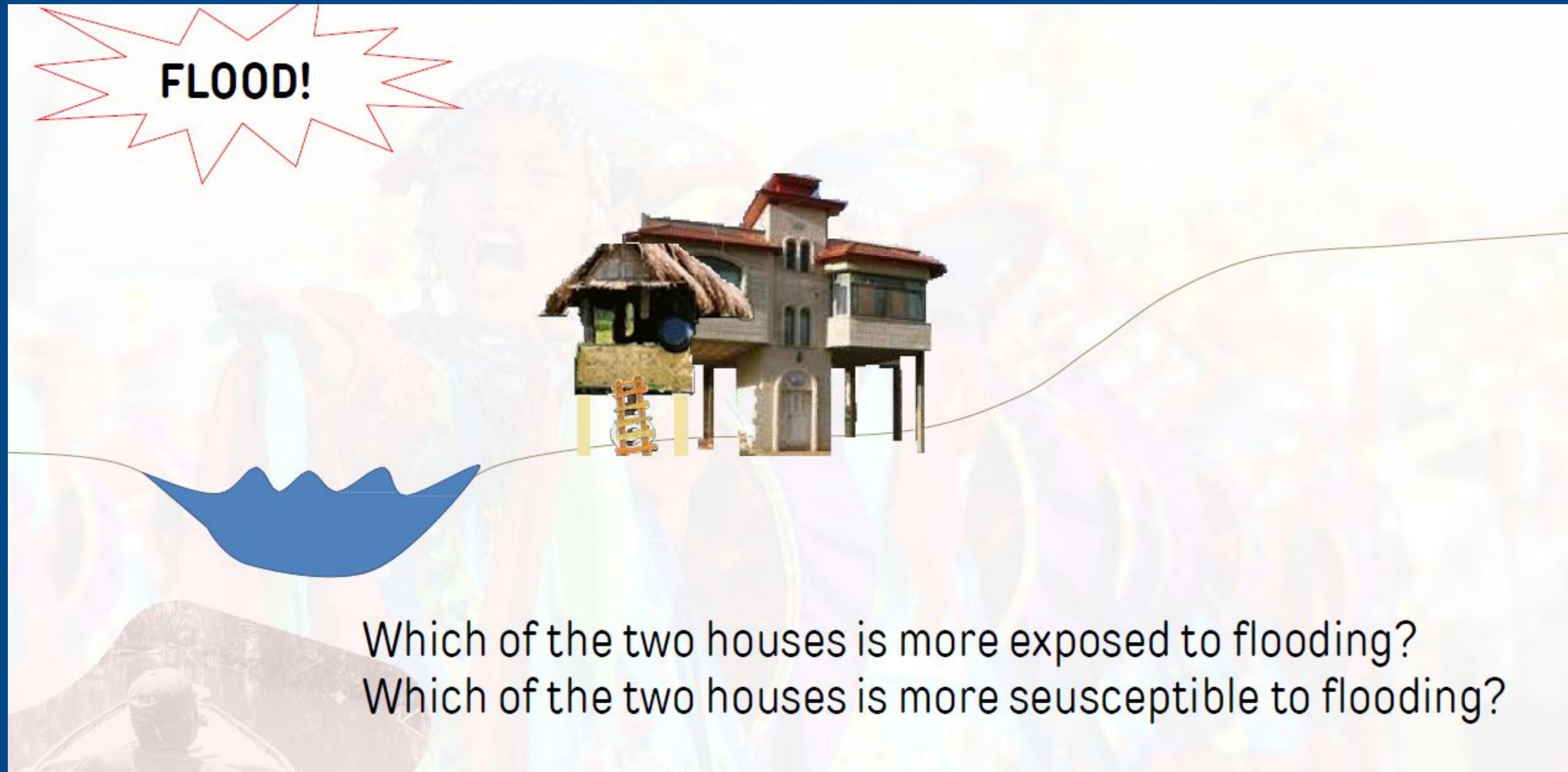


Both houses are exposed to flooding. The house made of light material is more vulnerable to flooding and may get damaged.

