

# Session 4: Recovery and resilience

After a natural disaster the Red Cross supports the people affected as they start to recover and rebuild their lives.

By reflecting upon and applying learning from past experiences, communities can increase their resilience and ability to cope with disasters.

This final session focusses on themes of recovery and resilience and concludes by bringing the learning back to a local context for students encouraging them to reflect on how they could apply this learning to their own lives.

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1. Introducing resilience
2. The role of the Red Cross in recovery

### Activities for Key Stages 3-5

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KS4: Modelling responses to disasters  
KS5: Resilient behaviour after an earthquake

## Learning objectives

### Young people are able to:

- > Develop their use of geography specific language in written and verbal work, and develop the capacity to 'think like a geographer'.
- > Develop their understanding of the role of the Red Cross in supporting people to recover after a natural disaster.
- > Understand the concept of **resilience**, and how it applies to a specific context.
- > Consider how they might apply this learning to their own lives.

## Key questions

- > What are the longer term impacts of a natural disaster and how do people recover?
- > How did individuals and communities in Nepal build their resilience before the earthquake?
- > How can communities increase their resilience – what about the school community? What might make a community more or less resilient?
- > What lessons can be learned from each event so people are better prepared for them in future?



People from Jyamdi Mandan village development committee in Nepal. After doing a vulnerability and capacity assessment (VCA) and mapping the village, the groups will establish a community disaster management committee with responsibilities for hazard mitigation, preparedness, response and prevention, livelihoods, water, sanitation and hygiene promotion (WASH) and health.

# Introductory activities

## You will need:

- > [Access to YouTube to show films from the Red Cross](#)
- > [Nepal infographic \(PDF\)](#)

## 1. Introducing resilience

A key element of the response to any natural disaster is the way that communities and the people in them are able to recover, and to learn from the experience if possible so that they are better prepared for the next time something happens.

This can be part of all of our lives but the changes that the Nepal earthquake brought about were on a huge scale. Many people would have been trying to cope with the loss of family members, friends and the destruction of their homes and livelihoods.

The ability to cope in challenging circumstances can be called **resilience**. This is a term that all geographers should be aware of and be able to explore. It has also been introduced into a lot of schools as a characteristic for students to develop.

Humanitarian agencies try to build resilience in the communities they work with both before, during and after hazard events. The work that the Red Cross carries out across the world with the help of their staff and volunteers on the ground, supports communities to be more resilient, as we saw during Sameer's interview in Session 3.

Ask students to suggest what they understand by the term resilience.

Resilience could be defined as:

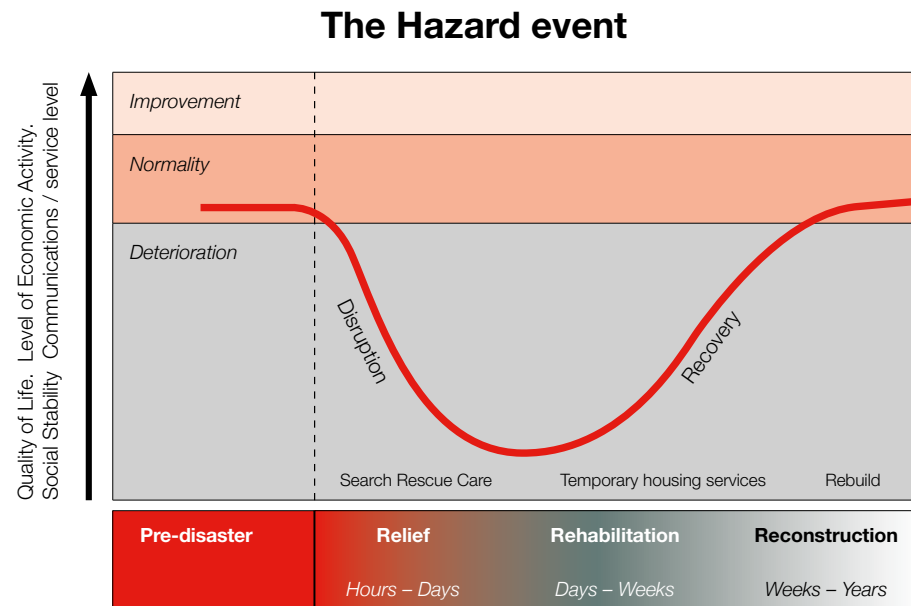
*“Having the ability, skills, behaviours and coping strategies, to support yourself and others during times of change or a sudden shift in circumstances, such as a crisis caused by a disaster or emergency.”*

Or more simply:

*“Having the capacity to recover quickly from difficulties.”*

The resilience of an area following a disaster can be explored using the **Park Model**.

After Park, 1991



Relief and rehabilitation often with the help of outside agencies

This illustrates the reaction of a community to an event which causes disruption, and how long it takes to “bounce back” or recover.

