

Lesson 12

Cooperative Efforts to Improve Global Health

Student Resources

| Resource | Description |
|-----------------------|---|
| Student Resource 12.1 | Reading: Natural Disasters and Complex Humanitarian Emergencies |
| Student Resource 12.2 | Note Taking: Natural Disasters and Complex Humanitarian Emergencies |
| Student Resource 12.3 | Vignettes: Reasons for Cooperation in Global Health |
| Student Resource 12.4 | Graphic Narrative: Successful Cooperative Action for Global Health |
| Student Resource 12.5 | Culminating Project Work: Intervention Strategies |

Student Resource 12.1

Reading: Natural Disasters and Complex Humanitarian Emergencies

The people of Sierra Leone suffered greatly during a civil war from 1991–2002. The fighting left more than 50,000 people dead. During the war, women were raped, people were tortured and enslaved, and children were forced to be soldiers. Many people were displaced from their homes, and families were torn apart.

Haiti is one of the poorest countries in the world. In January 2010, a 7.0 magnitude earthquake violently shook the capital city. Major devastation followed. Over half of the existing health facilities were destroyed. The estimated death toll ranged from 200,000 to as high as 316,000. Even more people were injured. The earthquake damaged the country's already burdened infrastructure (basic services and facilities like roads and water supply) and many people lost their homes. A cholera epidemic followed the earthquake, sickening about half a million people. Years after the catastrophe, people were still living in inadequate tent camps and broken buildings.



Port-au-Prince was in rubble after the earthquake.

The earthquake in Haiti was a natural disaster. The civil war in Sierra Leone was a complex humanitarian emergency (CHE). Both situations have a significant effect on global health. Earthquakes and armed conflict both lead to death, illness, disabilities, and severe economic consequences. Both natural disasters and CHEs require a cooperative effort of multiple countries, organizations, and agencies to alleviate the suffering of the victims.

Natural Disasters

A **natural disaster** causes damage, ecological destruction, and death. Global health is concerned with natural disasters that cause large-scale destruction that can only be addressed by global cooperation. In a natural disaster like the Haiti earthquake, the suffering of the people is so great that assistance from outside the country is vital. People and organizations from all over the world gave aid to Haiti.

A natural disaster can be related to weather, such as a drought, hurricane, typhoon, cyclone, or heavy rain. It can also be a natural occurrence like a tsunami, volcano, or earthquake. Earthquakes are the natural disasters that kill the most people. More than 90% of deaths caused by earthquakes occur in low- and middle-income countries.

Examples of Natural Disasters

- In 2007, a cyclone in Bangladesh killed 3,500 people.
- In 2008, a 7.9 magnitude earthquake in western China killed 67,000 people.
- In 2009, a typhoon caused mudslides that buried at least 600 people in southern Taiwan.

Natural disasters often have a bigger impact on people in low-income countries. There are several reasons for this. Housing in poor areas is not built to standards needed to withstand the damage caused by a natural disaster. For example, buildings in Los Angeles or Tokyo are constructed to withstand the effects of a moderate earthquake. That is not the case in Haiti. Also, in poor areas a natural disaster often damages elements of the infrastructure. Reservoirs used for clean water can become polluted. Roads that are used to transport sick or hurt people are often damaged, as are hospitals and health clinics.

People can die as a direct result of a natural disaster. For example, they can get buried in the rubble after an earthquake or they can drown during a flood.



The flooding of the Kosi River in India in 2008 killed at least 75 people and displaced over 2 million.¹

But many people also become ill or die from indirect events related to the natural disaster. For example, if an earthquake damages a sewage system, people could develop sanitation-related health problems. Other long-term risks for natural disaster survivors include physical disabilities, mental health problems, diarrhoeal diseases, respiratory infections, and skin diseases.

