Theme1. World social and envirnonmental stakes

Lesson 1:
FACING HAZARDS.

INTRODUCTION

Global warming and CO2 pollutions are burning subjects today.

The media have helped to make people more aware of the impact human beings have had on the planet.

When doing this, they put more an more the stress on hazards.

What are the different kinds of harzards and what role do people play in their creation, anticipation and control?

First, let's study the main hazards

Then, let's see how people try adapt to them.

I/ MORE AND MORE RISKS

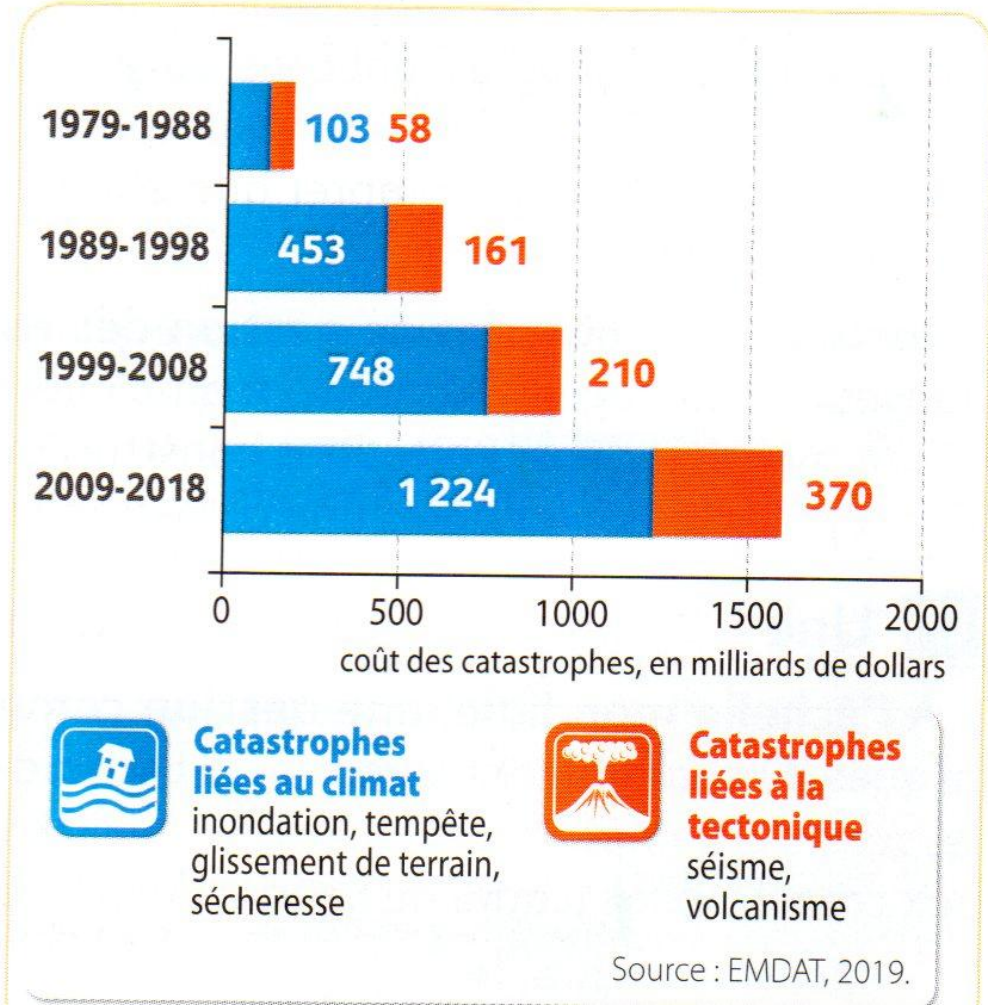
A/ WHAT TYPES OF RISKS?

In English these risks are called hazards (aléas in French)

1)Natural hazards :
hurricanes, earthquakes, floods, drought are the more frequent

2)Technological hazards :
They are linked with industrial activities.
They are usually due to the poor state of infrastructure.

