

## A3: ENERGY AND SUSTAINABILITY

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### Overview

Everything we need for our survival and wellbeing has always depended directly or indirectly on sustaining a careful management of the natural environment. This need for sustainability has always been addressed, e.g. the rotation of crops is essential to managing the quality of the soil, moving grazing animals is needed to allow vegetation to recover. On the other hand, the damage caused in the American Midwest by the 'dust bowl' storms of the 1930s was partly due to deep soil ploughing resulting in the destruction of the grasses that trapped moisture and prevented the loss of top-soil. Failure to manage a sustainable balance between cash crops and food has contributed to poverty in many countries. There is an even greater focus now on sustainability for the following reasons: rapid population growth, economic growth and the consequential consumption of our natural resources.

In **1972 The United Nations General Assembly** convened at the **United Nations Conference on the Human Environment**, or the [Stockholm Conference](#). This conference introduced environmental concerns into the formal political development sphere, focusing on human interactions with the environment. Among the key resolutions were that Earth's capacity to produce renewable resources should be maintained and that non-renewable resources should be shared and not exhausted.

To rally countries to work and pursue sustainable development together, the **UN General Assembly** established the **Brundtland Commission** in **1983**. The Commission published *Our Common Future*, also known as the *Brundtland Report*, in **1987**. The report aimed at promoting a sustainable development path, and recapturing the spirit of the **Stockholm Conference**. The document coined, and defined the meaning of, the term 'sustainable development' i.e. to maintain 'developments that meet the needs of the present without compromising the ability of future generations to meet their own needs.'

The limit of our resources is illustrated by the first two activities – **A3 ACTIVITY 1: VISUALISING: WHY SUSTAINABILITY? IS THERE ENOUGH LAND FOR EVERYONE?** and **A3 ACTIVITY 2: VISUALISING: WHY SUSTAINABILITY? HOW MUCH FRESHWATER IS THERE?**

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### Suggested approaches:

- Before introducing any of the activities, pose the following questions to the class:
  - ① *Is there an energy crisis?*
  - ② *If so, what does this mean?*
  - ③ *What do the words sustain and sustainability mean?*
  - ④ *Apart from the Sun, what energy resources do we have on planet Earth?*
  - ⑤ *Which of these resources are essential for living?*
  - ⑥ *How can we replenish these resources?*
  - ⑦ *How long would it take to replenish these resources?*
- Alternatively, divide the class into groups and assign one of the above questions to each group. Record the responses for future reference. These questions should lead the students to understand that when resources like oil or coal have been depleted, there is no way they can be created again. The time spent need not be too long as the overall aim is to show that a number of our energy resources are indeed finite, i.e. should a crop fail or seeds be destroyed then there is no agency outside Earth to replace them.
- Let the students draw up a list of what they consider to be an **energy crisis** and how it might be addressed.

- Challenge them to list examples of **energy conversion applications** in everyday living and ask them which of these could be considered **energy efficient**.
- Former president of Ireland, Mary Robinson, founded the **MARY ROBINSON FOUNDATION: CLIMATE JUSTICE** which facilitates action on **climate change**. Challenge the students by posing the following questions for discussion:
  - ① *What exactly is **climate justice**?*
  - ① *Why was the **Mary Robinson Foundation** set up?*
  - ① *How are people affected by **climate change**?*
  - ① *How do we contribute to **climate change**?*
  - ① *How should we contribute to **climate change**?*
  - ① *What impact could a **rising population** have on **energy resources**?*
- Another approach would be for the students to carry out the two activities and then use them to generate discussions on: land ownership vs. usage, population demands, the conservation of water, the role of ethics in society, how lifestyle changes might make land sufficiency easier (eating less meat, eating seasonal foods, composting to replenish the soil, etc.).

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### Resources:

- [The Mary Robinson Foundation](#) website provides access to a number of fascinating studies and videos. Encourage your class to browse the website, or summarise some of the information for them.
- [Download the Principles of Climate Justice](#).
- The [SEAI One Good Idea](#) topics page has lots of information and factsheets for you to download.
- The [SEAI website](#) has a useful outline of how a **sustainable energy community** works.
- The [USA Environmental Protection Agency](#) website provides a simple introduction to the terminology and facts about climate change.
- Download a [graphic presentation of the population status in 2050](#) to show in class.
- [Download a short booklet on population and water resources](#).
- **Trócaire** has a great [website on climate change](#) and the effects it has on people in the poorer parts of the world. [Visit their education resource website](#).
- For examples of ways to live sustainably, show the [Eco Eye TV programme on Sustainable Communities](#) in class.