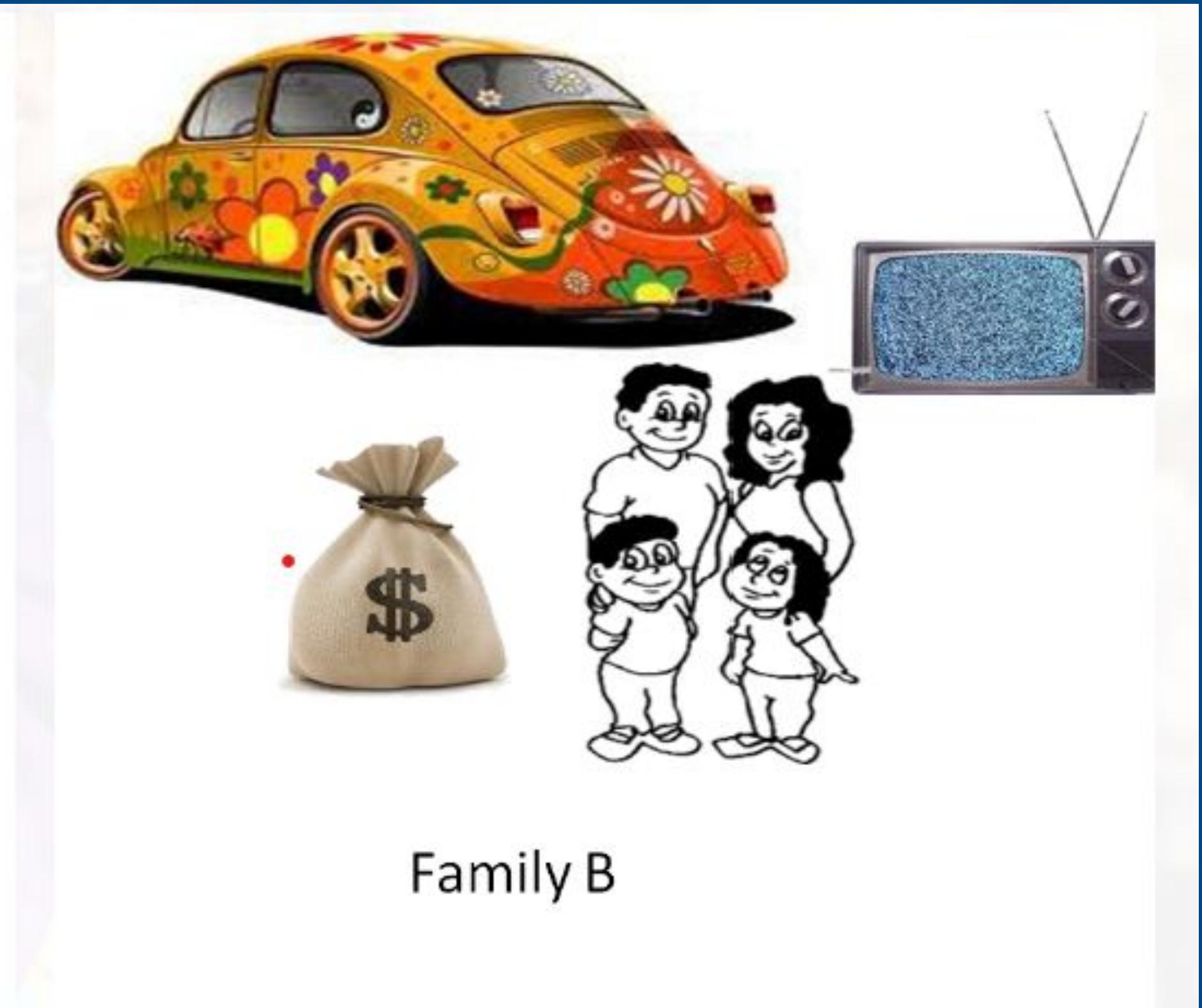
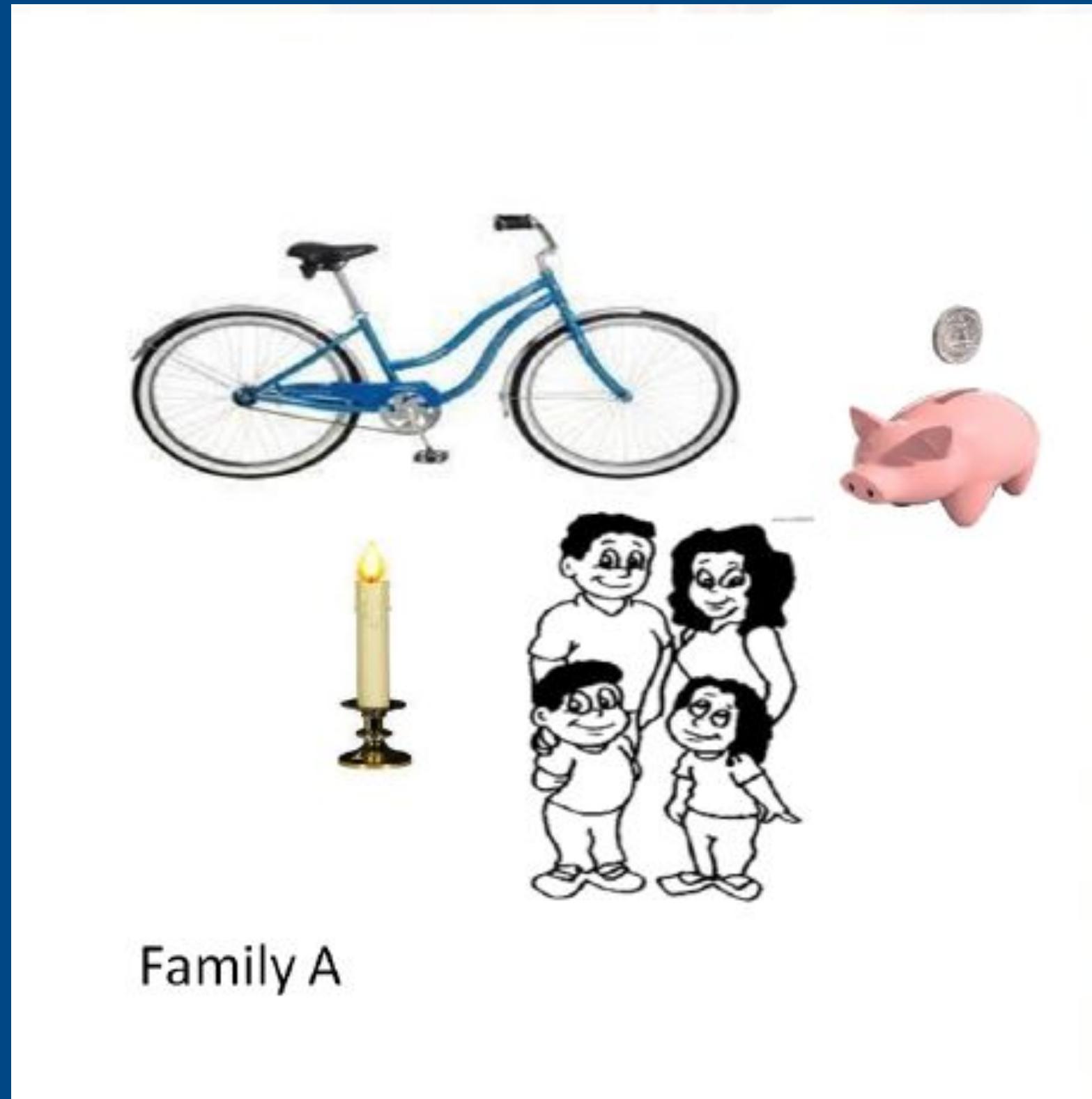
DESCRIBE THE SCENE



DESCRIBE THE SCENE



DESCRIBE THE TWO FAMILIES



DESCRIBE THE SCENE



DESCRIBE THE SCENE

FLOOD!



Family A



Family B



How can we increase the adaptive capacity of Family A?

DESCRIBE THE SCENE

FLOOD!

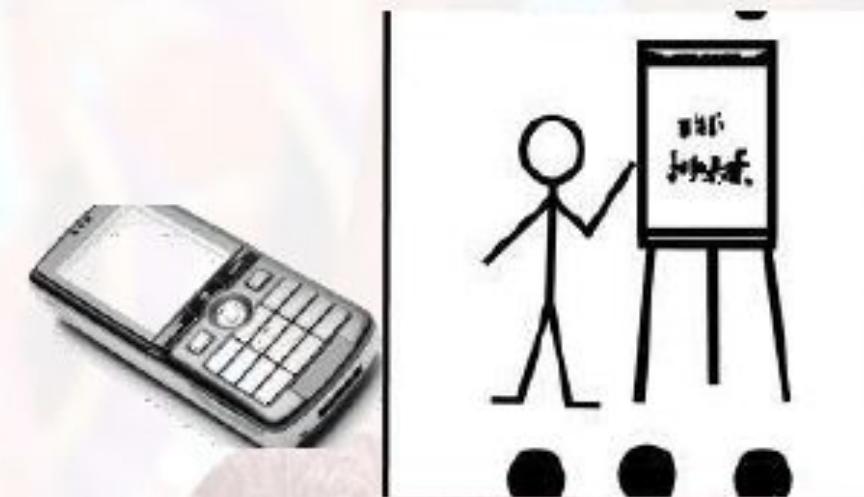
How can we increase the adaptive capacity of Family A?