3)Public health risks:
they refer to epidemics like the EBOLA virus 2014-2015, or the COVID but also to hunger crises/famines



1- identify the document

2-What kind of evolution did the cost of hazards have?

3-What is the major natural hazard today? Why?

Climat: climate
Tectonique: tectonic
Seisme: earthquake

EMDAT: International disasters database

B/ COUNTRIES' VULNERABILITY

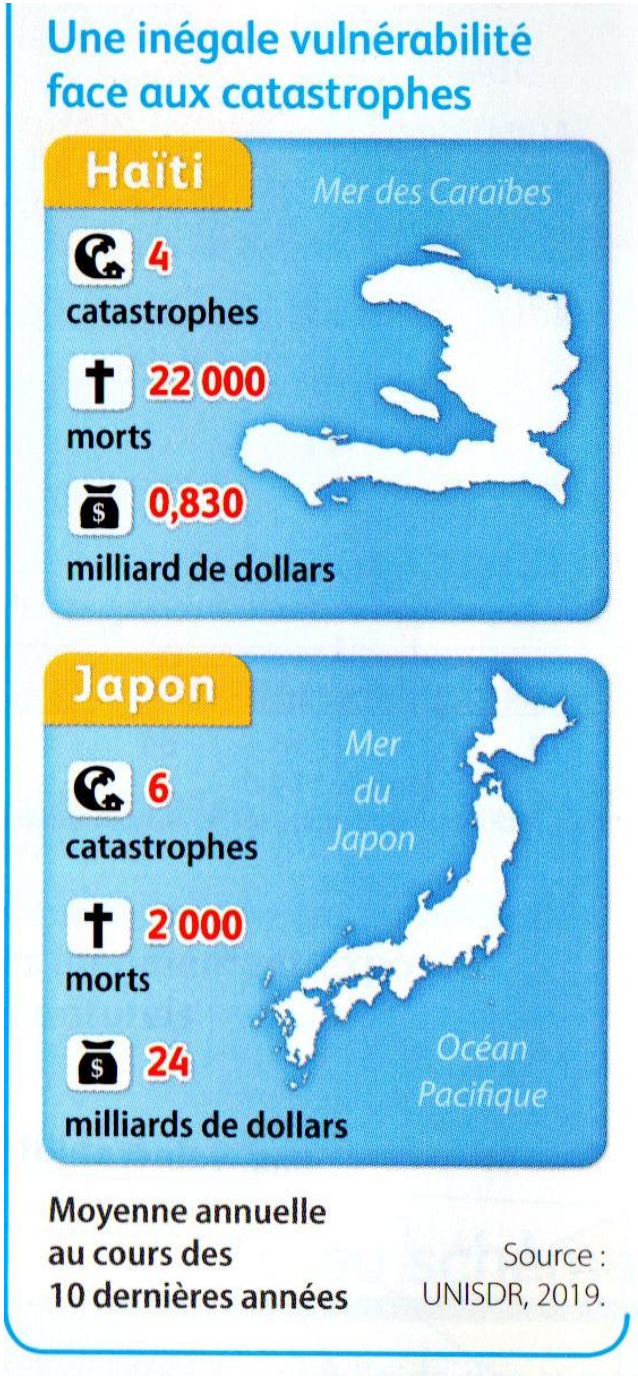
1)Developing countries are the worse victims.

Hazards kill 6 times more people in a developing country than in a developed One

Why?

Illiteracy, no information to anticipate,
poor quality of roads, buildings
and infrastructure in general

Haïti: same in English
Japon: Japan
Moyenne annuelle: yearly average
Milliards de dollars: billion dollars



2) But in developed countries the cost of hazards is much higher.

-damaged infrastructure are usually costly

-hazard can paralyze/ block the whole economy!

