

TEACHING ABOUT 'NATURAL' DISASTERS

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INTRODUCTION

These pages contain material for teaching about natural disasters from a development education perspective. This material was jointly developed by DICE and Comhlámh. The session refers to a PowerPoint presentation that may be used in conjunction with the activities. The presentation can be downloaded [here](#).

The activities and associated material are appropriate for student teachers, but may be adapted for other audiences. A proposed outline for the session is given, followed by an explanation of each activity. Materials for the activities (factsheets, background information and so on) are collated at the end. A list of further resources and useful websites is also included to allow you to delve deeper into the topic.

CONTENTS

- I Aims of these Sessions
- II Session Outline
- III Activities
- IV Resources, Worksheets and Background Information
- V Further Information

I. AIMS OF THIS SESSION

- To explore the theme of natural disasters as an example of incorporating a global dimension in lesson planning.
- To introduce the 8 key concepts of the global dimension in education.
- To explore the relevance of some of these key concepts to teaching about hurricanes.

II. SESSION OUTLINE

The session is outlined below in seven steps:

1. Introduction
2. Activity 1: Move if you Agree
3. Curriculum Links
4. Activity 2: Case Study
5. Activity 3: Eight Key Concepts
6. A step further/from awareness to action
7. Consolidation

III. ACTIVITIES

TEACHING ABOUT NATURAL DISASTERS

1. Introduction:

- Aims of the session. You can refer to Slide 2 of the PowerPoint presentation.

2. Activity 1: Move if you agree

Materials required: Statements

This activity engages students in a discussion about natural disasters. Some of the statements are facts, and are therefore true or false and some are value-based statements, requiring the students to reflect on the assumptions that lead them to agree or disagree. Please feel free to use more relevant or appropriate statements for your group.

- Ask the participants to move to one side of the room.
- Assign the other side of the room as the AGREE side.
- Explain that you will read out some statements and if they agree with them they can move towards the other side of the room. They should move as far as they feel they agree with the statement.
- After participants have had time to move, ask a number of people why they moved.
- Facilitate a brief discussion before asking everyone to move back to the starting side of the room. (Guiding Notes are included with the Statements).

Follow Up:

- Ask participants for their views on how they would define a natural disaster.
- Follow that with Slide 3 of the PowerPoint presentation.
- Ask participants if they agree or disagree with the definition.

3. Curriculum links

- Invite participants to suggest what areas of the curriculum might link to this theme.
- Slides 4–5 provide background information about curriculum links.
- Sample background information on hurricanes is given in Slides 7–12.
- See Slide 28, ‘Useful websites’ for additional sources.

4. Activity 2: Case Study

Materials required: Copies of case study ‘Hurricane Mitch’

- The task is for participants to read the handout on Hurricane Mitch.
- The facilitator then opens a discussion based on Page 2 of the Case Study ‘Was it really a ‘natural’ disaster?’
- Methodology: Group work and/or plenary discussion, drawing out the ‘Global Dimension teaching points’, asking the question: ‘What are the development education elements found in the Case Study?’

Global Dimension teaching point:

This case study illustrates that factors, such as existing levels of poverty and the servicing of large debt repayments, all had an influence on the ability of this country to cope with a ‘natural’ disaster. It also demonstrates how the impact of human activities on the environment, such as deforestation for the production of ‘cash crops’, reduced Honduras’ natural capacity to withstand the power of the storm surge in Hurricane Mitch.

‘...disasters occur when hazards meet vulnerability’ Blaikie, 1994

Developing countries experience most disasters, are least prepared for them, suffer the most from them and take longer to recover afterwards. Disasters can wipe out years of development and growth and use up vital resources.

5. Activity 3: Eight Key Concepts

Materials required: Copies of the 'Eight Key Concepts'.

