Disaster Risk Reduction resource for Secondary schools

CURRICULUM LINKS:

Year 7 Geography | ACHASSK187 - explaining the economic, environmental and social impacts of a selected atmospheric or hydrological hazard on people and places, and describing community responses to the hazard.
Year 10 Geography | ACHGK081– The role of international and national government and non-government organisations' initiatives in improving human wellbeing in Australia and other countries.

Year 7 & 8 Design and Technologies | ACTDEK029 - critiquing competing factors that influence the design of services, for example a natural disaster warning system for a community.

SUSTAINABLE DEVELOPMENT GOAL LINKS:

Goal 11: Make cities inclusive, safe, resilient and sustainable. **Goal 13:** Take urgent action to combat climate change and its impacts.

Real life experience

- Ask students for examples of disasters they have experienced or heard about in the news
- Watch a clip of someone affected by a disaster, eg. http://bit.ly/qZwqR9
- Ask students to imagine they were that person. What would they have heard, seen, felt, done?

What is a 'disaster'?

- Ask students, in pairs, to write a one-sentence definition of a 'disaster'

Hazards: At regular but unpredictable intervals, people around the world are affected by hazards. These may be natural (eg. earthquake) or man-made (eg. conflict).

Disasters: Disasters occur when hazards destroy homes and livelihoods and overwhelm the capacity of vulnerable people to cope.

Population movement (eg. people moving to cities or coastal areas), population pressures and environmental changes all mean that natural hazards affect increasing numbers of people. Poverty is often the cause of population movement, as people move from areas where they are unable to make a living. Poverty also affects how well people are equipped to cope with disasters.

Disaster Risk Reduction

Disaster risk reduction seeks to analyse and reduce the factors that cause disasters. Experts sometimes use this equation:

$$\text{Risk} = \frac{\text{Hazard x Vulnerability}}{\text{Capacity}}$$

Ask students to describe what they think the equation is expressing. *(The risk is greater if hazard and vulnerability are high and capacity of the community to cope is low).*

The scale of the impact depends on the choices we make for our lives and for our environment. These choices relate to how we grow our food, where and how we build our homes, what kind of government we have, how our financial system works and even what we teach in schools. Each decision and action makes us more vulnerable to disasters - or more resilient to them.

Being well-prepared can greatly reduce the impact of a disaster, especially for vulnerable people living in hazard-prone areas with no savings to help them recover if they lose their means of livelihood.

Examples of disaster risk reduction include: reducing exposure to hazards; lessening vulnerability of people and property; wise management of land and the environment; preparing people to cope with future disasters.

Disaster Risk Reduction

Role Play Exercise (40 mins)

Note: If you have time and are adventurous, you could do the following exercise with students acting out their plan in a hall or field, with the different areas marked out.

Divide the class into groups of eight. Give each group a map (page 4). Explain that this exercise is situated in an imaginary village but is based on real experiences in this area of South Bangladesh.

Tell groups: You are living in the village of Khulna in South Bangladesh. Your village is prone to flooding and this is likely to worsen over coming years due to climate change, with more cyclones and rising sea levels.

1. Each person in your group must choose to be one village inhabitant:

- Crab farmer, father of a large family
- Mother of a large family
- Teenager in school
- Primary school teacher
- Tailor with a small business, who also uses a wheelchair
- Well-respected community leader
- Presenter on the local community radio
- Volunteer health worker at the travelling clinic which visits the village once a week

2. Take two minutes to create and jot down details of your character. Think about:

- How old am I? Who is in my family? What is my house/workplace like?
- In a flood, what would be my main concern?

3. Ranmal, who works with Caritas Australia's partners in Bangladesh, is in your area to help communities reduce their vulnerability to disasters. He has called a village meeting.

Together you have 15 minutes, in role, to come up with a plan to ensure that - in the event of a flood - no-one is swept away, damage to houses is minimal and people can survive in good health until the waters recede. Use the information on the map. Your plan must include:

- Preparations to be made in the months before the flood, and who will take responsibility.
- Actions when the flood is approaching, and who will take responsibility
- Actions during and after the flood, and who will take responsibility

Encourage students to be creative and make up facts when they are unsure, but to research using the internet later. **Points to consider:** How will people know the floods are coming? Where might they go? How might they ensure the river takes longer to overflow? What might they do to buildings before the floods? What might they need when surrounded by flood waters?

4. Debrief: Let each group present its plan. Discuss. What were your concerns and needs? How would your plans have made a difference to the impact of the flood?

In reality: Caritas Australia helped set up the crab projects in this area, where salt water was making it impossible to grow crops. A cyclone shelter was built nearby with Caritas support and people were trained in setting up early warning systems. Despite people building higher mud platforms for their houses, shoring up the river banks and improving drainage, the land was overwhelmed by severe monsoon rains in August - September 2011. Caritas Australia supplied immediate needs to support the people as they recovered.