Family A



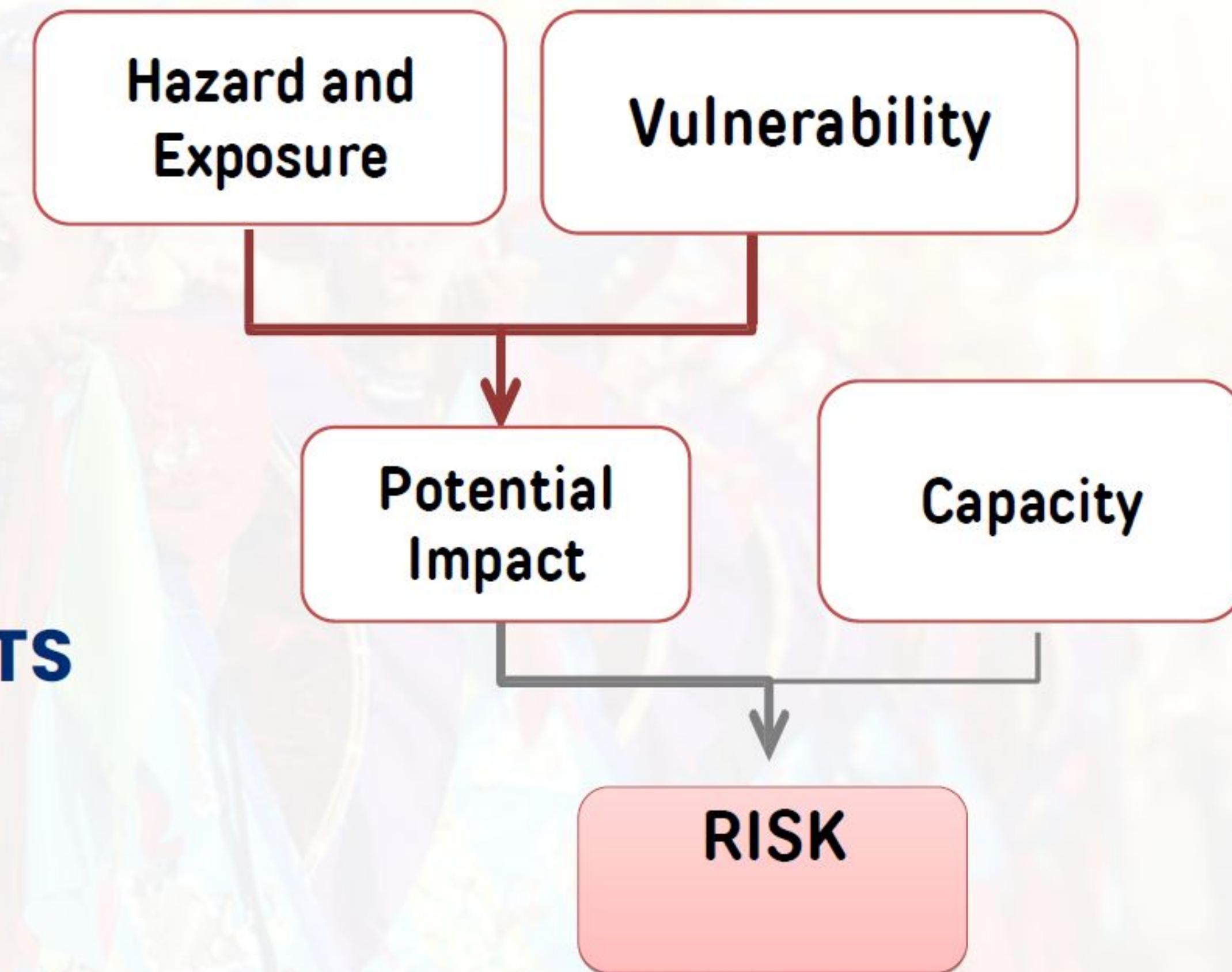
Family B



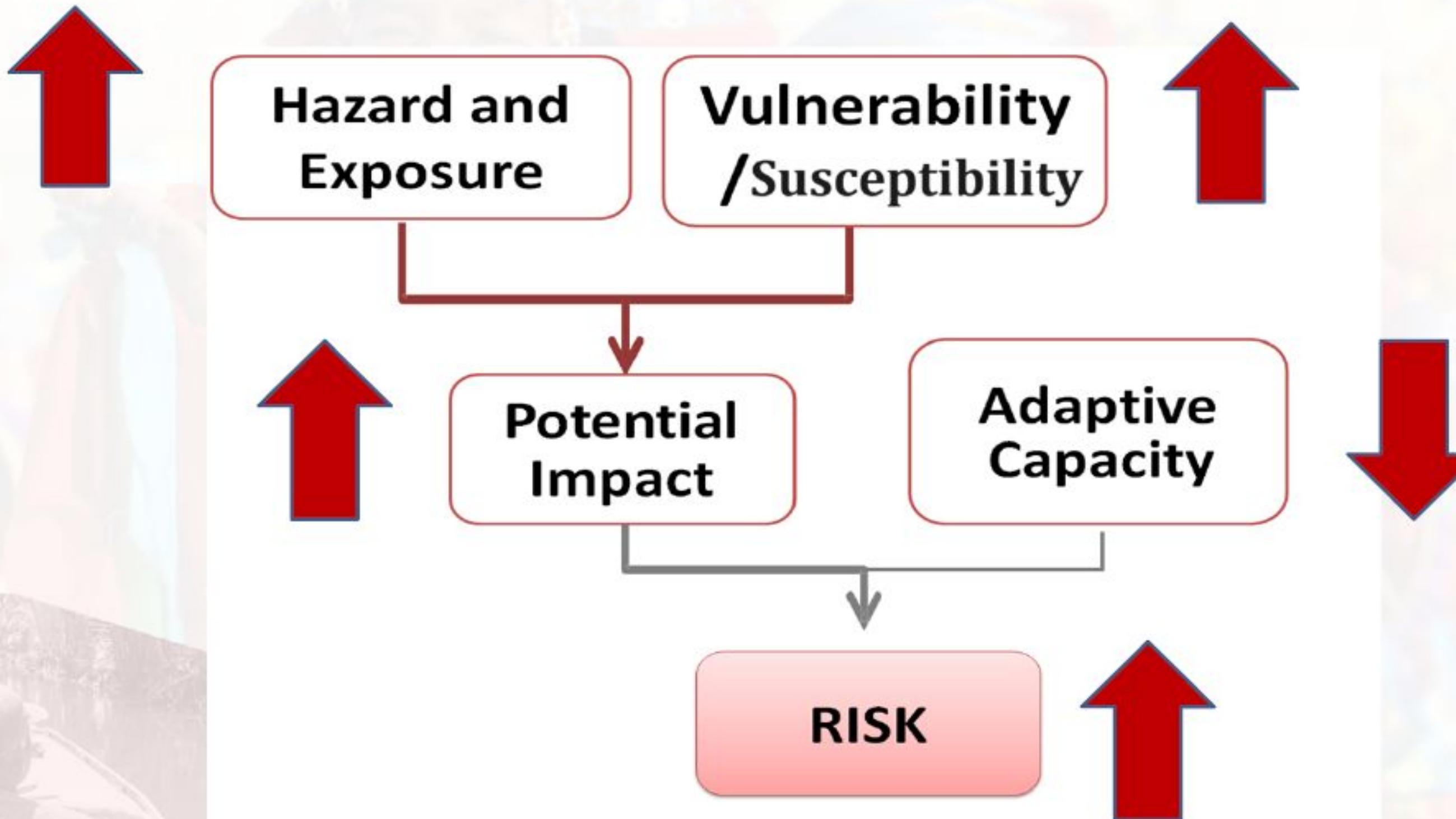
DESCRIBE THE SCENE



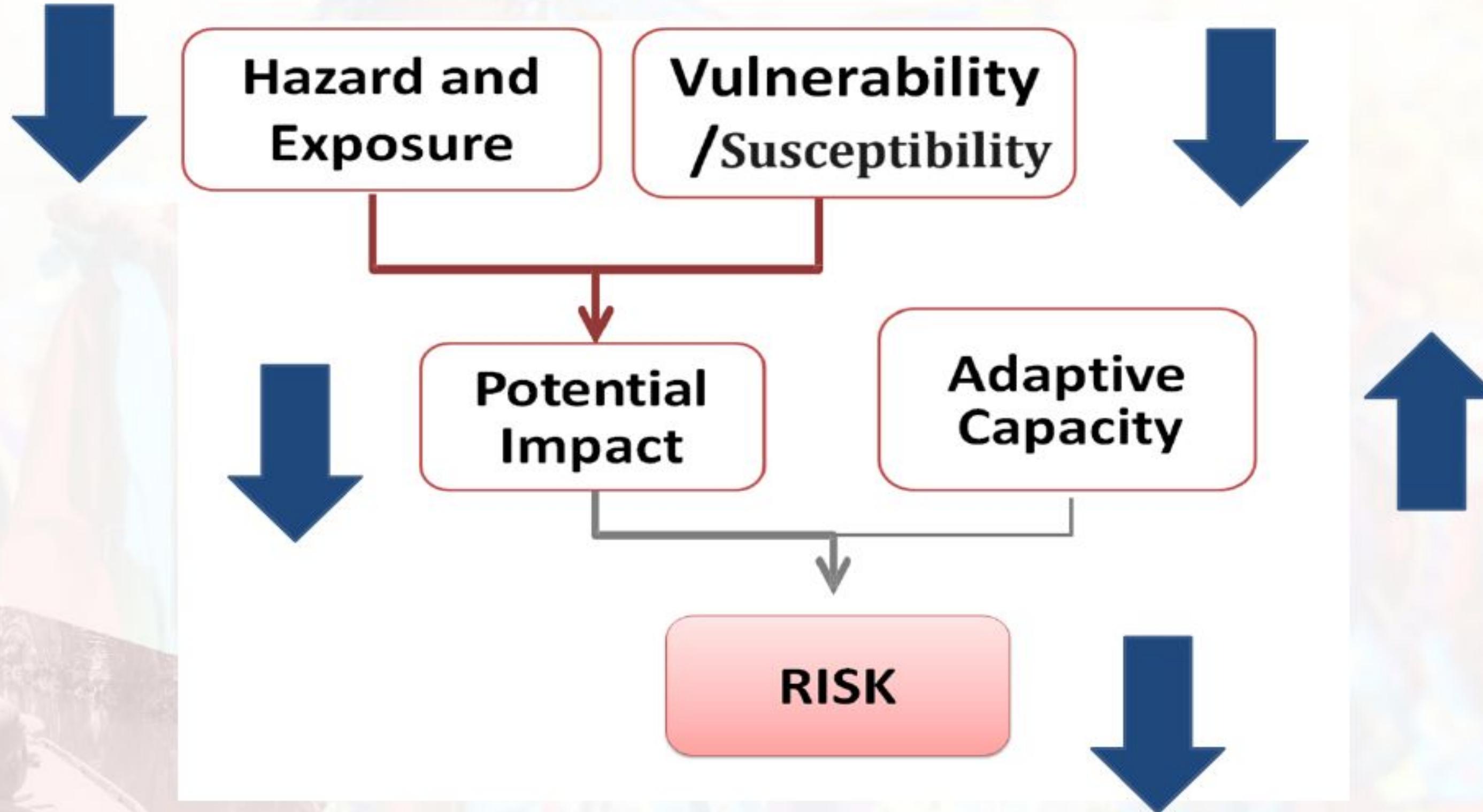