- Before this activity stick the copies of the eight key concepts on the wall at different points around the room.
- Refer to Slide 14 of the slideshow.
- Now that participants have come up with the development education elements of the Case Study, introduce them to a framework that encapsulates the broader areas: the 'Eight Key Concepts'.
- Ask participants to move to the part of the room in which the key concept has been placed that they think most fits/reflects the content that has been explored.
- Key questions for discussion:
 - Why did you choose that particular key concept?
 - Was there another that you thought it could equally have been?
 - Are there any links between that concept and others?
 - Give reasons why you thought some did not apply.
- At this stage the facilitator can identify particular concepts and discuss them with the group (see Slides 15–18 for examples).

6. A step further/From awareness to action

- Use Slides 19–20 to illustrate further detail if the group is ready to take the material forward.
- The activities have shown the connectedness between 'natural' disasters and global or development issues. Explore with participants what actions would be appropriate to take and how to proceed with them. Slide 21 gives one example.

7. Consolidation

Materials required:

- Copies of 'Golden Rules for Using Images'.
- Selection of images – Slides 22–27.
- Use of images: Reflect on 'natural' disasters using the images as prompts. What key questions can you come up with in relation to these images, reflecting on all the issues that have come up from the previous activities and explorations?
- Introduce the 'Golden Rules for Using Images'.

IV. RESOURCES, WORKSHEETS & BACKGROUND INFORMATION

ACTIVITY 1: 'MOVE IF YOU AGREE'

Statements for Activity 1:

1. Move if you can think of the name of two hurricanes.
2. Move if you agree – in the immediate aftermath of an emergency and thereafter, most of the hard and dangerous work is done by foreign relief agencies.
3. When a disaster strikes, the most important thing for a relief agency to do is to respond immediately.
4. 95% of deaths caused by disasters occur in poor countries.
5. Nothing can be done to prevent the destruction caused by an emergency, even a hurricane or an earthquake.
6. Natural disasters happen to people who deserve it.
7. 'God makes drought, humans make famine.' – African proverb
8. What made the Asian Tsunami a disaster was that people had started to occupy part of the landscape they shouldn't have occupied ... 50 years ago the coastline was not densely occupied as now by tourist hotels.
9. The mangroves were cleared by people who didn't have long-term knowledge of why these mangroves should have been saved, by outsiders who get concessions from governments and set up shrimp farms.

Background Information for Activity 1:

1. Mitch, Hugo, Ivan, Andrew, Katrina, Rita, Stan.
2. (FALSE) The vast majority of the rescue and rebuilding work is carried out by local people. Aid agencies provide the money for supplies and often provide the technology too.
3. (FALSE) A hasty response that is not based on impartial evaluation often contributes to the chaos. It is better to wait until the genuine needs have been assessed, which should be done as efficiently and as quickly as possible.
4. (TRUE)

5. (FALSE) While earthquakes and hurricanes are natural disasters, human-made actions can intensify their effects or indeed reduce the scale of destruction. Tackling the root causes of poverty is one way of achieving this.
6. (FALSE)
7. (ARGUABLE)
8. (FALSE) The effects of a disaster last a long time. Disaster-affected countries experience a depletion of their resources and their means of generating income.

ACTIVITY 2: CASE STUDY – HURRICANE MITCH (HONDURAS)

On October 29th 1998, a ferocious hurricane named Mitch hit the north coast of Honduras. The whole coastal area was hammered by the full strength of the hurricane for two days, causing massive damage. It then turned into a tropical storm and began to move inland. Hurricane Mitch was to become the worst natural disaster that ever hit Central America.

As the storm moved, it destroyed everything in its path – roads, schools, bridges, water supplies, electricity, sewage systems, houses and factories. Whole villages were washed away as the waters swelled. Thousands of people died as their houses were swept down mountain sides. Others were buried under metres of mud. Survivors told stories of tying their children to the tops of trees in the hopes that they would not drown in the rising waters. Half the country was left totally under water, 250,000 homes were ruined and 1.4 million people were left homeless. Crops were destroyed leaving acute food shortages.

Even when the rain stopped, diseases were a major problem. Malaria, dengue fever, hepatitis A and diarrhoea threatened the population. The government simply could not cope. The president of Honduras said that his country's capacity for suffering and pain was never before put to such a hard test.

In the aftermath of the disaster, the suffering of the Hondurans continued. 70% of all crops were washed away. Thousands of agricultural workers no longer had jobs or any way of making a living.