Disaster Risk Reduction

Role Play Exercise (40 mins)

This project is now part of a bigger program called the Sustainable Food and Livelihood Security Phase II. The learnings/lessons learned from this small climate change adaptation project was incorporated and used in areas where there are issues with salinity, raising vegetable beds and improving canals around vegetable plots in areas where monsoon rains cause heavy floods. For more information about the work we support in Bangladesh, watch our film 'Sweet Water' (9:28).

Climate justice

Pope Francis' newly-released encyclical letter on human ecology, Laudato Si' ("Praise be to you") – On the Care of Our Common Home, is the Church's most profound clarion call yet for us all to be protectors of creation and the poor.

The Encyclical calls for a new global solidarity, where all individuals, communities and governments have an essential part to play. Out of love for our sisters and brothers worldwide, and for the love of God's creation, we are called to respond.

Climate change is the single biggest threat to reducing global poverty. While every person on the planet is affected by climate change, the impact is especially severe for women, men and children most vulnerable to extreme poverty – those who have done the least to contribute to global warming.

The communities we work with have told us of the increasing ferocity of cyclones and other extreme weather-related events, of rising sea levels, of the increasing unpredictability of farming seasons and food security, of water supplies contaminated with salinity, and of the negative impacts on community wellbeing and health.

Visit the web resources for the 'Our Common Home' campaign.
http://www.caritas.org.au/act/our-common-home

Fact File:

- Between 1994 and 2013, EM-DAT recorded 6,873 natural disasters worldwide, which claimed 1.35 million lives or almost 68,000 lives on average each year.
- 218 million people were affected by natural disasters on average per annum during this 20-year period (1994-2013).
- Since 2000, EM-DAT recorded an average of 341 climate-related disasters per annum, up 44% from the 1994-2000 average and well over twice the level in 1980-1989.

Study the ***'How can we stop natural hazards becoming disasters' infographic*** (page 5) and answer the following questions.

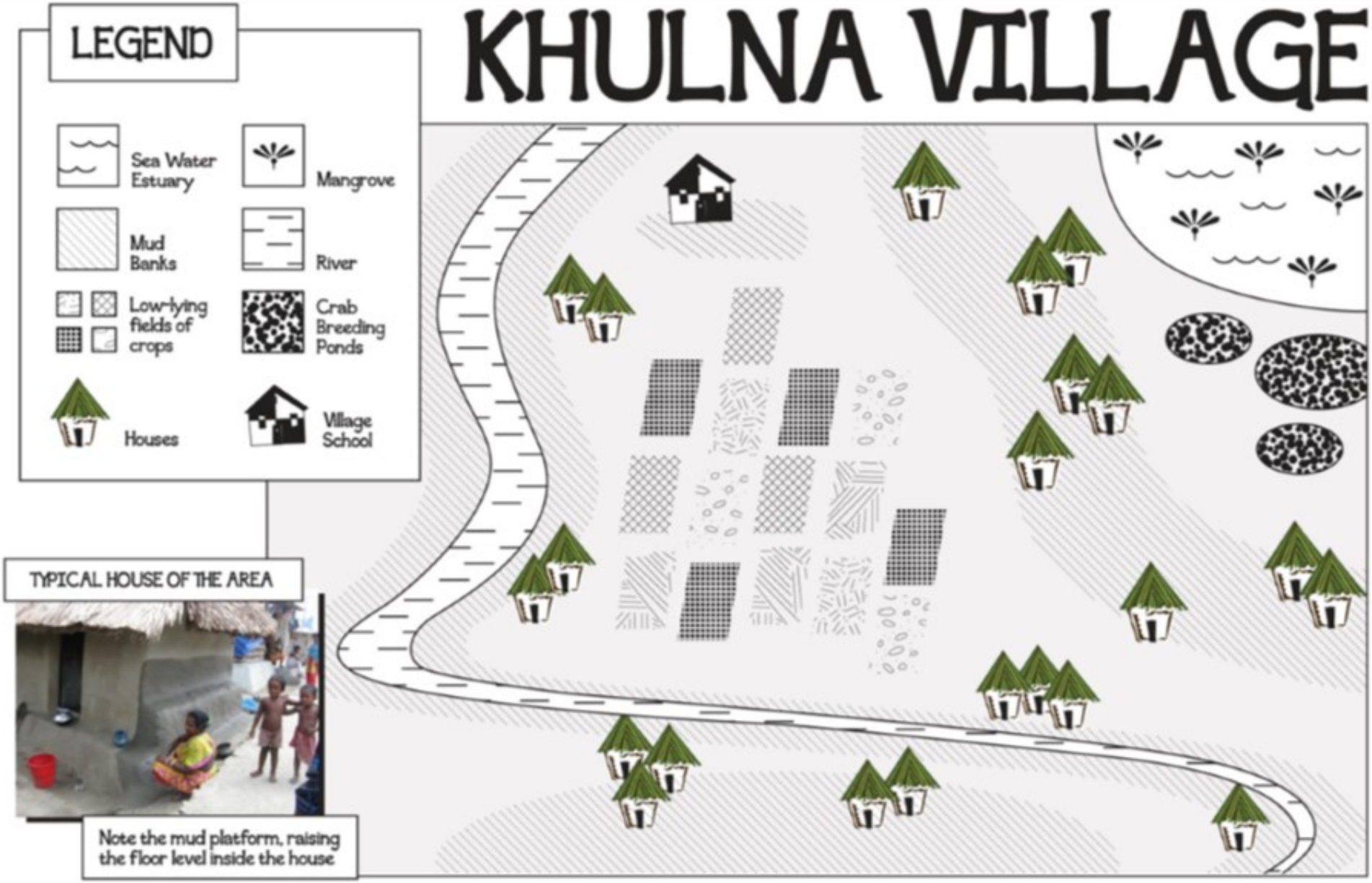
- What are the four stages of Disaster Risk Reduction?
- Can you think of an example for each stage? This could be something you have seen in the news.
- What kind of actions do you take at home?