It leads to a huge loss of income

C/ BUT SOCIETIES ARE SOMETIMES **RESPONSIBLE FOR** SOME NATURAL DISASTERS

1) Some human activities worsen risks:
deforestation and urbanisation for example, increase the risk of landslides

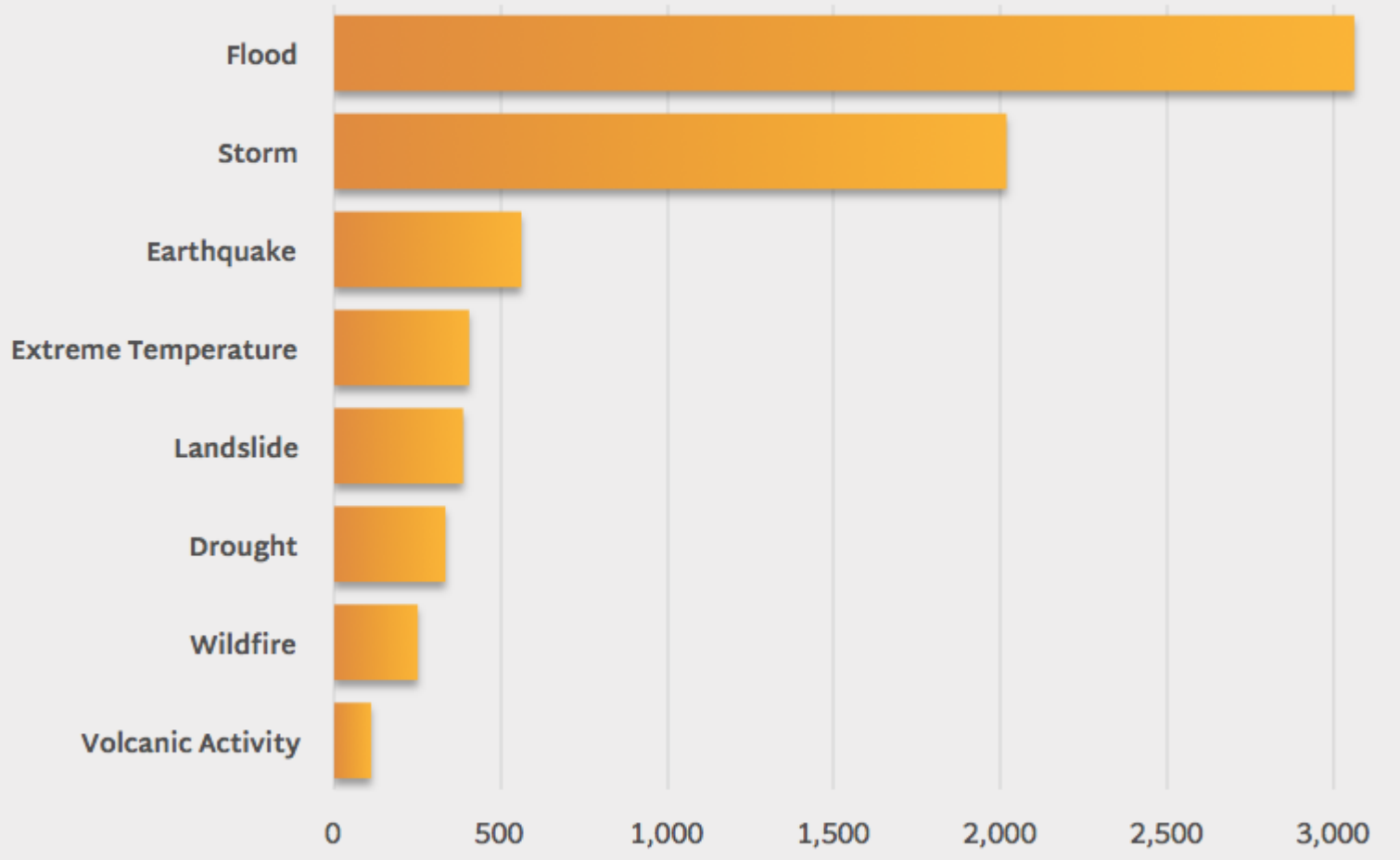
2) Global warming
It worsens floods and rises sea level

Vulnerability increases when population densities are high

Which Natural Disasters Hit Most Frequently?

Occurrences by disaster type (1995-2015)

HelgiLibrary



Source: UN/CRED

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Transition:
Natural hazards are hard to anticipate or avoid.