There are various options for exploring this aspect of disaster recovery. KS4 activities will focus on the Park Model, while KS5 activities will introduce students to the Degg Model.

## 2. The role of the Red Cross in recovery

Three short videos supplemented with questions help students learn more about how the Red Cross was involved in helping people recover and rebuild stronger after the earthquake.

The [Nepal earthquake infographic](#) can also support with students' understanding of the changing needs of communities as they move from the response to recovery phase.

### VIDEO 1: Nepal three months on



This video shows the numbers affected by the earthquake, and how in the days, weeks and months following the disaster, the Red Cross was there to support those affected.

Efforts were focussed on providing relief, shelter, medical care and safe water to communities in the worst affected districts.

#### Questions

1. What were the five areas of priority for the Red Cross response?
2. What was the impact of a second earthquake on people in Nepal?
3. How did the Red Cross support survivors of the earthquake?

### VIDEO 2: Water: communities help water flow again after Nepal earthquake



Water supplies and sanitation systems for thousands of communities in Nepal were disrupted by earthquakes, leaving people at risk of water-borne diseases.

Water, sanitation and hygiene promotion (WASH) is one of the main elements of the Red Cross' earthquake response plan.

As well as installing water tanks for cooking and washing, the Red Cross trains communities to maintain the pipes, and promotes hygiene through radio shows, community meetings and training for school children.

#### Questions

1. How was access to clean water affected by the earthquake?
2. What risks does lack of clean water pose for a community?
3. What everyday activities is water needed for?
4. How did the Red Cross support with bringing clean water to communities after the earthquake?



### VIDEO 3: Shelter: Nepal communities learn earthquake resistant building



The earthquakes damaged or destroyed more than 900,000 homes leaving people without shelter against monsoon rains, summer heat and winter cold.

#### Questions:

1. What are the consequences for communities when we talk about “lack of shelter”?  
What have people lost?  
What support might they need?
2. How is the Red Cross supporting people to be better prepared for future hazard events like earthquakes?
3. What might this mean for the potential impact of such events on people in the future?

#### Nepal infographic

Hand out the [Nepal earthquake infographic \(PDF\)](#).

Encourage students to discuss the progress from ‘disaster’ and ‘emergency response’ stages through to ‘early recovery’ and ‘recovery priorities’.

#### Discussion questions:

- > What are the differences between the response and recovery phases?
- > How does the support given to communities change over time?
- > How does the recovery phase incorporate activities that will build communities’ resilience to future events?





# Activities for key stages 3-5

Students should now be asked to complete an age-appropriate activity from the following list.

*NB: Elements of younger (or older) age group activities may still be used with particular age groups. Don't feel confined to the age bracket. You are welcome to adopt or adapt these ideas.*





# KS3: School disaster plan

**In this activity:** students will investigate the school site for possible risks. There will be some internal and possibly external fieldwork.

## You will need:

- > [School disaster frame \(PPT\)](#)
- > [School disaster plan template \(PDF\)](#)

## 1. Background information

Explain that even in some areas where earthquakes are common, people need help to learn how to keep themselves safe and react quickly.

Regular practice drills for the 'Drop, Cover and Hold' routine are held along with the usual fire drills, so that everyone knows what to do in case of an earthquake.

People living in areas prone to natural hazards like earthquakes can plan for what to do. They may also look for opportunities to retro-fit their buildings, making modifications to improve them, or ensuring that the contents can be secured.

The Red Cross offers support to vulnerable communities in this task, through education and other events for residents.

## 2. Student briefing

Ask students to imagine that their school is sitting in a disaster zone.

A fault line runs directly beneath the school building. This could be 'pointed out' to them through the window if you want them to suspend disbelief. The fault moves from time to time, triggering shaking and seismic movement.

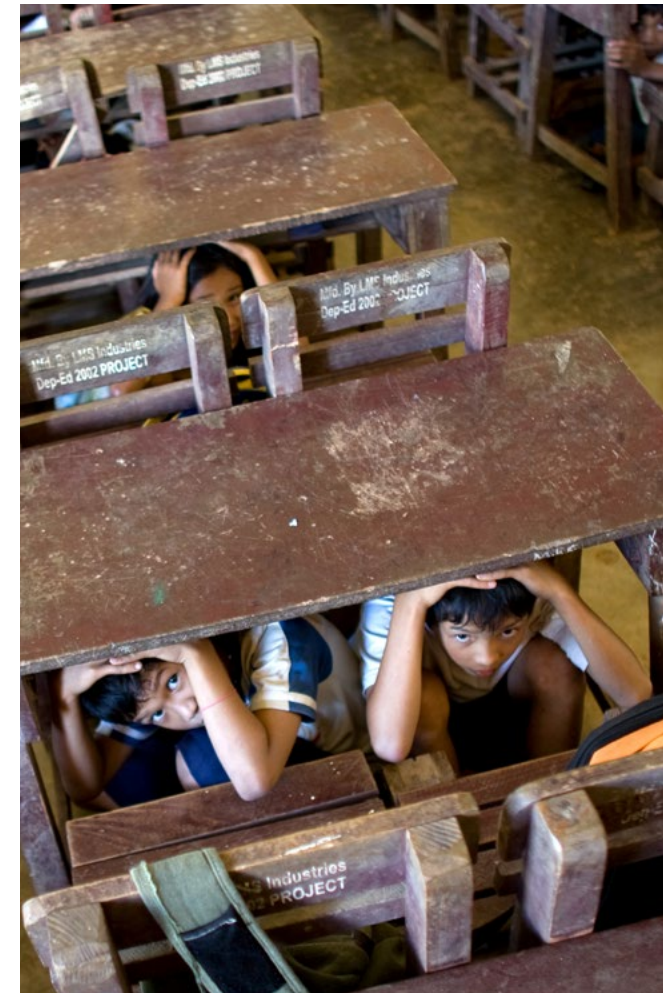
Explain that the students' job is to inspect the school for potential problems that might occur if an earthquake was to happen.