RISK ELEMENTS



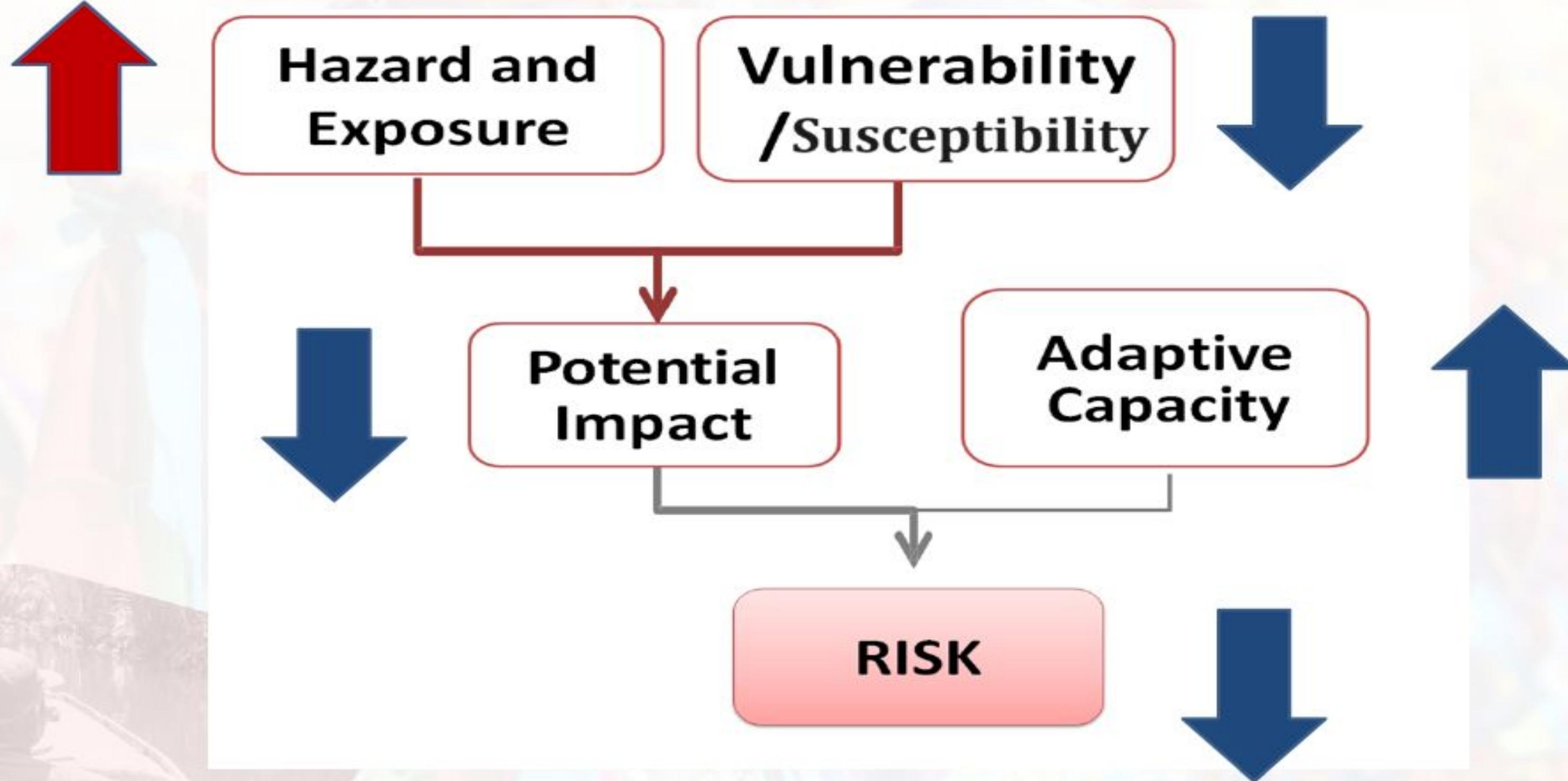
Risk Elements



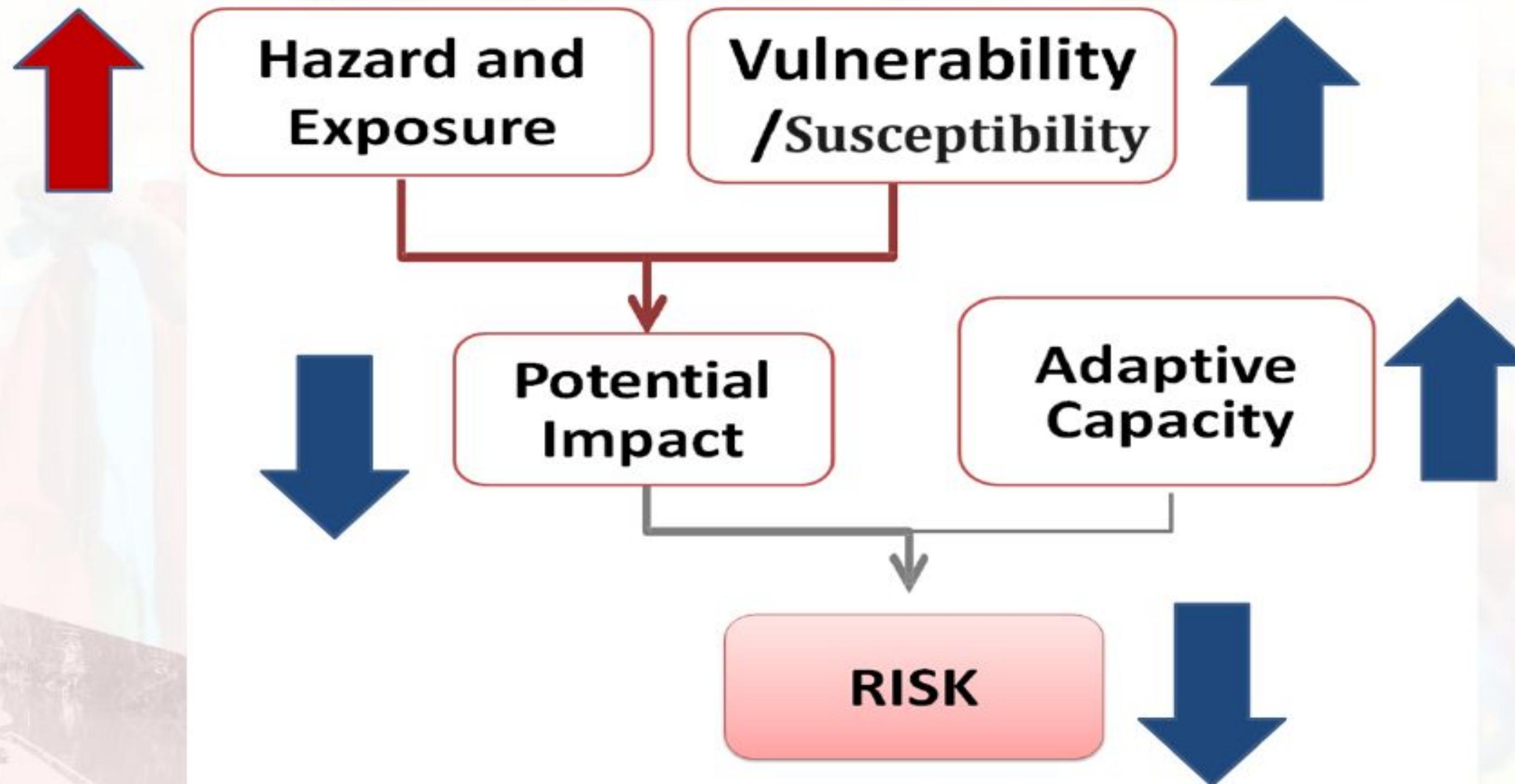
Risk Elements

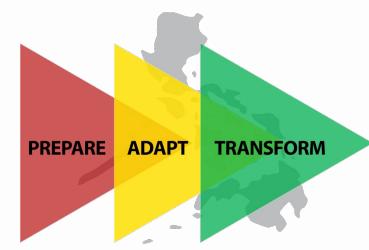


Risk Elements



Risk Elements





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Climate and Disaster Resilience