But , hopefully, many contries try to enforce efficient policies to adapt to hazards and limit them when it is possible.

II/ HOW TO ADAPT TO HAZARDS?

A/ PREVENTION

Prevention is **either** avoiding hazardS **or** controling their impact.
It can be done :

1) By educating/train the population on how to react
2) By trying to foresee them
3) By building specific infrastructure to withstand hazards
   - Mangroves

1 Une adaptation aux risques littoraux.

La replantation des forêts de mangrove en Thaïlande permet de protéger les littoraux de l'érosion côtière et des tsunamis.

- Sponge cities

A small part of Shanghai is turning greener, street by street. In the Lingang district, pavements are lined with trees, gardens and public squares full of plant beds. Between cranes and construction sites, plans display new buildings enveloped in the green and blue of parks, streams, and water features.

Lingang has a mission. As Shanghai's "sponge city", it is piloting an ecologically friendly alternative to traditional flood in the coastal city which faces long-term risks from rising sea levels.

Rapid concrete development in China has often blocked the natural flow of water with hard, impervious surfaces; to reverse this, the sponge city concept focuses on green infrastructure, such as wetland areas, rooftop plants and rain gardens.

"The first thing is to try and preserve or restore natural waterways, because that is the natural way to reduce the flooding risk," says Prof Hui Li at Tongji University. "In Wuhan, for example, the main problem is that a lot of small rivers were filled in during building. "Sponge city infrastructure is beneficial because it is also changing the living environment, helping with pollution and creating a better quality of life in these areas," says Dubbelaar. "The initial driver for sponge cities was the extreme flooding of urban areas, but the change in mindset, that development should have a more holistic, sustainable approach, is an extra benefit that is evolving during this project."(…)

What is a sponge city for?

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The building of sponge cities can have an impact on people's mindset? Which one?

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So:
A sponge city is a city which has been designed to manage water.
When it rains, the water gets absorbed by the ground so it restores natural water flows.

The building of concrete roads causes floods because the water runs on them , but in the sponge city the water gets used instead.

Sponge cities are green cities so It improves people's living conditions and reduces pollution.

It's a sustainable approach

B/ BUT NOT ALL THE COUNTRIES **CAN AFFORD** SUCH PROGRAMS

1) **In developed countries, governments invest in risk management:** but it is costly

(ex: seismically-safe structures)

2) But in developing countries the lack of money is an obstacle

In Indonesia, during the 2018 Tsunami, the warning system did not work as it was poorly maintained

But in the 2017 earthquake, Mexico only had 230 deaths whereas it was 13 000 in the 1985 earthquake!

C/ THE NEED FOR A WORLD CONTROL AND MANAGEMENT

1)The 2015 PARIS AGREEMENT

It's developed under the United Nations Framework Convention on Climate Change (UNFCCC)

-This agreement is to limit global warming

-It consists in 5-year cycles

What does it imply?

-By 2020 each signing coutry had to communicate its plans to reduce greenhouse gases

-The agreement also puts in place supports technical and financial supports for countries which need it.

-In 2024, each signing country will have to report on the actions taken

-So after all the countries could **assess** (évaluer) the needs thanks to to a global **stocktake** (inventaire) and prepare the next round.

2) **Locally, some programs are put in place**

Example: The use of public electric bikes in Brasil and in many Chinese cities were the first large-scale programs to be put in place

But one question remained unanswered: who is to blame for this increasing pollution?

China and the USA keep blaming each other…

3) Environmental migrants/ climate refugees

The number of displaced persons for climate reasons is estimated to be around 143 millions in 2050

This will give a new challenge to meet: how to help these people out?

CONCLUSION

What kind of harzards must societies face?

What role do people play in their creation, anticipation and control?

Besides natural hazards, some more have been created by human societies.