Complex Humanitarian Emergencies (CHEs)

Complex Humanitarian Emergencies, or **CHEs**, like the civil war in Sierra Leone, account for more deaths each year than all natural disasters combined. Conflicts, wars, or political situations that threaten regional or international security are CHEs. During a CHE, institutions, like banks, schools, or even governments, often collapse. Law and order break down. In a CHE, people are unable to pursue normal activities. Portions of the population are often forced to migrate in an effort to seek safety. Food, water, and safe shelter become limited or unavailable. CHEs are linked to death, illness, and injury that would not have occurred if the conflict hadn't happened. Conflicts often last for long periods of time, compromising the health of people over years or even decades. Like a natural disaster, a CHE can require the response of outside groups.

CHEs affect health in many ways. Often the groups involved in the conflict will not allow humanitarian assistance provided by global organizations to reach opposing groups, so people who are sick or injured do not get the medical treatment or food or water that they need. Combatants intentionally harm or kill civilians. Torture and rape are used as weapons of war. People suffer from nutritional issues and mental health issues, like depression and post-traumatic stress disorder (PTSD).

Refugees and Internally Displaced People (IDP)

CHEs create refugees. **Refugees** are people who flee their country because they fear persecution based on their race, religion, nationality, or membership in a social or political group. These people are unable or unwilling to return to their country.

People who flee for safety during a CHE often end up in refugee camps, which are crowded and may not have appropriate sanitation systems. Disease can spread quickly in these conditions. For example, in 1994 there was genocide, or mass murder, in Rwanda. Almost a million people were killed during a short period of time. Because of the violence, tens of thousands of Rwandan refugees fled to the border town

¹ Image retrieved from http://commons.wikimedia.org/wiki/File:NDRF_in_Bihar_Flood.jpg on August 22, 2012, and reproduced here under the terms of the Creative Commons Attribution Share Alike 3.0 Unported (<http://creativecommons.org/licenses/by-sa/3.0/deed.en>). Image courtesy of Kumarrakajee.

of Goma in the Democratic Republic of Congo. In one month in 1994, many refugees died in Goma, and almost all of the deaths were from cholera spread by contamination of the lake where the refugees were getting their water.

An **internally displaced person**, or **IDP**, is a type of refugee. IDPs also flee their homes, but they stay in another region of their country. For example, the worsening conflict in the Syrian Arab Republic displaced 6.5 million people in 2015 within the country's borders (this is in addition to the nearly 4.2 million people who have fled the country). These people were forced to leave their homes because of violence or the threat of violence, but they remained in the country. They mostly lived in refugee-type camps or informal camps set up around urban areas.

In 2013, there were 16.7 million refugees and 33.3 million IDPs around the world. Pakistan was the country with the largest number of refugees. These are the highest numbers since 1994.



In 2011, a family that fled from the civil war in Somalia inside the Dadaab refugee camp in Kenya.

Vulnerable People

All refugees and internally displaced people are vulnerable, but people are vulnerable in different ways. Female refugees often face discrimination, harassment, and sexual abuse, even after reaching refugee camps. Pregnant and nursing women are at risk for maternal and reproductive health problems.

Being forcibly displaced, and possibly separated from their families, increases children's exposure to violence, abuse, and neglect. They have nutritional needs that must be met to ensure normal growth and development. When food is scarce, they face health issues related to growth and development.

Men and boys are often most directly affected by armed conflicts. They are at risk of being forced to participate in armies and militia groups. If they are refugees in countries that ban them from being a part of the workforce, they face not being able to provide for themselves and family.

Military Recruitment of Children

The UN outlaws children from participating in military activities. But today it is estimated that over 300,000 children and teens are fighting in over 30 conflicts around the world.

Sometimes children and teens are forced to become soldiers. Armies and rebel groups have been known to take children from their schools or villages. Some children decide to fight because they need food, clothing, and shelter. They may think that participating in the conflict will help protect their families.

