

Beat the flood

A challenge to design and build a home before the floods arrive on Watu island



Changing climates

Imagine living with the constant danger that your home could be flooded at any time.

Our climate is changing and for many people living near riverbanks, the fear of flooding is never far from home.

Does anywhere close to your home get flooded?



Where in the world?

Activity

Look at the photographs given to you by your teacher and decide where they belong on the world map.



Where in the world?



Thoughts on photos...

Choose one photo from Europe and one from a developing country that interests you.



- What would life be like for the people in these pictures whose homes have been flooded?
- Who do you think is most devastated by the effects of flooding and why?

The big fat reality...

- People living in poverty are worst affected and suffer most from the effects of flooding
- Living in poverty makes it more difficult for people to cope with flooding and recover from the effects as they have less money to rebuild their lives

But...

- If people are prepared for floods, they are more likely to recover quickly and less likely to feel disaster
- At Practical Action we enable people to learn skills and access technologies to help prepare for floods

Beat the Flood on Watu Island...



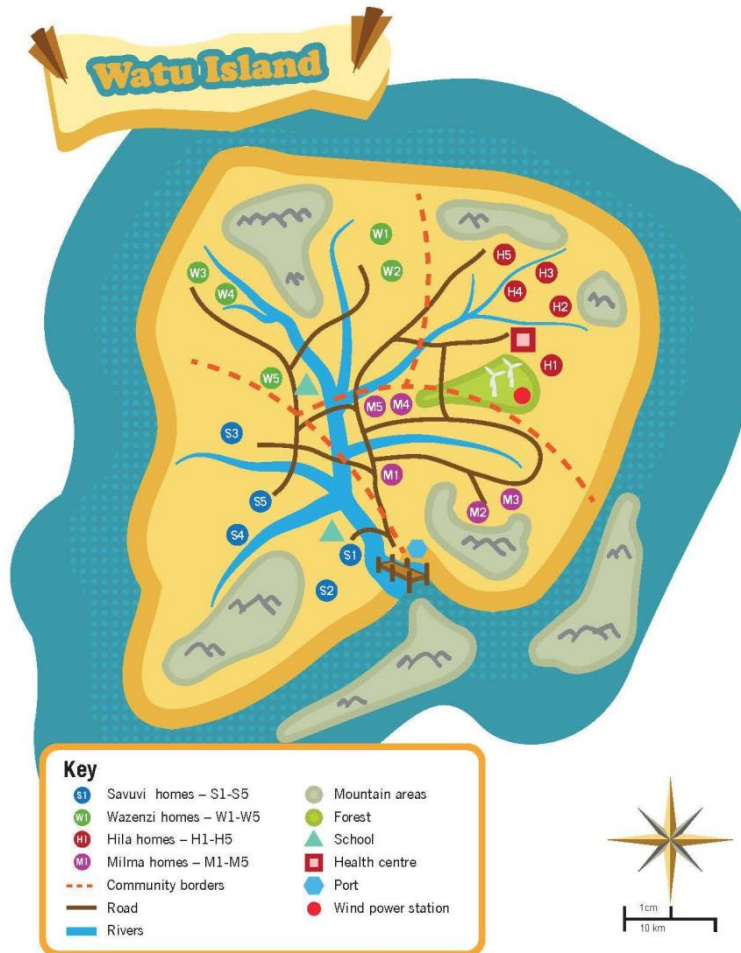
You are a community living on Watu; a small island in the Indian Ocean.

Over the past 5 years you've seen a massive increase in rainfall, causing many of the island's rivers to flood at least twice a year.

Your traditional homes made from earth floors, wooden frames and topped with corrugated iron roofs are regularly damaged or lost as they're not designed to withstand flooding.

As a group of islanders you want to **beat the floods** by making sure your homes are flood-proof before the next rainy season.

Watu island...