Hurricane Mitch caused the deaths of over 7,000 people. Its path had been wrongly predicted and the country did not have the resources to deal with such a battering. Communities were not evacuated in time, many had not been warned and many simply did not have the resources to deal with such an incredible storm.

Was it really a ‘Natural Disaster’?

Some experts claim that what happened in Honduras was a disaster waiting to happen. They base this claim on a number of reasons. The first reason identified is the ravaging of the region’s eco-system. In previous decades widespread de-forestation had taken place in Honduras. People warned of an ecological disaster if this was allowed to continue.

Over the last 30 years, more and more forest was cleared by Multinational Corporations (MNCs) for the creation of large crop producing areas. These areas were usually used for the production of ‘cash crops’ for export. Companies like Chiquita and Dole owned massive plantations where they grew bananas for export to the US and Europe. During the hurricane, the accompanying rains poured down treeless hillsides. Floods swept whole villages away.

Another reason for the extent of the tragedy was the poverty that existed in Honduras. Many houses were substandard and were simply swept away. Many Hondurans had been forced from their land and were living in urban shanty towns. Many of those who survived the hurricane remain homeless.

International response to Hurricane Mitch

In 1998, Honduras owed over \$4.5 billion in foreign debt and was paying more than 80% of its total government income in foreign debt repayments.

After the hurricane, many countries responded with aid and also agreed that Honduras would not have to service its debt for 2.5 years (but this amount would then be added to the total debt at the end of that period).

The IMF and the World Bank agreed new loans with Honduras, but at terms that will mean a continued drain on the country’s resources.

Did you know?

**When Mitch hit,
Honduras was paying
\$1.5 million per day in
debt service**

CONSOLIDATION

GOLDEN RULES FOR USING IMAGES

Some 'Golden Rules' for student teachers on using images in the classroom:

1. Choose images which preserve the dignity of the people.
2. Use a balanced selection of images to convey diversity of people and situations.
3. Check images and text, as far as possible, for accuracy and any contradictory messages, stereotypes and clichés.
4. Avoid 'victim' images: show people as active as possible in their own development.
5. Include images of minority groups, such as people with disabilities, or members of ethnic minority groups. Ensure they are shown appropriately and naturally.
6. Check text/language (e.g. captions) for tone and accuracy: avoid patronising, demeaning or sentimental language.
7. Identify and name those in images if at all possible.
8. Check for (or be mindful of) distortion through cropping, editing, etc.
9. Provide a context for the images or those in it.
10. 'Proof' material before using it with children and plan in advance for your lesson; be clear in relation to the purpose/ learning objectives to be achieved through use of images.

FOR ANY VISUAL IMAGE IT IS WORTH ASKING QUESTIONS SUCH AS:

- **Why was it taken?**
- **Who took it?**
- **For what purpose?**
- **What image was not taken or could have been put in its place to give a different message?**
- **What, if anything, has been omitted?**
- **What can you do with images when you are unsure of the source?**

Adapted from 'Fat Felts and Sugar Paper', DEC (Birmingham) 1998

BACKGROUND INFORMATION ABOUT HURRICANES

What's the difference between a hurricane and a typhoon?

Major tropical cyclones in the Atlantic and eastern Pacific Oceans are called 'hurricanes' but in the western Pacific and Indian Oceans they are 'typhoons'. Either one has winds over 74 miles per hour that circulate counter-clockwise in the northern hemisphere and clockwise in the southern hemisphere. If the wind speed is less than 39 miles per hour, such weather events are 'tropical depressions'. They become 'tropical storms' when the wind speed exceeds 39 mph but remains less than 74 mph.

Where does the word 'hurricane' come from?

'Hurricane' comes to English from the Spanish word *huracán*. The Spaniards adapted the word from the language of the **Taino Indians** who inhabited Cuba, Jamaica, Hispaniola (Haiti and the Dominican Republic), and Puerto Rico at the time of Christopher Columbus's arrival in the western hemisphere.

In Taino, *huracán* meant 'centre of the wind' – 'hura' = 'wind' + 'kan' = 'centre'.