This is something that needs doing from time to time to assess risks and reduce the impact so that the school can recover more quickly if a disaster strikes.

They will be looking out for how the building, people and contents could be affected by an earthquake.

There are five main areas which students need to investigate during this activity:

1. Furniture
2. Equipment
3. Walls and windows
4. Building structure
5. Other items



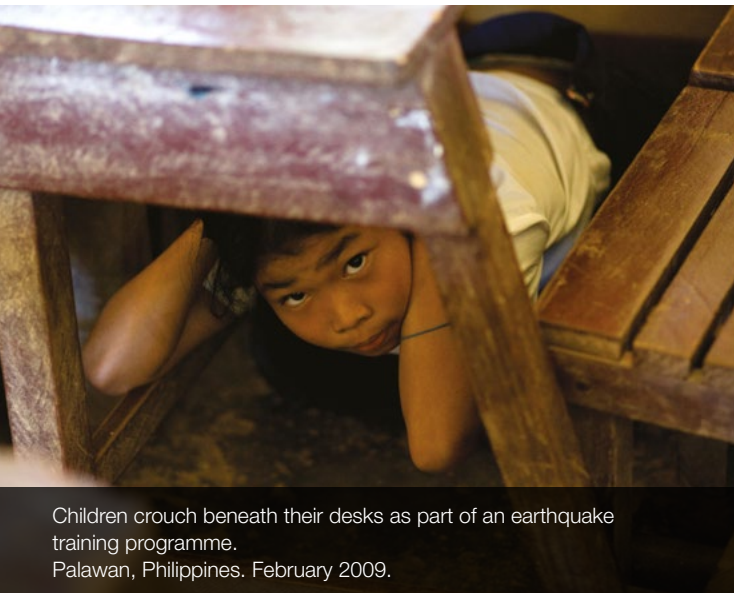
Children crouch beneath their desks as part of an earthquake training programme. Palawan, Philippines. February 2009.

### 3. Before leaving the room

Ask students to imagine what would happen if the room that you are teaching this lesson in was to be hit by an earthquake.

- > What items would move around?
- > Where are the danger spots?
- > Where would be the safest places in the classroom?
- > What should the students do in this situation? (some students may mention the idea of Drop, Cover and Hold - <http://www.dropcoverholdon.org/>)

There are a few videos of shaking during the Nepal (and other) earthquake(s), which can be sourced online and could be shown at this point. Some of these videos show the impact on school classrooms e.g. suspended ceilings collapsing, or filing cabinets tipping over.



Children crouch beneath their desks as part of an earthquake training programme.  
Palawan, Philippines. February 2009.

### 4. School disaster frame

*Explain to students that they are going to use the [School Disaster Frame \(PDF\)](#) to identify some potential problems by holding it up at locations around the school site. Model this for the classroom.*

**Print duplicate copies of the frame out on card, and then cut out the central section so that it forms a frame for students to hold up and see through.**

School Disaster Frame	
Cut this bit out	Furniture
	Equipment
	Walls and windows
	Building structure
	Other items
Location: <input type="text"/> Take some images with a camera or tablet at each location.	

### 5. Visualising the impact

Support students to identify locations at risk on the school site.

You may want students to visit certain parts of the school building, or direct them yourself on a guided walk visiting certain locations.

Each student needs a copy of the disaster frame for each location that they visit.

At each location, ask students to visualise the impact of shaking and write down the possible results in the boxes down the right hand side.

Students could also take an image of each location using a tablet, and annotate the place with an app such as Skitch to show the issues that they have spotted. This could also be used to create a video simulating an earthquake if time permits.

Share and report back when the students return, before moving onto the critical questions.