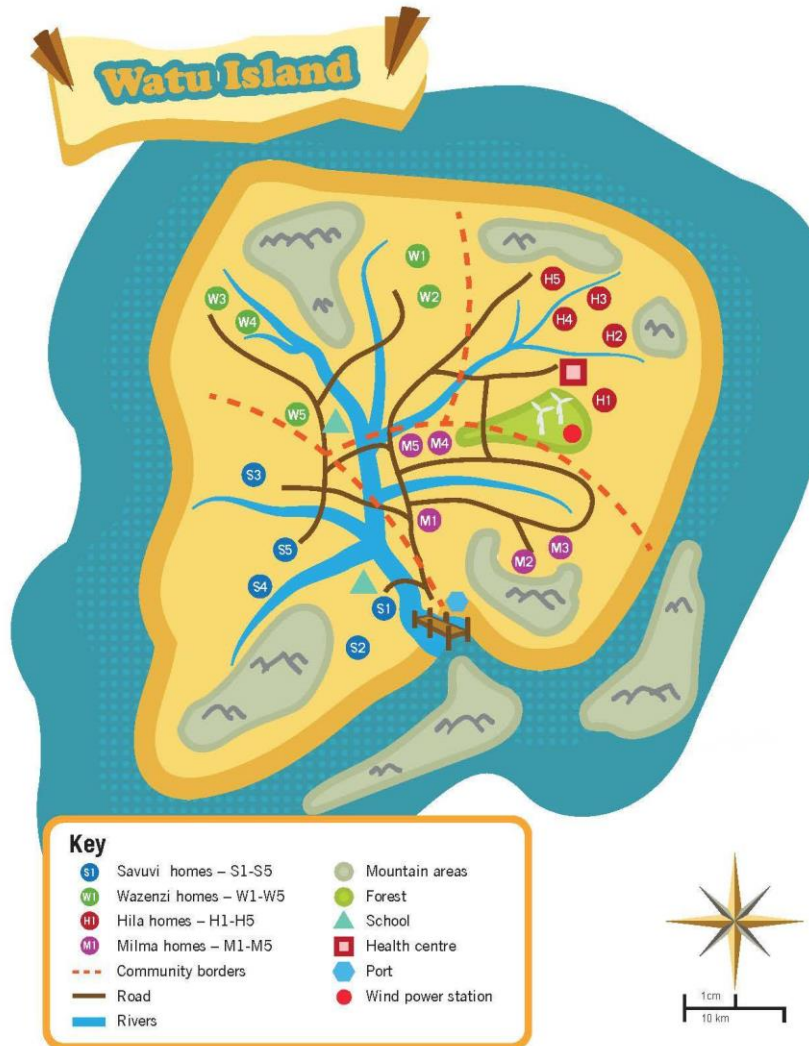
Your class will be divided into four groups.

Each group will represent one of the four communities living on the island.

Look at your map of Watu and your community card to find out about the area where you live.

Are you from the Hilas, Savuvi, Wazenzi or Milma community?

Who's at risk on Watu?



Which of the homes and areas in your community are at risk of flooding?

Discuss in your group or class and mark the homes most at risk on your map.

Where might you build your new house?

Your Beat the Flood challenge...

Design a home for your community on Watu Island able to withstand the effects of flooding, and make a model of your design so you can test it.

- What skills and information will you need to help you develop your new houses?

For your challenge...

Work as a team to complete:

- **Research** - find out about flood-resistant homes, suitable materials and structures, and the material costs for your home

Your teacher will provide you with some information and activity sheets to help your research.

- **Design sheets** - develop a design specification, design ideas and final design of your flood-resistant home
- **A model of your home**
- **A flood test** - you will need to stand your model in 5cm of water and squirt with a hose for 2mins from 1m away
- **A Presentation**

Presentation...

At the end of the challenge, your group will be given 5 minutes to present your work to the island community.

Try to include:

- Your findings about the areas and homes most at risk in your community
- Why you chose the design you developed, including your choice of materials and structure
- How well you worked as a team
- How your model stood up to the flood test
- What you would do differently if you did it again

If you've enjoyed the challenge, ask your teacher about how you can enter your work into our competition or to gain a CREST award.

Competition details

If you'd like to enter into our ***Beat the Flood*** competition, please make sure that your group submit:

- Starter and summative questions from **each person** in the group
- Design specification ideas and design ideas from each member of the group
- Final design sheet for your group
- Photo of your model before and after the flood test.

Please send them to:

Beat the Flood competition
Education Unit
Practical Action
Schumacher Centre
Bourton on Dunsmore
CV23 9QZ

or to schools@practicalaction.org.uk by 30th April 2014

Beat the flood

www.practicalaction.org/beattheflood



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