Child soldiers face serious health risks. They can be wounded, disabled, or killed. They suffer severe psychological damage. Many find that it is impossible to lead a normal life after the fighting has stopped.

Natural disasters and CHEs have a profound impact on the state of people's health around the globe. Hurricanes, droughts, and earthquakes, as well as wars, genocide, and tribal conflict, can lead to death and illness. Understanding how global health professionals from different nations and different relief organizations work cooperatively to address such catastrophes is a vital part of global health.

Student Resource 12.2

Note Taking: Natural Disasters and Complex Humanitarian Emergencies

Student Names: _____ Date: _____

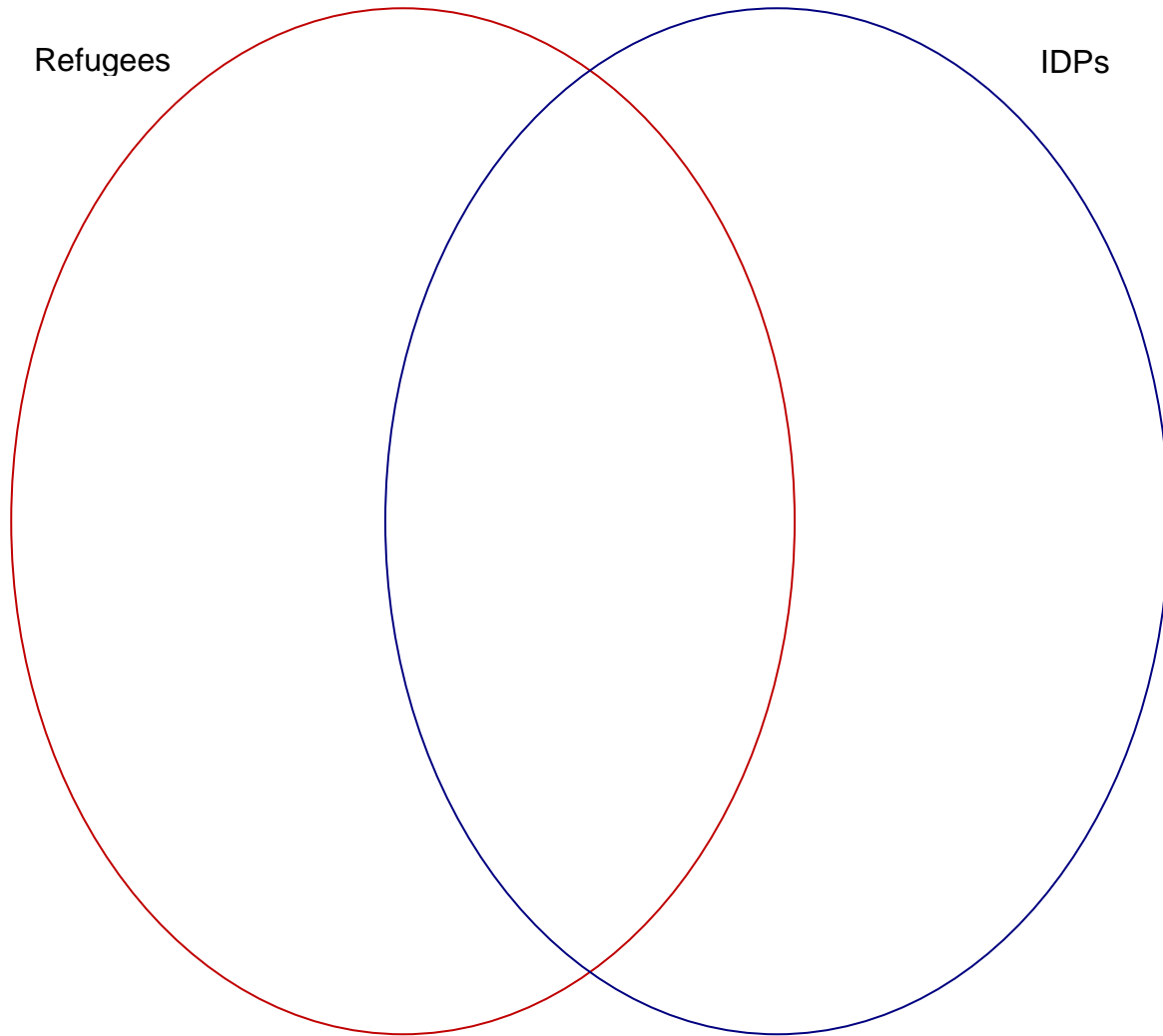
Directions: Complete this resource as you read Student Resource 12.1, Reading: Natural Disasters and Complex Humanitarian Emergencies. First, use the Defining Format chart below to define the terms natural disaster and complex humanitarian emergency. The first category is filled in for you.