## 6. Critical questions

- > How could this activity help people prepare for an emergency?
- > How resilient do you think the school would be if an earthquake was to happen?
- > How long do you think it might take for the school to recover?
- > How would you feel if you lived in an earthquake zone?
- > How might it change the way you prepared for school, and moved around the site?
- > What training or equipment might the school staff need to be better prepared to help themselves and students during an earthquake?

## 7. School disaster plan

Produce a school disaster plan, which takes into account what would happen in the case of an earthquake, and how you need to prepare, based on what was observed during the field visits.

Use the [School Disaster plan template](#) as a framework for your final plan. This could be set as a literacy task, or as a homework task.



Pupils learn how to take shelter from earthquake, how to mitigate the effects of landslides and how to give first aid.  
Bhanu Higher Secondary School Danda Bazar, Dhankuta, Nepal  
November 2014



## 8. Extension: creating a local plan

Think about what risks your school might be affected by. This could include events like winter storms or flooding.

Start by doing some research into how likely these events are within your home area.

Create a disaster plan for one of those events and share the results with your family, if you also live within the same area as the school.

Consider how you could improve your individual or community resilience.

- > Is creating a local plan sufficient?
- > Would opportunities to practise be of benefit?
- > What qualities do you have that might make you better able to cope with a local hazard event?
- > What skills would you like to develop?



# KS4: Modelling responses to disasters

**In this activity:** students will consider the longer term impacts of an earthquake, using the Park Model to structure their thinking.

**You will need:**

- > [Park Model \(PPT\)](#)
- > [Living graph \(PPT\)](#)
- > [Living graph recording sheet \(PDF\)](#)
- > [Steve in Nepal tweet ordering sheet \(PDF\)](#)
- > [Steve in Nepal tweets \(PDF\)](#)

Look at the details on the **Park Model** of disaster response using the [Park Model \(PPT\)](#). Talk through how the model works with students (see info below).

The **line** on the model shows how people respond following a hazard event. This response changes over time as the recovery starts, and life starts to return to normal.

The more resilient a country is, the faster this will take place, but it will still be many years, even in the case of a rich country for this to happen in full.

Even then, the psychological trauma may still mean that some people require ongoing support.

## 1. Impact mapping

Consider what the impacts of an earthquake might be in the area under the four headings in the table below. Discuss, and note down student ideas, perhaps on sticky notes so that they can be re-arranged as required.

Immediately after the earthquake	A few days after the earthquake	In the weeks following the earthquake	In the following months and years

This would be a good opportunity for educators to draw in elements for young people to compare and contrast the impact, response and recovery to earthquakes that have happened in different countries.

Students could research earthquakes that have happened for example in Ecuador, Japan, Haiti, Italy or New Zealand and plot the different impacts over time.



## 2. Living graph activity

Explain to students that they will now look at some tweets that were sent by someone who was caught up in the earthquake: a person called Steve.

He has a Twitter account called **@SteveinNepal** which he set up before he set off, so that he could keep people up to date with his travels.

Unfortunately he was caught out in the earthquake, but survived and was able to send ten tweets, partly to let people know that he was safe.

*NB: @SteveinNepal is a fictional account which was created for this resource.*

*Following any natural disaster, Twitter becomes active with thousands of tweets reporting the situation. Students should be ready to watch twitter for the next time there is a major event that they are studying.*

*It is up to the teacher to choose a time to talk through this information.*

This is a **living graph activity**. It is so called, as the comments are added to a graph to bring it to life, by adding the context for the changes that are shown on the graph.

Hand out the following resources:

> [Tweets from Steve in Nepal \(PDF\)](#) – **10 tweets in total**

> [Steve in Nepal tweet ordering sheet \(PDF\)](#)

> [Living graph recording sheet \(PDF\)](#)

Use the [Living graph presentation \(PPT\)](#) to lead the session. It includes some starter tweets from Rachel Hay to get students thinking about the timeline of events. The PowerPoint provides the structure for the activities that students should complete. This will take a reasonable amount of time to do.

Students should read the tweets, and start by sequencing them in order. As they do this, they need to place the relevant number of the tweet onto the graph, to show which stage of the Park Model is being described, and where it fits in the event timeline.

Answers for Tweet sequencing order:  
5, 1, 2, 10, 7, 3, 4, 6, 8, 9.

## Conclusion

How did Steve seem to cope with the earthquake? What did he do? What might have contributed to his resilience?

Now think about your own resilience, what skills and qualities do you have that could help you cope in an unexpected event? What might you need to develop?

Consider how the longer term recovery will be reflected in people's comments on social media. At what stage will the earthquake have less priority in what they are discussing?