Action!

The second Wednesday in October is International Day for Disaster Reduction. It focuses on the urgent need for prevention activities to reduce the impacts of disasters.

Prepare a display or an assembly for this day, to raise awareness of the work Caritas partners are doing to reduce the impacts of disasters on communities living in poverty. Use the infographic on page 4: 'How do we stop natural hazards becoming disasters'
If appropriate, you could include a collection to help those affected by a current disaster, e.g. drought in East Africa.

KHULNA VILLAGE

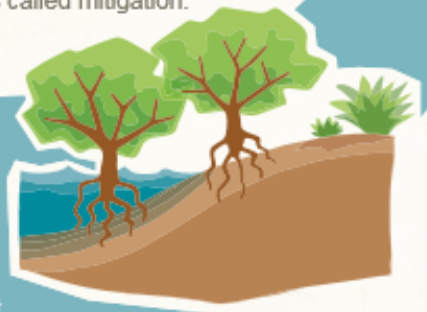


HOW CAN WE STOP NATURAL HAZARDS BECOMING DISASTERS?

Every year, natural disasters cause the loss of thousands of lives, millions of homes and billions of dollars. People in poorer countries are the most physically, economically, socially and environmentally at risk from disasters. When it comes to natural disasters, Disaster Risk Reduction is about preparing for, recovering from and mitigating against disastrous events. While natural hazards are inevitable, they don't have to be disastrous. Communities can adapt to the surrounding environment to minimise the destructive impact of events such as cyclones, earthquakes, tsunamis and flooding. Through long-term planning, community education and preparation, people can live safely in their natural environment.

1. MITIGATION

While most natural hazards can't be prevented, steps can be taken to prevent them from developing into a disaster. Reducing the destructive impact of a hazardous event is called mitigation.



EXAMPLE

Caritas Australia worked alongside communities in Vietnam to re-plant mangrove forests, which act as a buffer against hazardous tidal surges.

2. PREPAREDNESS

Through practical planning, training and preparation of essential supplies, the damage and casualties from a disaster can be significantly reduced.

EXAMPLE

In Samoa, Caritas Australia worked with partner Caritas Samoa to provide essential disaster relief supplies – such as cooking sets, hygiene kits and blankets – which are strategically placed in six critical locations around the islands of Savaii and Upolu.

3. RESPONSE

Knowing what to do and where to go if a disaster occurs is vital. The quicker the emergency response, the more lives will be saved.

EXAMPLE

Caritas Australia helped to coordinate and manage an evacuation centre at Holy Cross Cathedral for communities in Honiara, Solomon Islands whose homes were badly damaged or destroyed in the April floods this year.

4. RECOVERY

There are short-term and long-term phases of recovery. Firstly, utilities and infrastructure are restored so the community can function. But the long-term goal is to "build back better" through strengthened building codes, safer housing, improved drainage systems and other initiatives.

EXAMPLE

Following the devastating Typhoon Haiyan in 2013, Caritas helped to provide hazard-resilient shelters to vulnerable households and communities in the Philippines, using the 'build back better' principles.

"REDUCING DISASTER RISK IS EVERYBODY'S BUSINESS, AND NEEDS EVERYONE'S PARTICIPATION."
BAN KI MOON, UN SECRETARY GENERAL

IN 2008 ALONE, THERE WERE 354 MAJOR NATURAL DISASTERS – 235,000 PEOPLE LOST THEIR LIVES, WITH 214 MILLION MORE PEOPLE AFFECTED AND $190 BILLION IN DAMAGE CAUSED.

THE UNITED NATIONS ESTIMATES THAT FOR EVERY US$1 INVESTED IN DRR, US$7 OF LOSSES CAN BE PREVENTED.

IN THE LAST DECADE, AN AVERAGE OF 27 MILLION PEOPLE LOST THEIR HOMES TO NATURAL DISASTERS EVERY YEAR.

Caritas neighbours