Then use a Venn diagram to compare and contrast the characteristics of refugees and internally displaced persons (IDPs). Finally, use a Venn diagram to explain the differences in the risks faced by displaced women, men, and children.

| Term | Category | Characteristics |
|----------------------------------|--|----------------------------------|
| A natural disaster | is a <i>catastrophe caused by nature</i> that | 1. 2. 3. 4. |
| A complex humanitarian emergency | is a _____ that | 1. 2. 3. 4. |

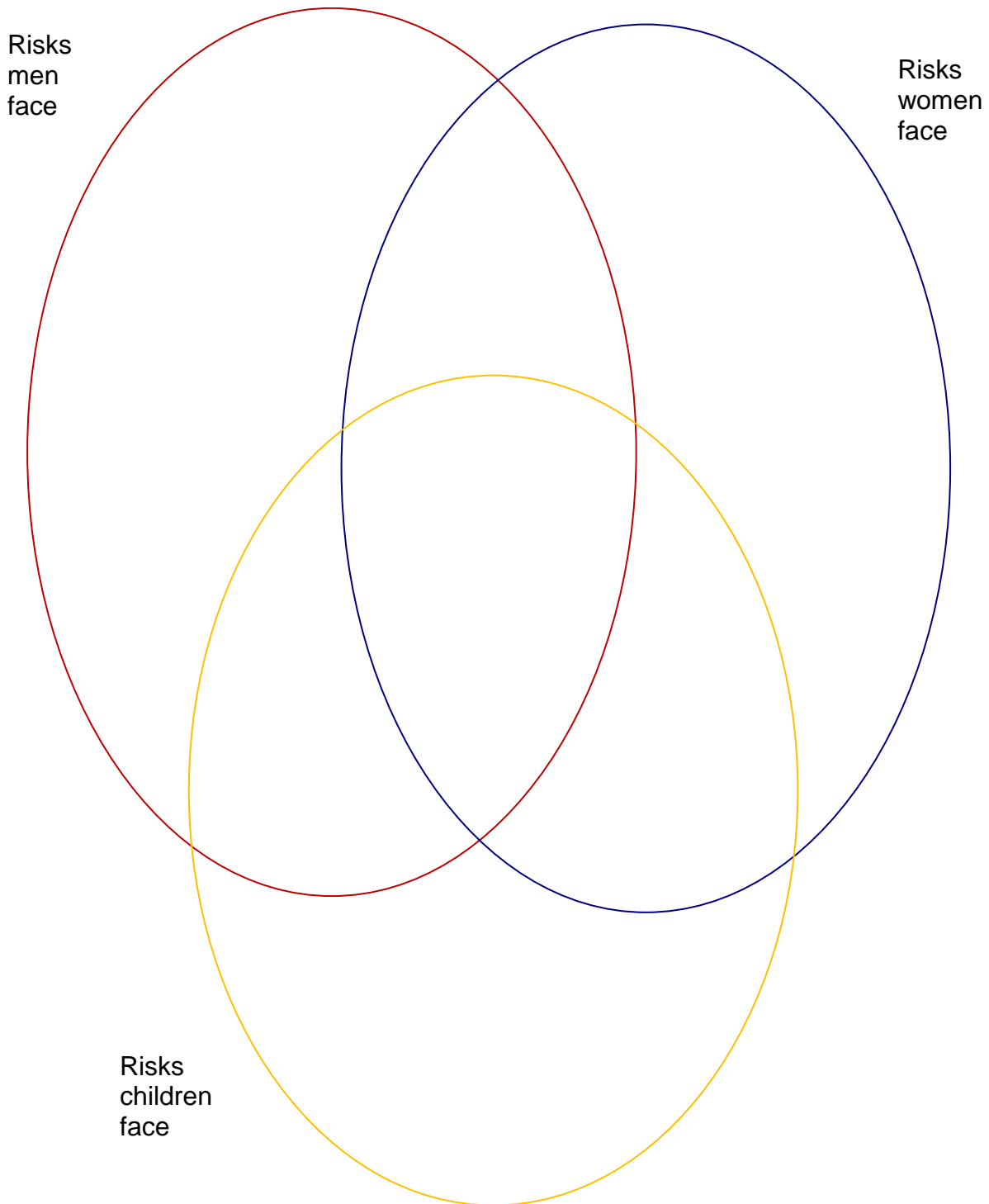
Refugee and IDP Venn Diagram

In the left part of the Venn diagram, list characteristics that apply only to refugees. In the right part, list characteristics that apply only to IDPs. In the overlapping part, list characteristics common to both.



Risks Faced by Men, Women, and Children Venn Diagram

Think about the risks brought on by natural disasters and CHEs. In the left part of the red circle, list risks faced only by men. In the right of the blue circle, list risks faced only by women. In the bottom part of the orange circle, list risks faced only by children. In the overlapping areas, list risks that are common to the groups whose circles are overlapping.



Student Resource 12.3

Vignettes: Reasons for Cooperation in Global Health

Student Names: _____ Date: _____

Directions: Read the following four vignettes with your partner and respond to the questions.

Vignette #1: Severe Acute Respiratory Syndrome (SARS)



SARS is a serious form of pneumonia that is spread by close person-to-person contact. This chest X-ray was taken of a patient with SARS.²

Before 2003, SARS was an unknown disease, but in February of that year a WHO physician diagnosed a businessman with the new disease. The businessman had traveled from China to Hong Kong to Vietnam. Both the businessman and the doctor eventually died. Over the next few months, the disease spread quickly to more than two dozen countries.