Kathmandu, Nepal  
April 2015

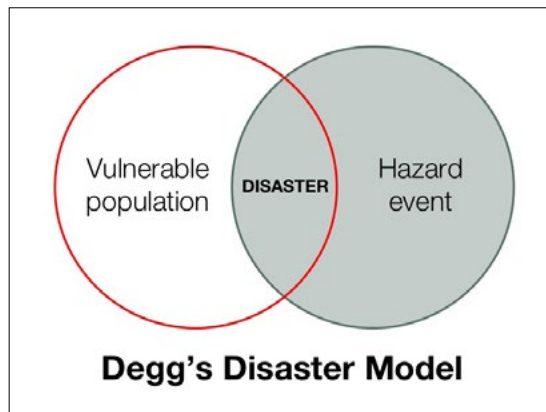
# KS5: Resilient behaviour after an earthquake

**In this activity:** students will consider the Degg Disaster Model and reflect on how they could apply learning from the unit to their own lives.

## You will need:

- > [Degg Disaster Model \(PPT\)](#)
- > [Final prompt questions \(PPT\)](#)

**The Degg model** was developed by Martin Degg of the University of Chester. Like the Park model, this is used at 'A' level to explore the response of communities to hazardous events.



Talk through the model and its Venn diagram structure.

The second slide shows some possible responses that vulnerable populations might have to the hazards. Ask students to consider what their reaction to living in a dangerous place would be.

Ask: How did people in Nepal prepare, respond and recover? Reflect on learning from earlier sessions.

One of the impacts of the earthquake was the destruction of many houses. Efforts are now being made to design and rebuild homes in different designs.

How is their learning from the earthquake ensuring the people of Nepal are better prepared for future hazard events?

Think about daily activities that we take for granted, and how they might be carried out differently in different circumstances. How many of these activities are actually luxuries rather than essentials?

Students could write their ideas on sticky notes and then organise them into 'needs' and 'wants', discussing what is essential and what is not.

## A resilient UK

Students are now ready to tackle the final activity in the unit.

Pose the question: **How can you apply the learning you have gained about how people prepare for, respond to and recover from disasters to improve your personal resilience?**

*Display or hand out a copy of the [Final prompt questions](#) and encourage a discussion that brings students' learning back to situations that are relevant to their lives.*

- > What risks do we have here in the UK?
- > How do we prepare for them?
- > How could we become more resilient?

*Hand students a printout of the two slides on the [Degg Disaster Model \(PPT\)](#) which show the Degg Model and some possible responses of people following a natural disaster.*



# Supporting resources for Session 4

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Park model (PPT)	121
Living graph (PPT)	122
Steve in Nepal tweets	123-125
Steve in Nepal tweet ordering sheet	126
Living graph recording sheet	127
Degg disaster model (PPT)	128
Final prompt questions (PPT)	129

# School Disaster Frame

Cut this bit out

Location:

Take some images with a camera or tablet at each location.

Furniture

Equipment

Walls and windows

Building structure

Other items



## School disaster plan

School name and address	
Headteacher's name	
Name of inspector(s) carrying out inspection	
Date of inspection	

Area of school inspected	
<b>Furniture</b> e.g. furniture on castors, tall cupboards not fastened to walls, crowded corridors, plastic stacking boxes	
<b>Safety equipment</b> e.g. first aid kits and defibrillator, water, fire extinguishers or blankets, science equipment	
<b>Walls and windows</b> e.g. glazing, window closures, plaster, fixings	
<b>Building structure</b> e.g. age of the building, areas under construction	
<b>Other items</b> e.g. temporary fittings, staff, hot liquids	

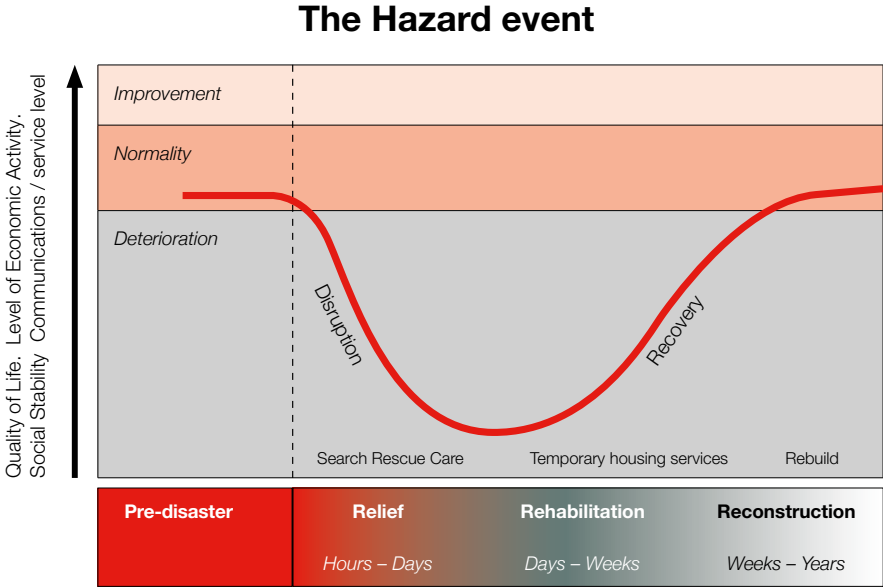
Recommendations for making the school safer