B. Manyena et al./World Development 123 (2019) 104587

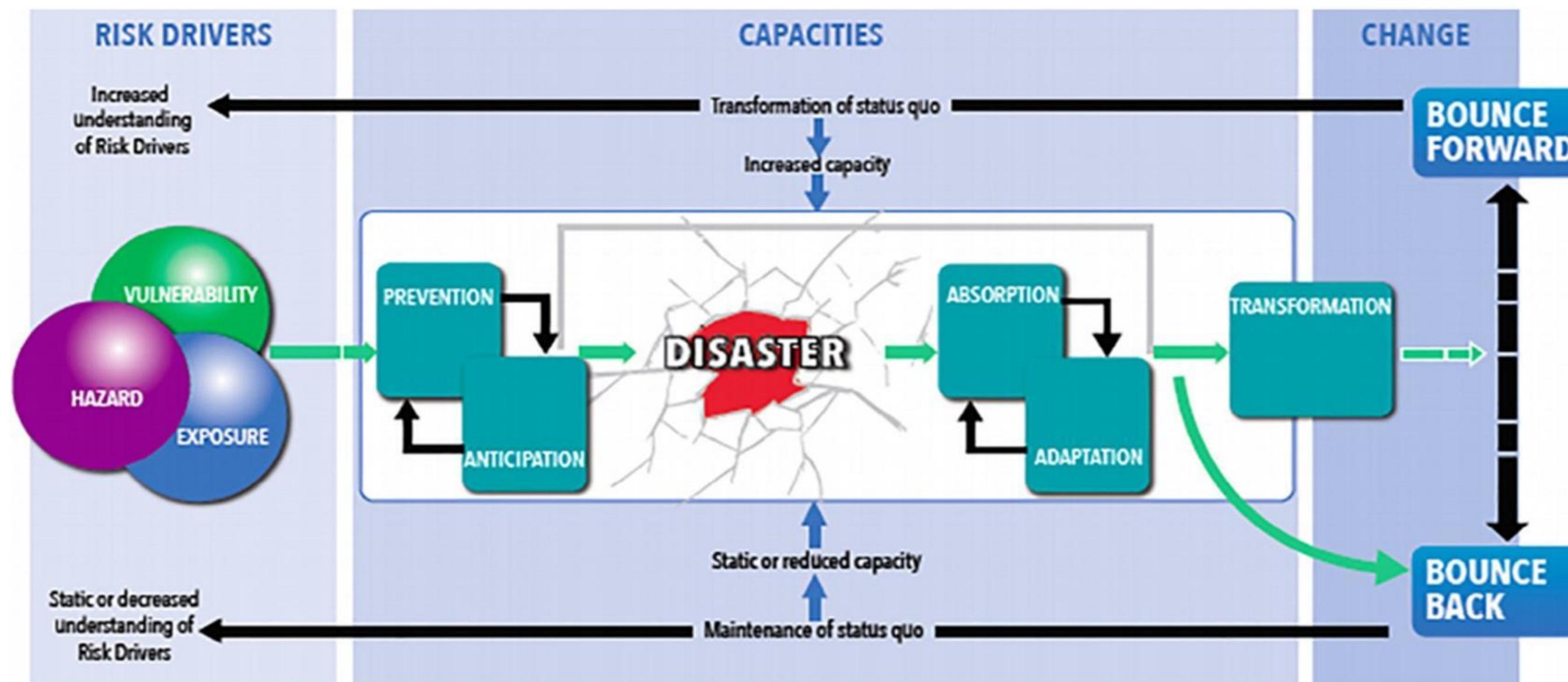


Fig. 1. Disaster Resilience Framework for Transformation (DRIFT).

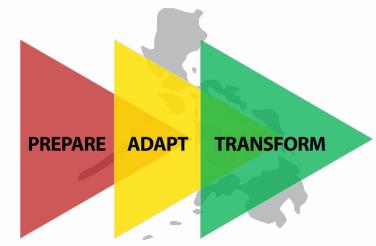


RESILIENCE o KALIG-ONAN

The ability of an exposed community, ecosystem, or infrastructure to bounce forward from the effects of a hazard in a timely and efficient manner.

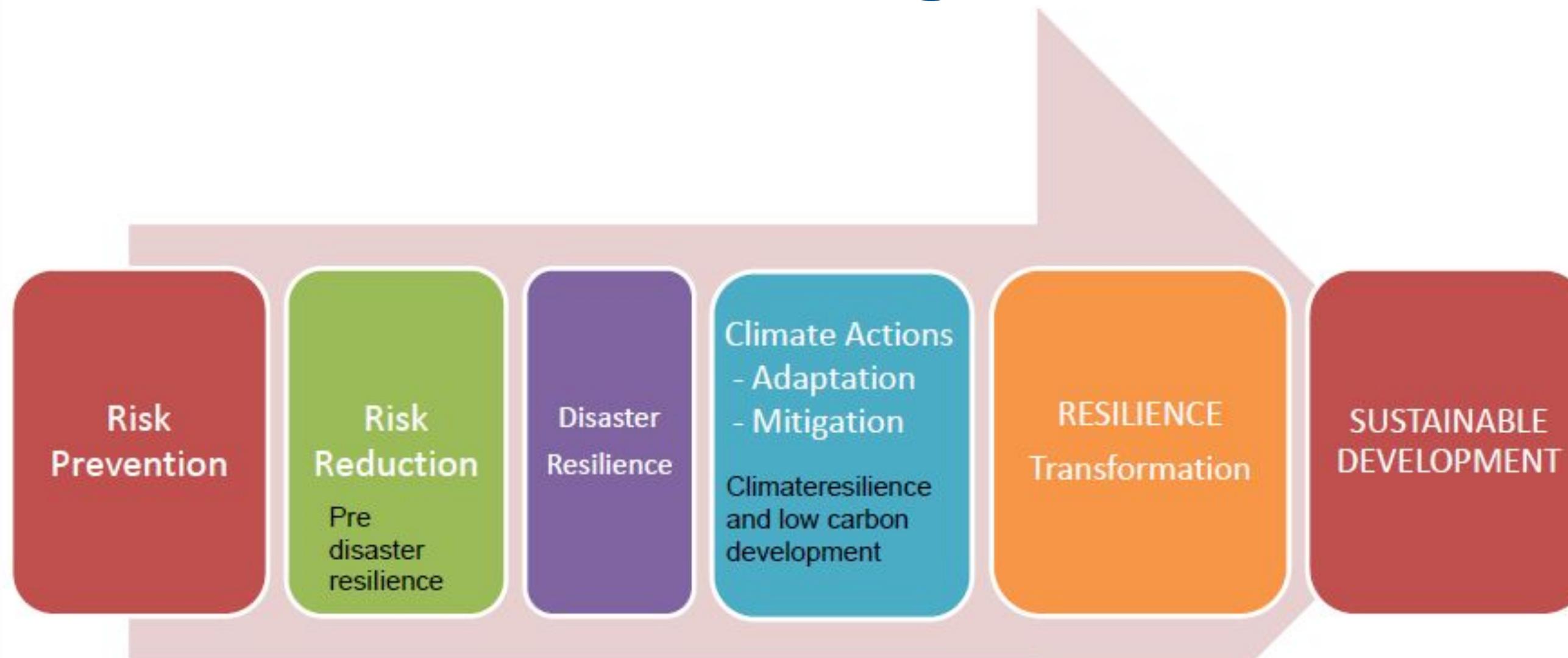
This includes ability to:

- Resist (mosukol)
- Absorb (mosuhop)
- Accommodate (paghatag ug higayon, dawaton)
- Recover from the devastation (maulian gikan sa pagkaguba)
- Preservation and restoration of basic services through risk management (pagpreserba ug pagpasig-uli)
- Adaptation and transformation (pagpahiangay ug pagbag-o)



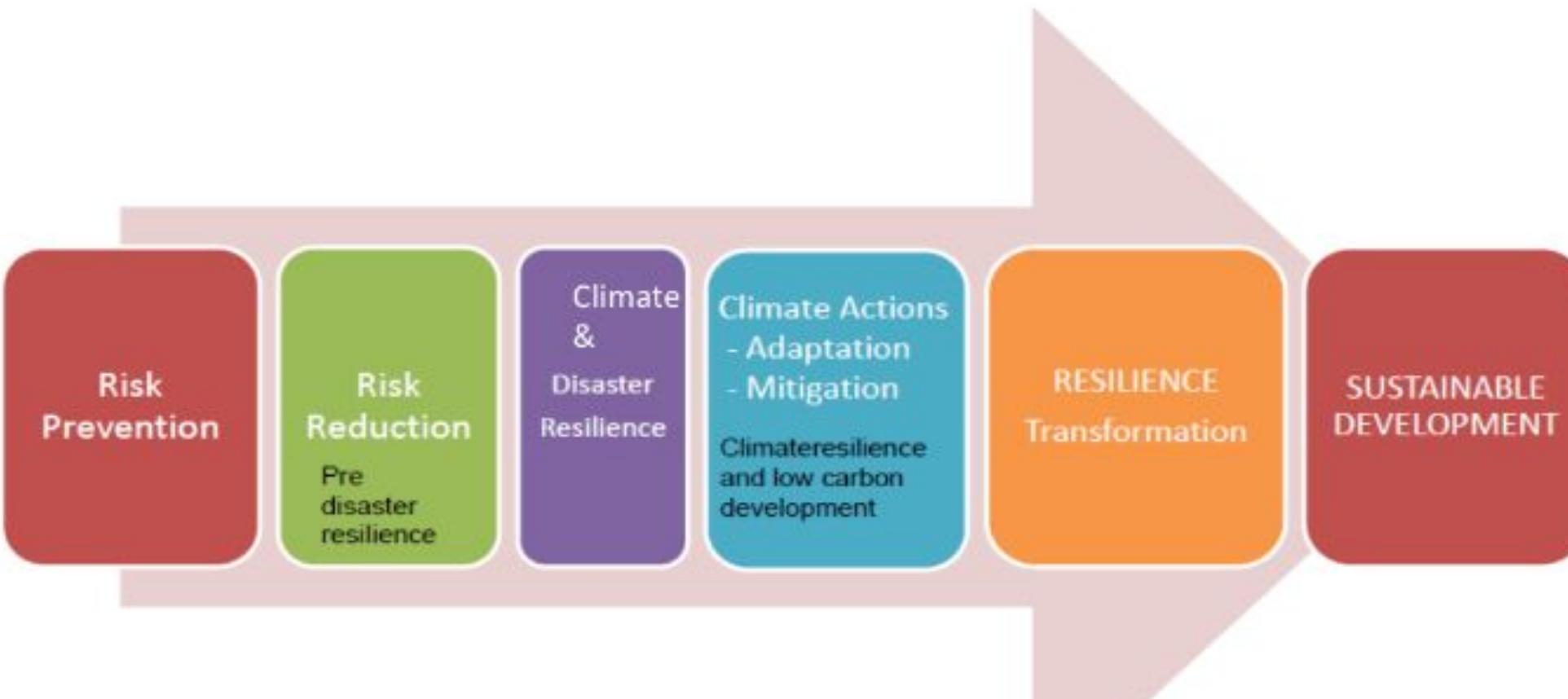
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Building Resilience



“Resilience is a journey not the goal/destination.”

III. The Science of Resilience



“Resilience is a journey not the goal/destination.”