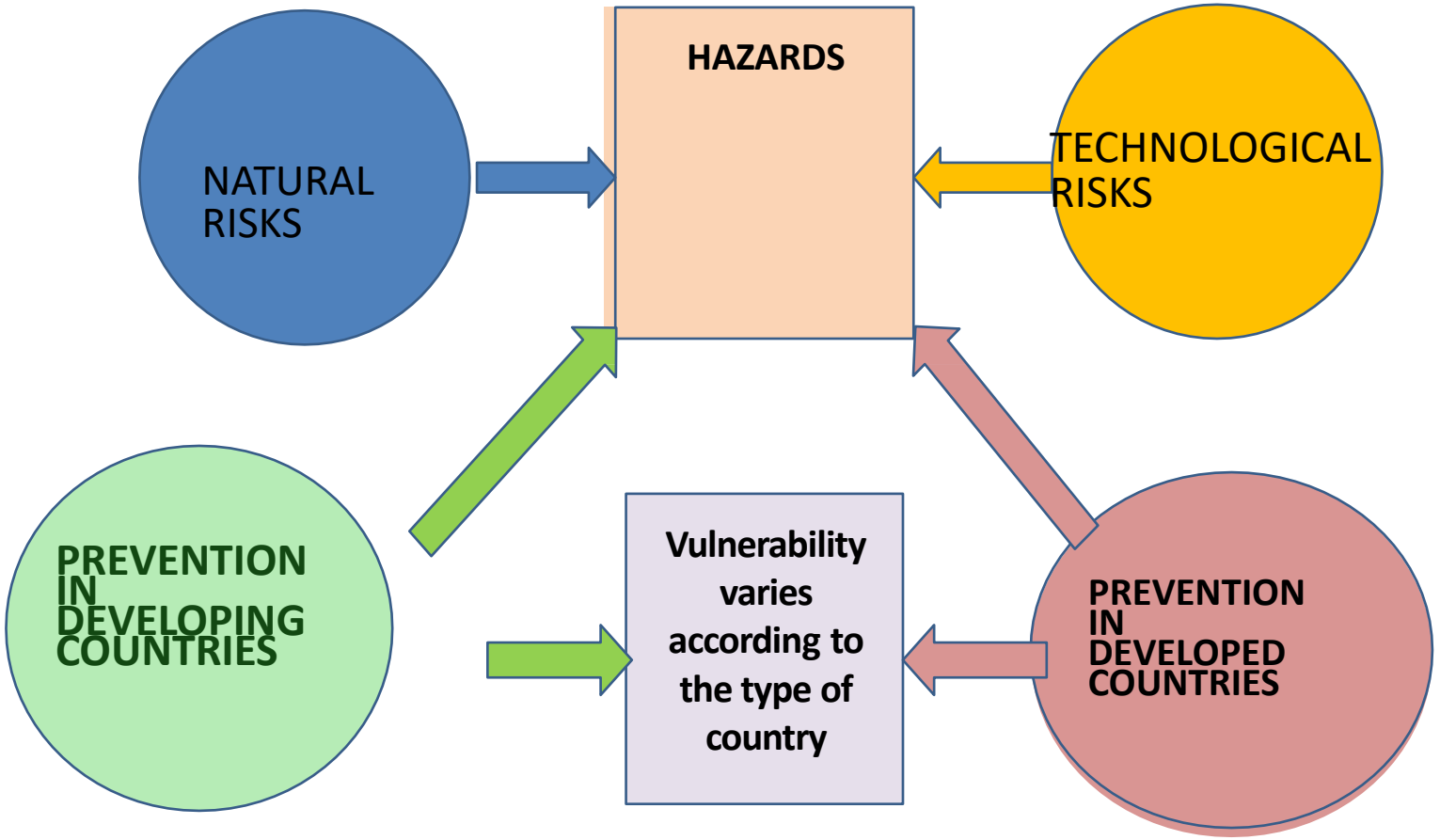
The media helped to become aware of this responsibility.

The world seems to change mindset toward(s) a more ecological approach of human activities to reduce hazards.