--

Signed: \_\_\_\_\_ Safety Inspector

# Park model

A model for exploring disaster response and recovery



Relief and rehabilitation often with the help of outside agencies

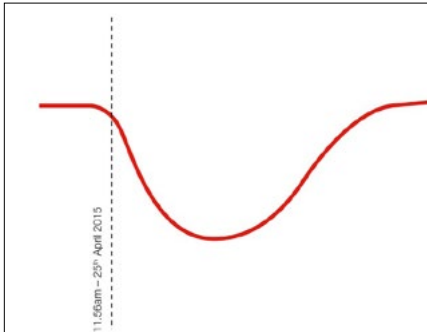
[Download full PPT here](#)



## Session 4 Living Graph tweets

You are going to be shown a number of tweets from a visitor to Nepal, and need to add them to a timeline matching the Park Model...

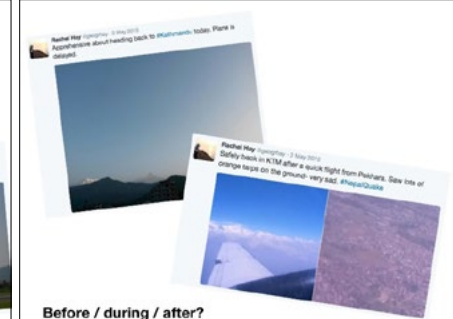
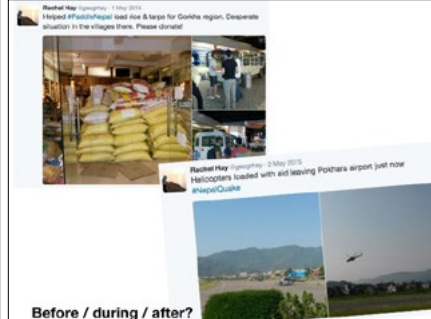
What is the Park model?



Some tweets from Rachel Hay - sent while in Nepal

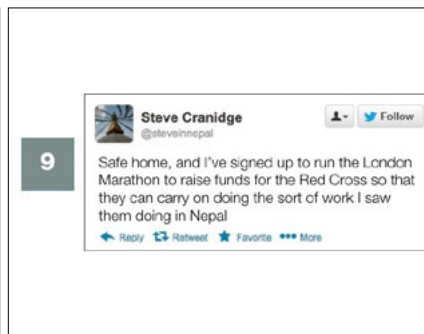
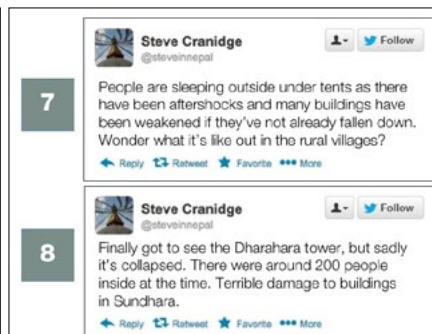


Before / during / after?



Sequence the 10 tweets that are being sent by Steve Cranidge, who arrived in Nepal just before the earthquake...

@SteveinNepal



## @SteveinNepal tweets – in chronological order...

1

**Steve Cranidge**

@steveinnepal



Follow

Recovering from jetlag with a chai and checking out my guide for the best stupas to visit. Want to visit the Dharahara tower in particular

Reply Retweet Favorite More

2

**Steve Cranidge**

@steveinnepal

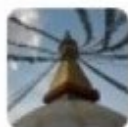


Follow

Wondering what just happened – in the shower when the water went off and I was thrown around in the cubicle – wardrobe fallen over and window smashed

Reply Retweet Favorite More

3

**Steve Cranidge**

@steveinnepal



Follow

I need to get a flight out of Kathmandu, but the airport is closed at the moment, and there's no information as to when flights will resume

Reply Retweet Favorite More



4

**Steve Cranidge**

@steveinnepal

 Follow

I've been helping to move rubble around the base of a collapsed building. There were apparently some noises heard from underneath, but everything is so chaotic.



Reply



Retweet



Favorite



More

5

**Steve Cranidge**

@steveinnepal

 Follow

Just arrived at Tribhuvan airport in Kathmandu after long flight from Istanbul – now to find a taxi to the hotel



Reply



Retweet



Favorite



More

6

**Steve Cranidge**

@steveinnepal

 Follow

Aid agencies have been distributing food and bottled water, and there is some medical treatment available for the most badly injured. Searches for the trapped have ended.



Reply



Retweet



Favorite



More

7

**Steve Cranidge**

@steveinnepal



Follow

People are sleeping outside under tents as there have been aftershocks and many buildings have been weakened if they've not already fallen down. Wonder what it's like out in the rural villages?