It became clear to experts that global cooperation was going to be necessary to control the potentially fatal disease.

The WHO issued a rare travel advisory for people going to countries where the disease was present. Screening measures at airports were set up for travelers coming from infected areas. Quarantines were established for people who were infected or were believed to have been in contact with infected people.

Modern communication technology allowed the WHO to quickly alert both medical professionals and travelers about the serious situation. However, it was also technology—the ability for people to easily move from one country to the next—that allowed the disease to quickly spread.

Specialists from dozens of nations were flown to countries that needed assistance. A lab network in nine countries was set up. Researchers worked in these labs around the clock to figure out what was causing the disease.

Over 8,000 people became sick with SARS during the 2003 outbreak and 774 died. Since 2004, there have been no known cases of SARS anywhere in the world. The fast and efficient global response likely saved many lives.

Questions:

Why was global cooperation needed to respond to the SARS outbreak?

What made the cooperative effort effective?

² Image retrieved from http://commons.wikimedia.org/wiki/File:SARS_xray.jpg on August 22, 2012. US government image.

Vignette #2: Conflict and Food Insecurity in Mali



Drought, food prices, and plagues of insects threatened the food production of crops grown in Mali, like rice.³

In January 2012, fighting began between government forces and rebels in Mali. The conflict, combined with other events of political instability, led to a mass displacement of people.

