

LIVING PLANET REPORT 2020

YOUTH EDITION
TEACHER RESOURCE



INTRODUCTION

The **Living Planet Report (LPR)** is produced every two years by WWF, with input from leading experts and other organisations. It is a health-check for the planet, showing how the natural world is doing, what threats it faces and what this means for us humans. The conclusions and recommendations in the LPR are based on an analysis of a great many measures of biodiversity, one of the biggest being the **Living Planet Index (LPI)**.

WWF has created a 12-page youth edition of the report explaining the LPI and highlighting the key findings and recommendations through graphics and case studies. This teacher pack offers suggestions on introducing and exploring the key topics of the report with your students.

RESOURCES

It is suggested both teachers and students read the LPR Youth Edition prior to any lesson/s or activities. Each activity can be added into the lesson or completed as separate lessons. Both activities have supporting slides to help facilitation and extension/homework activities can be found in this pack.

- **Lesson:** Exploring the LPR (PowerPoint) – facilitates a look at the report and inspires discussion around the findings.
- **Activity 1:** Freshwater debate: Dams*
- **Activity 2:** Create your own LPR

**Includes freshwater activities which can be used as a lesson or homework before the debate to give students a better understanding of freshwater systems.*



CURRICULUM LINKS

KEY 1 = LPR document as a whole/lesson 1 2 = Freshwater Debate 3 = Create your own LPR

ENGLAND Key Stage 2 Key Stage 3 Key Stage 4	Science (1, 2, 3); Geography (1, 2); English (1, 2, 3) Science (1, 2, 3); Geography (1, 2, 3); English (2, 3) Science (1, 2, 3); Geography (1, 2, 3); English : (1, 2, 3)
NORTHERN IRELAND Key Stage 2 Key Stage 3 Key Stage 4	Contributors to society (1,2); Contributors to the economy and the environment (1, 2, 3) Contributors to society (1,2); Contributors to the economy and the environment (1, 2, 3); Science; Environment and Society/Geography (1, 2, 3); English (1,2) Biology (1, 2, 3); Geography (1, 2, 3); English (1, 2)
SCOTLAND Curriculum for Excellence	Sciences (1, 2, 3); Literacy (1, 2, 3); Social (1, 2, 3)
WALES Curriculum for Wales	Science and technology (1, 2, 3); Language, Literacy and Communications; Humanities (1, 2, 3)

For a more detailed table on curriculum links please see Appendix I.

SUSTAINABLE DEVELOPMENT GOALS



Goal 6: Ensure access to water and sanitation for all



Goal 14: Conserve and sustainably use the oceans, seas and marine resources



Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss



Ensuring a healthy and productive future for our freshwater habitats also contributes to other SDG goals, including the following: **GOAL 1:** No Poverty, **GOAL 2:** Zero Hunger, **GOAL 3:** Good Health and Well-being, and **GOAL 12:** Responsible Consumption and Production

ACTIVITY 1:

FRESHWATER DEBATE: DAMS

AIM:

Through debates and discussions explore the real life environmental, community, political and business impacts of building dams to control freshwater.

TIMING:

This is flexible depending on time available, but the task should consist of group preparation and discussion, class debate, and conclusions.

BACKGROUND:

Freshwater is essential for the survival of all life on land - including humans - and yet freshwater habitats such as rivers, streams, wetlands and lakes are among the most threatened ecosystems on our planet. There are many ways that humans are damaging these precious freshwater systems. Diversions and dams reduce water flow, and therefore the amount of nutrient rich sediment carried by water into the ecosystem and create breaks in water systems that were once connected, preventing species from completing their life cycles.

For the LPR, a global team of scientists and policy experts have recommended a six-point Emergency Recovery Plan, based on proven measures, to reverse the dramatic decline. One of these measures focuses on dams.

TASK:

Discuss, in the viewpoint of the given stakeholder, how they may feel about the new dam, and the effects, pros and cons of the proposal of another dam in Brookham.

Use the PowerPoint slides to facilitate.

STAKEHOLDERS:

Prompt students to think about who might be affected by the new dam and who the decision makers are (the stakeholders who might be involved in this debate).

Use Appendix II as a prompt or alternative stakeholder identities. These can be given out to groups for the debate, but students can also make up their own.

Organise students into groups and do one of the following:

A. Assign each group one of the following stakeholder personas.

Give groups time to discuss and agree on their viewpoint. Give time for each group to present their stakeholder viewpoint/argument/solution to the class. Let groups (stakeholders) debate their viewpoints, challenging or supporting each other. (If time allows) discuss any implications of the most supported arguments. Conclude with a vote or discussion on the best scenario for the future.

B. Assign each person within a group one of the following stakeholder personas.

Give students time to debate their stakeholder viewpoint/argument/solution amongst their group and as a group come to an agreement on their viewpoint on the dam. Give time for each group to present their viewpoint/argument/solution to the class. Did other groups come to the same conclusion? (If time allows) discuss any implications of the most supported arguments. Conclude with a vote or discussion on the best scenario for the future.