Reply



Retweet

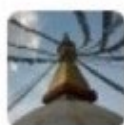


Favorite



More

8

**Steve Cranidge**

@steveinnepal



Follow

Finally got to see the Dharahara tower, but sadly it's collapsed. There were around 200 people inside at the time. Terrible damage to buildings in Sundhara.



Reply



Retweet



Favorite



More

9

**Steve Cranidge**

@steveinnepal



Follow

Safe home, and I've signed up to run the London Marathon to raise funds for the Red Cross so that they can carry on doing the sort of work I saw them doing in Nepal



Reply



Retweet

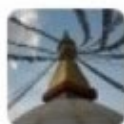


Favorite



More

10

**Steve Cranidge**

@steveinnepal



Follow

Dressed as quick as I could as the hotel is showing signs of collapsing. Street is filled with brick rubble and my throat is full of dust...



Reply



Retweet



Favorite



More

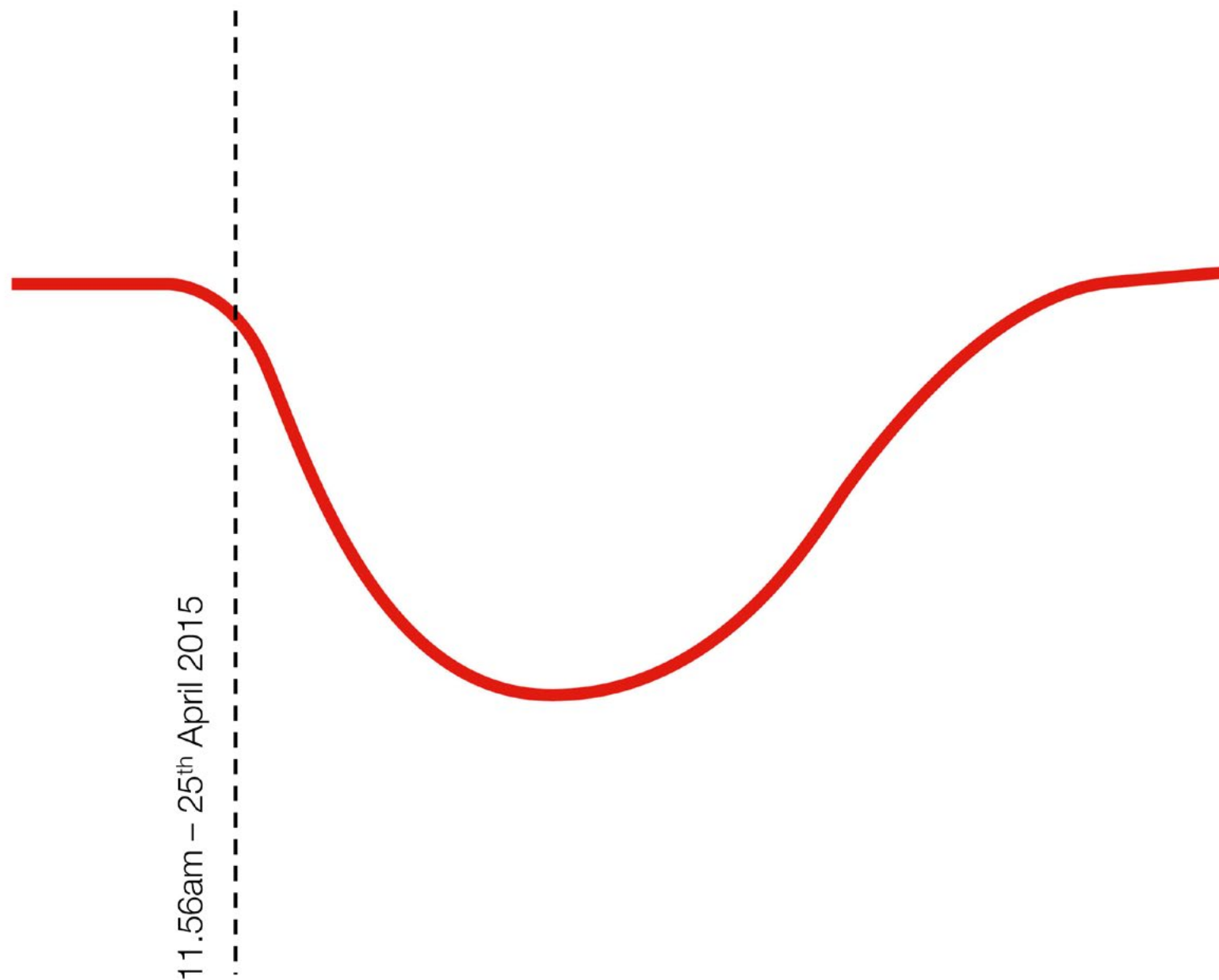


## Steve in Nepal tweet ordering sheet

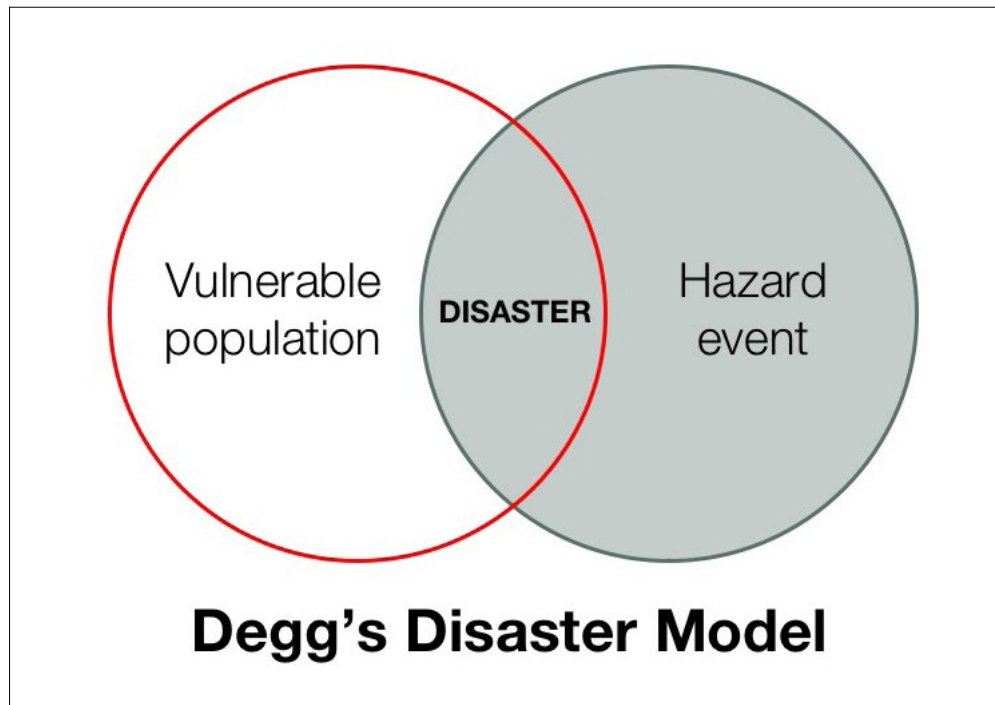
Tweet number	Why did you place this tweet here?

After Park, 1991

**MARK THE NUMBERS 1 to 10 on the GRAPH to match the timing of the tweets**







[Download full PPT here](#)

**What risks do we have here in the UK?**

**How do we prepare for them?**

**How could we become more resilient?**

# Video resource list

## Session 2: Earthquakes

Introductory activities: 1. Tectonic background - p48

**Anatomy of an earthquake - Professor Iain Stewart**

<https://www.youtube.com/watch?v=8QNigxTN384>

Introductory activities: 3. An introduction to the role of the Red Cross in earthquake preparedness - p49

**Earthquake preparedness in Nepal**

<https://www.youtube.com/watch?v=XxiEESGGJgc>