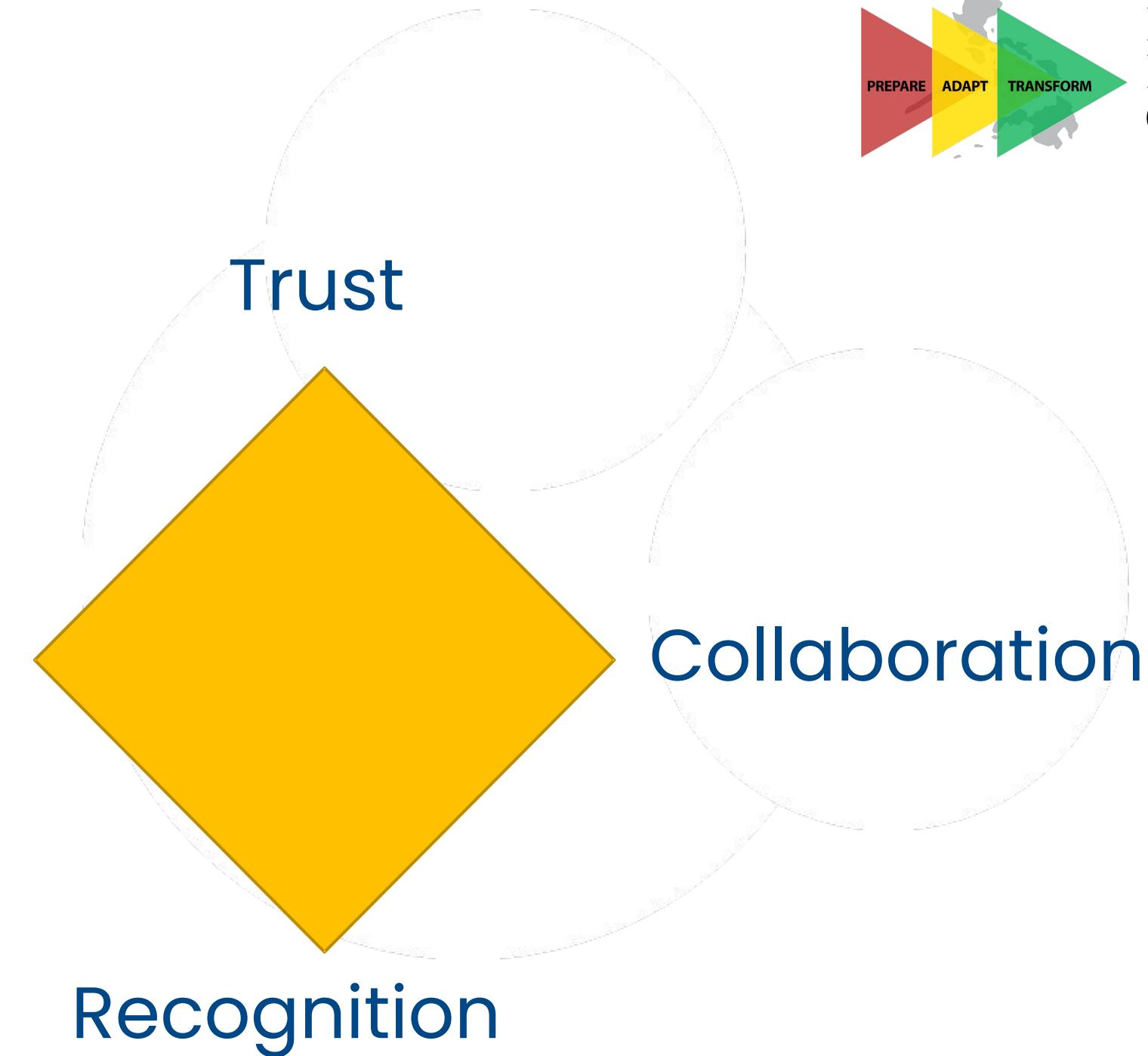


Enablers for effective climate action

IPCC-SYR, 2023

Human factors also enable action

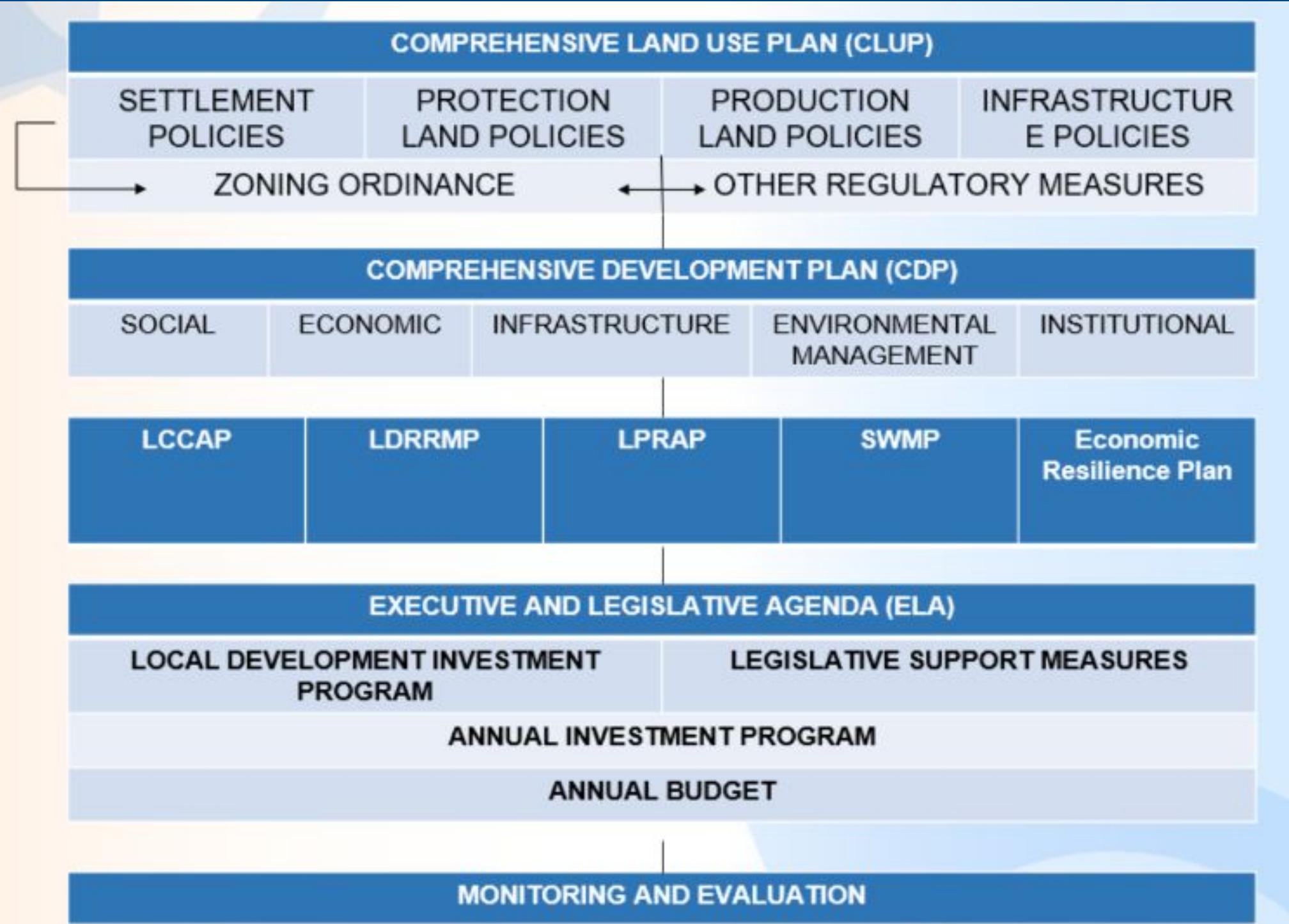
Sharing of
benefits and
burdens



IV. How are our policies responding to the calls of transformation by science?

Long-Term Framework Plan
Multi-year, Multi-sector Plan
Derivative Plans

Term-based Plan



“Resilience must be mainstreamed down to the barangay level.”

V. Social Vulnerability Index (SOVI) (Sukdanan sa kahuyang)

**Kinsa ang nalakip? Kinsa ang mga apektado?
Unsa ang ilang kapabilidad?**

(Who are involved? Who are affected? What are their capacities?)

Kalig-on- usa ka pamaagi sa kintabuk-ang katilingban. Kini nagpasiugda sa pagpanag-iya, duyog sa pagpanag-iya, duyog sa paglalang, ug duyog sa kaayohan

(Resilience is a whole-of-society approach. This promotes ownership, co-creation, co-ownership, and co-benefit.)

“Kung gusto nimo molakaw ug layo, lakaw nga mag inusara, kung gusto ninyo mopanaw sa mas layong dapit, magkuyog kita sa pagpanaw”

"If you want to go far go alone, if you want to go further go together."

WORK WITH US!



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