The word may also be related to 'Hurakan', the name of the ancient **Mayan** god of wind and storm, whose name means 'one-legged' in Mayan. In Taino imagery, the *zemi* (or deity) who controls the *hurakan* is depicted as a circular head with no body. Two hands spiraled off the head in opposite directions, an apt representation of the circular action of a hurricane. Some sources claim this god's name was also a variant of Hurakan. Others disagree. You'll also come across interpretations stating the Maya and Taino considered this an 'evil god' or 'evil spirit'. This is probably a modern extrapolation.

The word entered **English** as *furacano* or *furacane* in a 1555 translation of writings by Columbus. The first recorded use of 'hurricane' was by Governor John Winthrop of the Massachusetts Bay Colony who wrote of the 'Great Colonial Hurricane' of August 1635 that passed between Boston and Plymouth, Massachusetts.

Where does the word 'typhoon' come from?

'Typhoon' comes from two different sources. In **Cantonese**, the word *taai* translates to 'great' and *fung* to 'wind'. A *taai fung* is a 'great wind'. *Taifu* in **Japanese** has about the same meaning.

In ancient **Greek**, the father of the winds was called Tupon and the word was also used as a noun meaning 'whirlwind, typhoon'.

Arabic borrowed the word during the Middle Ages and when Arabic-speaking Muslim invaders settled in 11th century India, the word passed into languages spoken there. The descendant of the Arabic word, passed into English through an **Indian** language. Its first recorded appearance in English came in 1588 and referred specifically to severe storms on the Indian subcontinent.

The Cantonese *taaifung* was first recorded in **English** as tuffoon in 1699. The two forms became the modern 'typhoon'. The current spelling first appeared in 1819 in Shelley's *Prometheus Unbound*.

Táino Religion

The Táinos were polytheistic. They believed in major deities, such as Atabei and Yucahú, and minor deities, including the deities of fair wind, the afterlife, and cassava, as well as their helpers. The Táinos called these deities *cemís*.

Juracán, changed his name from Guacar during the creation of the world. The brother of Yucahú and the son of Atabei, created by Atabei from magical elements in the air and therefore without a father. He became jealous of Yucahú when he saw his brother create the race of men, and tried to destroy his brother's creations. He became known as the god of strong winds, hence the name today of hurricane. He was feared and revered. When the hurricanes blew, the Táinos thought they had displeased Juracán.

(Sources: www.writers.com/newsletter0409.html)

V. FURTHER INFORMATION

Resources (including websites)

Trócaire

<http://trocaire.org/resources/schoolresources>

Geographical Association (UK)

www.geography.org.uk/resources/pastthemes/tsunami

- includes narrative for a place-based enquiry concerning the Asian Tsunami
- references to many additional resources and websites made on this site

Oxfam (2000) Dealing with Disasters, Teaching about disasters and development for ages 11 to 16.

<http://www.oxfam.org.uk/education/>

Christian Aid's Global Gang

www.globalgang.org.uk

Christian Aid (2000) Teaching about Disasters

(Resource pack aimed at 14–16 years olds but it contains material that would be useful to primary teachers and adaptable activities)

http://learn.christianaid.org.uk/TeachersResources/primary/disasters_assembly.aspx

Global Express, Edition 39 Jan 2005 – special edition funded by Oxfam. Copies of magazine available from Manchester Development Education Project

<http://www.dep.org.uk/ge/geedition.php?editionid=23>

Sources for images

Many of the above listed sites have images that can be downloaded.

Oxfam's Cool Planet website has an extensive photo bank (for more positive images).

Images also downloadable from **Google – Images – Natural Disasters**

References for frameworks:

Godalming (1994) Educating for the Future: A Practical Classroom Guide, WWF-UK

Hicks, David (2001) Citizenship for the Future, WWF-UK

Pike & Selby (2001) In the Global Classroom, Vol 1, Pippin Publishing
Dept for International Development, UK, Developing the global dimension in the school curriculum

www.dfid.gov.uk

Development Education Centre (1995) Development Compass Rose, Development Education Centre, Birmingham