A UN relief agency said that as of July 2014 128,866 people remained displaced. Over 160,000 people had registered with the UN as refugees. These refugees had fled to the neighboring countries of Niger, Burkina Faso, and Algeria. Between asylum seekers, refugees, and internally displaced persons, there were 428,902 people of concern in Mali.

In addition to having people displaced, Mali was at risk of famine. People in Mali needed food, water, and shelter. The World Food Program had reached many people, but it was believed that millions more still needed food.

Experts were also concerned about cholera. There had been reports of 140 cases of cholera and 11 deaths, and there was fear that the disease was going to spread. Unsanitary living conditions in refugee camps or temporary settlements are often the environment in which diseases like cholera spread quickly. UN agencies requested contributions from donors to help with the increasingly serious situation, but they were far from reaching the amount of funds needed to address the complex humanitarian emergency.

Questions:

Why was global cooperation needed in Mali?

What aspects of the situation in Mali could a cooperative effort address?

³ Image retrieved from http://commons.wikimedia.org/wiki/File:Mali_ricefarmers.jpg on September 12, 2012. US government image.

Vignette #3: Cyclone in Myanmar



The cyclone caused much destruction.⁴

In May 2008, a cyclone tore through the southern coastal region in Myanmar. The cyclone killed 138,000 people and left hundreds of thousands of people homeless. A cyclone is a violent tropical storm that is similar to a hurricane.

After the cyclone, there were short- and long-term needs. In the short term, survivors needed emergency care for injuries and the basic necessities for survival, like food and water. In the long term, they needed assistance reconstructing the infrastructure for health, shelter, food, and transportation.

Myanmar didn't have the resources to adequately respond to the needs of its people in either the short or the long term. Even before the cyclone, rural areas in Myanmar had poor sanitation services and lacked clean water. These areas also lacked the health care professionals needed to deliver critical services.

Outside help wasn't allowed to immediately aid the people of Myanmar. Myanmar was run by a military regime, and for three weeks after the disaster, the regime refused to let in international aid groups. Many countries and relief agencies were outraged about the regime blocking their own people's access to critical help.

After much political pressure, including a visit from the UN secretary general, international aid agencies were finally allowed to enter the country. But even after the agencies were allowed in, their activities and communication were heavily monitored, and many of the agencies felt that the government didn't allow them to do their work effectively. For example, the government didn't allow aid groups assigned to one section of the country to communicate with aid groups assigned to another region. These groups needed to communicate to get a big picture of the damage and assess the needs.

These aid agencies believe that the delay in response may have contributed to the high rates of mortality. They think that if they had been allowed immediate access to the country, lives would have been saved.

Questions:

Why was global cooperation needed in Myanmar after the cyclone?

What hindered the cooperative effort?

⁴ Image retrieved from http://commons.wikimedia.org/wiki/File:USDS_Nargis_Rangoon_Sign.jpg on August 22, 2012. US government image.

Vignette #4: Earthquake and Tsunami in Japan



The disaster in Japan was responsible for hundreds of thousands of collapsed buildings. This image shows the damage in Iwate Prefecture.

On March 11, 2011, a 9.0 magnitude earthquake rocked Japan. The earthquake triggered catastrophic tsunami waves, and then the tsunami caused a number of accidents at a nuclear power plant.

The disaster resulted in almost 16,000 deaths as well as injuries and missing people. Roads and railways were damaged. Millions of households went without water and electricity. There were 340,000 displaced people. The accidents at the nuclear power plant released radiation, causing widespread fear.

Even though Japan is a developed country with sophisticated emergency response systems, the scale of the disaster was so great that outside assistance was needed.

Japan requested search and rescue teams from Australia, New Zealand, South Korea, the United Kingdom, and the United States. Aid organizations from around the world came to meet the island nation's need, and more than \$1 billion was donated to the Japanese Red Cross. The money raised was used to rebuild hospitals that were destroyed and helped elderly citizens who lost their homes, and to meet other needs.