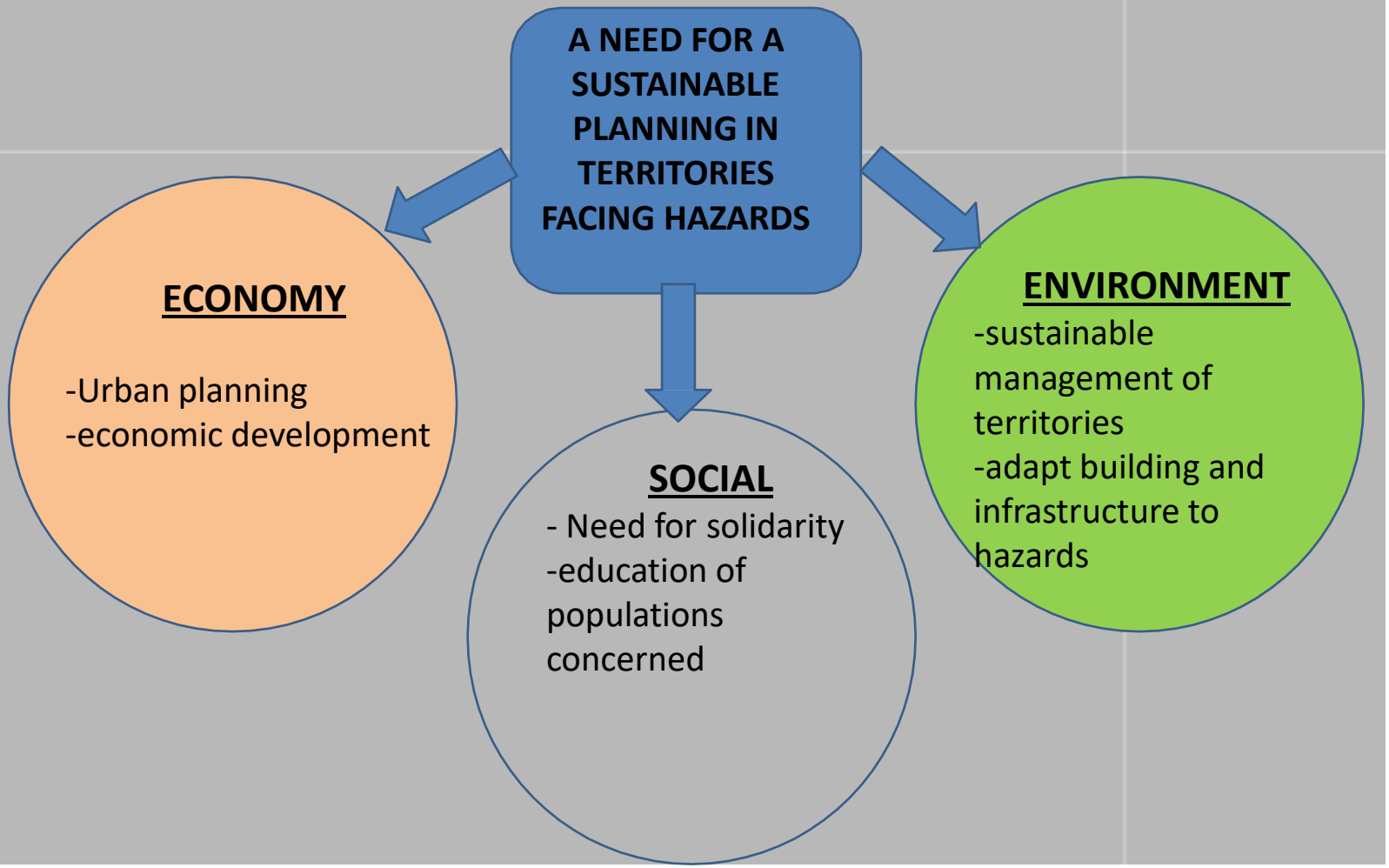
Unfortunately, money stays the main brake when it comes to enforce such programs as well as a world co-operation.

But is the world community capable of meeting the challenge of an efficient co-operation for a limitation and management of hazards?

COUNTRIES VULNERABILITY FACING HAZARD CHART



CONCLUSION:


A NEED FOR A SUSTAINABLE PLANNING IN TERRITORIES FACING HAZARDS
ECONOMY
-Urban planning
-economic development
SOCIAL
- Need for solidarity
-education of populations concerned
ENVIRONMENT
-sustainable management of territories
-adapt building and infrastructure to hazards