Water is Life

# **Teachers' Notes**

# Key Stage 3

### **Learning Outcomes**

Through using this resource pupils will be given opportunities to:

•Understand the importance of clean water to health and wellbeing and how its availability varies across the world

•Learn how properly managing water is fundamental to producing food, providing power and livelihoods, and maintaining biodiversity

•Understand the importance of improving sanitation and hygiene in delivering the sustainable development goals

•Learn about the impacts of weather and climate change on water availability and people's lives

•Understand the differences in water availability and use in Madagascar and Northern Ireland

•Learn how they can save water at home and school and why it is important to do so

## Some Useful Websites and Further Reading

•WHO and UNICEF 2017. Progress on Drinking Water, Sanitation and Hygiene. https://washdata.org/

•https://www.washwatch.org/en/countries/madagascar/summary/statistics/ The data on WASHwatch is sourced from a variety of organisations including GLAAS, JMP, UNICEF, WHO, SACOSAN, SWA, and the UN

- •JMP-2017-tr-safely managed drinking water services.pdf
- http://www.theglobaleducationproject.org
- •http://www.wateraid.org
- https://www.worldwatch institute.org
- •World Economic Forum https://www.weforum.org/
- •World Resources Institute http://www.wri.org/

## Activities KS3

### Class/Curriculum

•Use any technique – debate, essay, story, play, music, art – to highlight one of the issues surrounding water – pollution, shortage, wastage – at global, Madagascar or Northern Ireland levels

•Compare the different ways statistics can be used to highlight issues. What are the most effective ways to use mathematics and graphs to raise awareness and stimulate action?

•Explain or illustrate how water is essential to achieving SD goals – how does clean water relate to accomplishing all the other (relevant) SD Goals?

•Consider what the possible negative consequences are for providing access to safe drinking water are (e.g. overexploitation and wastage)

•How much water can YOU save? What do you do when the water goes off? (or if you haven't experienced it, what WOULD you do? How would you live on 50 litres a day?

#### Campus

•Identify one thing your school could do that will decrease water wastage and promote it to the entire student body, teachers and governors

•Hold a debate for the school about water conservation and why it's necessary.

•Create a display for the school to publicise the problems of water shortage in Madagascar or globally, and how this relates to Northern Ireland. Use a variety of media – art, drama, stories.

•Identify a charity addressing these issues and raise money to fund a specific project, a well, water capture, etc. Develop innovative ways to raise money that simultaneously raise awareness of the issues involved.

### Community

•Plan a publicity campaign using social and other media to help your community understand how precious water is and why, even in Northern Ireland, it should be conserved.

•Raise money as a community (i.e. beyond just your school) to fund a project providing facilities to a Madagascar community lacking water or sanitation

•Create a display (art, photography, poems, stories) open to the community to highlight the similarities and differences in water usage and cost between Northern Ireland and Madagascar

## **Glossary of Key Terms**

- Climate weather conditions in a wide area over a long period.
- **Climate Change/Global Warming** the gradual increase in the overall temperature of the earth's atmosphere caused by greenhouse gases and other pollutants.
- **Cyclone** –- large scale air mass rotating around a centre of low pressure. Tropical term for hurricanes and tornados, characterised by high winds, usually rain and often leading to major disruption and destruction.
- **Diffuse Pollution** pollution arising from land use activities that are dispersed across the water body catchment. Individually the activities may have little impact, but wide ranging multiple activities can lead to build up of toxic materials. Distinct from Point Source Pollution.
- **Drought** a long period of very low rainfall, leading to a shortage of water and often negative impacts on vegetation.
- Groundwater water held underground in soil or pores and crevices in rock.
- **Hydroelectric Power** electricity generated from moving water. Traditionally using water held in dams being released over turbines to generate electricity, but new techniques capture motion of tides and currents.
- Hygiene practices related to cleanliness and maintaining health and preventing disease.
- **Infrastructure** basic physical and organisational structures and facilities needed for society to function (roads, buildings, power, water).
- **Open Defecation** defecating and urinating outside, in the open environment.
- **Point Source Pollution** release of toxins from a single, identifiable source into air, water or soil. Includes heat, noise and light pollution as well as chemical.
- **Pollution** presence or introduction into the environment of a substance which has harmful effects (on the environment, on human health).
- Sanitation conditions relating to public health, especially providing clean drinking water and adequate sewage disposal.
- Surface Water water collected on the surface of the ground. Includes lakes, streams, rivers, reservoirs etc.
- Water Cycle cycle of processes by which water circulates between oceans, atmosphere and land, including precipitation, drainage, evaporation and transpiration.