Powerful earthquakes that have their epicenter on the ocean floor can trigger tsunamis that are very distant from where the actual earthquake occurs. A system of warning centers is in place to alert far-away populations who do not feel the earthquake that they could experience a tsunami. In the case of the 2011 Japanese earthquake, the Pacific Tsunami Warning Center in Hawaii posted an alert. As a result of the warning, countries took immediate action. For example, Russia evacuated 11,000 residents from coastal areas. In Papua New Guinea, patients were evacuated from a hospital before it was hit by waves, causing millions of dollars of damage.

Questions:

Why was global cooperation needed in Japan?

How was the cooperative effort effective?

Student Resource 12.4

Graphic Narrative: Successful Cooperative Action for Global Health

Student Names: _____ Date: _____

Directions: With your group, you are going to research a successful and effective cooperative action for improving global health and then create a graphic narrative using PowerPoint slides to present your findings. Follow the steps below.

Choosing a Global Health Issue

With your group, choose an issue that required cooperative action to feature in your narrative. You may choose one of the following issues. If you choose one not on this list, report your choice to your teacher.

Use the link provided in this list to begin your research about the cooperative action. Verify other sites that you use for research with your teacher.

- Smallpox (<http://www.who.int/features/2010/smallpox/en/index.html>)
- Landslide in Guatemala, 2015 (<http://www.aljazeera.com/news/2015/10/death-toll-rises-guatemala-landslide-151004054723648.html>)
- Avian influenza (http://www.who.int/topics/avian_influenza/en/)
- Yellow fever in Mali (http://www.who.int/features/2008/mali_vaccine/en/index.html)
- H1N1 pandemic (<http://www.who.int/csr/disease/swineflu/en/index.html>)
- Malaria in Tanzania (<http://www.who.int/features/galleries/2006/malaria/gallery/en/index.html>)
- 2011 hurricane season (http://www.redcross.org/images/MEDIA_CustomProductCatalog/m8540111_Disaster-Relief-Program-Review-2011.pdf)
- Earthquake in Chile, 2010 (http://www.redcross.org/images/MEDIA_CustomProductCatalog/m3140112_ChileEarthquakeOnYearReport.pdf)
- Volcanic eruption in Iceland, 2010 (<http://reliefweb.int/report/iceland/iceland-volcanic-eruption-prompts-european-red-cross-response>)
- IDP crisis in Pakistan (<http://www.globalhumanitarianassistance.org/crisisbriefing/crisis-briefing-humanitarian-funding-analysis-pakistan-idp-crisis>)
- West Africa hunger crisis (<http://www.savethechildren.org/site/apps/nlnet/content2.aspx?c=8rKLIXMGIpI4E&b=7942601&ct=11595901>)

Purpose

Your goal is to tell the story of a creative, effective approach that solved a specific global health problem. Your narrative should be both factual and engaging. It should illustrate the importance of a cooperative approach to solving global health issues.

Information Your Graphic Narrative Should Contain

You should include the following basic information:

- Background information about the issue you have chosen. What happened, and when and where did it happen?
- Why was a cooperative effort a good solution?
- What groups, countries, and key individuals were involved in the cooperative effort?
- What were the key factors and innovations that led to success?

Outline Your Slides

After you collect all your information, work with your group to outline what content you will put on each slide. Think about how the slides will work together to convey your message. You may want one to be a title slide that calls attention to the main idea of your graphic narrative. Then the other slides can give information to support it. You might want eight slides instead of six, but more than that will become unwieldy for this format.

Once you have outlined the content for each slide, have each group member create two of the slides, or divide the number of slides you have decided you need so that all members create at least two slides.

Using PowerPoint Slides

Choose a Theme

With your group, choose a visual theme for your slides. Decide on a PowerPoint template to use, or choose the fonts and colors you will use to create your own template. This will give your finished graphic narrative a polished, cohesive look.