KS3: Exploring the tectonic situation in the Nepal:

4. Traffic camera - p52

**Nepal Earthquake Disaster 2015 Hindi Documentary**

<https://www.youtube-nocookie.com/embed/btc020siGBo>

KS4: The Nepal Earthquake – why did it happen where it did? 1. One week in: the Nepal earthquake video - p54

**Nepal earthquake**

<https://www.youtube.com/watch?v=rfJ7WEmUX1s>

KS4: The Nepal Earthquake – why did it happen where it did? 2. The Red Cross' global response to the Nepal earthquakes - p55

**Nepal Earthquake appeal | The Red Cross' Global Response**

<https://www.youtube.com/watch?v=WXVwy8vyuTc>

## Session 3: The impact of a natural disaster

Introductory activities: 1. How did Red Cross volunteers support people affected by the Nepal earthquake? - p74

**Nepal Red Cross Volunteer Sameer Bajracharya**

<https://vimeo.com/162543449/c5030159ea>

KS3: Reporting the impacts of the Nepal earthquake:

Additional resources - p77

**Glossary of Common Video Terms**

<https://vimeo.com/blog/post/glossary-of-common-video-terms>

## Session 4: Recovery and resilience

Introductory activities: 2. The role of the Red Cross in recovery - p108/109

**Nepal earthquake: Three months on**

<https://www.youtube.com/watch?v=D1v1KCt-H6M>

**Water: Communities help water flow again after Nepal earthquake**

<https://www.youtube.com/watch?v=Nn801SrKMMa&list=UUZ8xf9ZrTOv7SeYK7U5eKVg&index=159>

**Shelter: Nepal communities learn earth-quake resistant building**

[https://www.youtube.com/watch?v=ClxT\\_2vjF0c&index=160&list=UUZ8xf9ZrTOv7SeYK7U5eKVg](https://www.youtube.com/watch?v=ClxT_2vjF0c&index=160&list=UUZ8xf9ZrTOv7SeYK7U5eKVg)