The Slides

The graphic narrative should have images that are both informative and persuasive. Professionals often use PowerPoint slides to create visual displays of different kinds, because the slides can be printed from a computer. Each slide should include some kind of visual such as a photo, a chart, a graph, a map, or an illustration that conveys the message of the slide.

Look for images as you work on NGO sites, like the Red Cross or the WHO, or on sites that contain free images, like Wikimedia Commons. On your slide, in a line of small print under the photo, give credit to the site where you got the image and give the photographer's name if it is provided.

The Text

The text accompanying each slide tells the story and helps the viewer understand the visual. When you are in the PowerPoint program, click Notes Page on the View tab. The space for writing text will appear below the slide.

Choose Your Format

Graphic narratives are easier to read and flow more naturally if they are in a storyboard format. Storyboards have a horizontal layout rather than a vertical one. Sometimes storyboards have text right below each visual element, and sometimes the text is next to the visual or placed in a way that works best to convey the message. You can cut the notes apart from the slide and play with different placements to find a way that is inviting to read.

Here is the simplest way to format your graphic narrative. It does not involve cutting the text apart from the slide:

| | | | |
|-----------------------------------|-------------------------|-------------------------|----------------------------------|
| Slide 1 visual Title slide | Slide 2 visual → | Slide 3 visual → | Slide 4 visual → |
| Slide 1 text | Slide 2 text | Slide 3 text | Slide 4 text |
| Slide 5 visual → | Slide 6 visual → | Slide 7 visual → | Slide 8 visual Conclusion |
| Slide 5 text | Slide 6 text | Slide 7 text | Slide 8 text |

Put It All Together

Share the drafts of your slides with your group. Give each other feedback about the images you have chosen and the clarity of the information expressed. Spend a few minutes revising your slides based on the feedback you received. Then print the slides. As a group, work together to arrange your slides and text on your poster board in an organized way that clearly presents the information.

Make sure your graphic narrative meets or exceeds the following assessment criteria:

- The graphic narrative demonstrates an understanding of the health issue it presents and the cooperative effort undertaken to address the issue.
- The text of the graphic narrative enriches understanding of the visual it accompanies and tells the story of the cooperative global health effort in an engaging way.
- The graphic narrative clearly explains why cooperation was needed and what key factors and innovations led to success.
- Visuals are used effectively to convey information.
- The slides are presented in a way that holds the viewer's attention and walks the viewer through the narrative in a compelling and logical order.
- The graphic narrative is neat and uses proper spelling and grammar.

Student Resource 12.5

Culminating Project Work: Intervention Strategies

Student Names: _____ Date: _____

Directions: In your culminating project group, read and review the argument you and your group members wrote during Lesson 10.

In the space provided below, write a brief description of the health issue you have chosen. Next, discuss interventions that could be effective in addressing the issue. Come up with as many ideas as you can for each type of intervention (individual, systems, and community). If you don't think a certain type of intervention would be appropriate for the issue, explain why. Fill in the chart with your ideas. Be as specific as possible.

Do some research online to generate innovative strategies. You may find that the following website gives you some new ideas for using social media to create an intervention:

<http://mashable.com/2012/04/16/disaster-relief-online/>

An example is shown below.

| Intervention | Type (individual, systems, community) | Why it could be effective | Why it might not work |
|---|--|---|--|
| <i>A school-based program to discourage students from smoking combined with a mass media blitz and a program aimed at parents and community leaders</i> | <i>Community</i> | <i>Addresses the issue from many angles and gets stakeholders involved (parents, school administration, public)</i> | <i>This will help, but one-on-one counseling of students who are actively smoking would be another component to consider</i> |

Write a description of your culminating project health issue here:

| Intervention | Type (individual, systems, community) | Why it could be effective | Why it might not work |
|--------------|---------------------------------------|---------------------------|-----------------------|
| | | | |
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