Prompting questions for the debate can include:

- How will they be affected?
- What do they feel are the pros and cons of the dam?
- What is their main motivation for their argument?
- What do they stand to lose or gain from this scenario?
- How does the dam affect:
 - The town of Brookham?
 - Livelihoods in the area?
 - Freshwater wildlife?
 - Other wildlife / biodiversity?
 - The local environment and landscape?

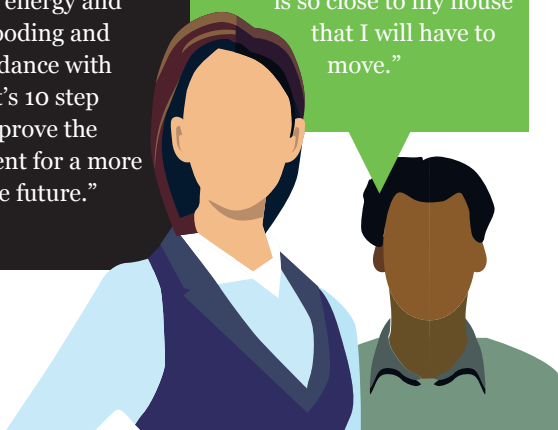
CASE STUDY:

Imagined town 'Brookham'

Brookham is a small town next to the Pebblebank River. It is famous for its delicious crayfish and many tourists visit each year to sample the fresh fish. There is also a large wetland reserve which provides a home to species such as otter, kingfisher and water vole. A large dam was built near the town ten years ago and planning permission has been approved for another dam to be added just outside of Brookham near the area's wetland reserve.

"This dam is being built to provide renewable energy and prevent flooding and is in accordance with Damdirect's 10 step plan to improve the environment for a more sustainable future."

"This is an outrage. The new dam proposed is so close to my house that I will have to move."



PREPARATION WORK:

These useful links provide more information on freshwater and why it is important. These can be completed in class before the debate or as homework.

FRESHWATER – RESOURCES:

ACTIVITIES

Our Plant guide to Freshwater: Introduces the importance of freshwater systems and includes educational activities for young people aged 6 - 14 years.

Explorable Globe: Students can use this interactive globe to explore our freshwater systems and take a journey across our amazing planet. Also includes video content that could be played in class. Supporting work:

- **Student worksheet**
- **Educator notes and worksheet answers** (KS 2-4 activities)



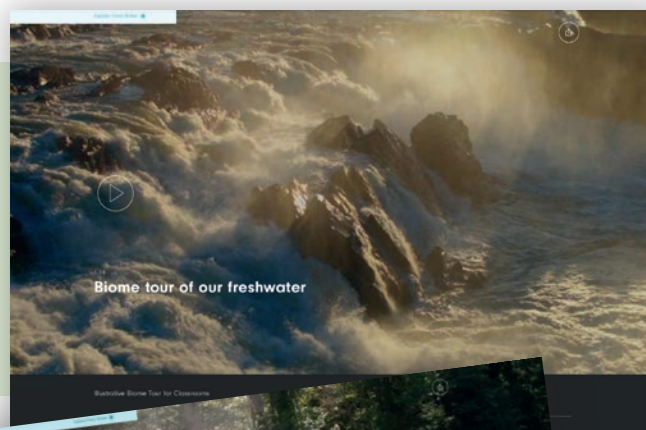
VIDEOS

Biome tour of freshwater (1m42)

How to save freshwater flow (7m47)

Restoring flow: Ultra Farming (0m42)

Innovation: Thirsty Plantations (0m42)



PLENARY:

- How does this debate feed into the wider picture presented in the Living Planet Report for Youth?
- Each biome is part of a system that works together and so it is imperative that we don't damage part of the system. How does taking part in this debate make your students feel about the challenges set out in the Living Planet Report for Youth and the solutions needed?
- Discuss with the class actions we can all take to help achieve global change.

ACTIVITY 2:

CREATE YOUR OWN LIVING PLANET REPORT

AIM:

This project allows students to gain practical skills through the challenge of creating their own report on biodiversity in their local area. This includes collecting and analysing data to identify trends and key findings, followed by writing their report in an interesting and engaging way.

This project can be undertaken independently, in class or as group work.

RESOURCES:

- Download WWF's **Our Planet LAB**: this toolkit enables students to carry out their own data collection effectively including mapping grids, observation sheets, biodiversity tracking worksheets and more.
- Download the **Seek App**: this app is downloadable on tablets or smartphone and helps with identifying fauna and flora via photo capture. It is not essential but very useful to have.



Use the PowerPoint slides to facilitate steps 1 and 2.

Step 1: Identifying the key components to writing a Living Planet Report

Step 2: Identifying resources and planning.

The toolkit offers more explanation and activities.

Step 3: Collecting biodiversity data using the Seek app and Our Planet LAB toolkit.

This can be over any timeline. For example, a one-day bioblitz to capture data in a point in time or a longer-term project tracking the changes over weeks or even seasons. The toolkit offers more explanation and activities.

Step 4: Analysing data to find out the key findings.

Step 5: Reporting findings

Why is biodiversity important to the local area?

What are their key findings and recommendations?

How are they going to create their report making sure it is scientifically accurate but also engaging to their audience?

Step 6: Sharing the report

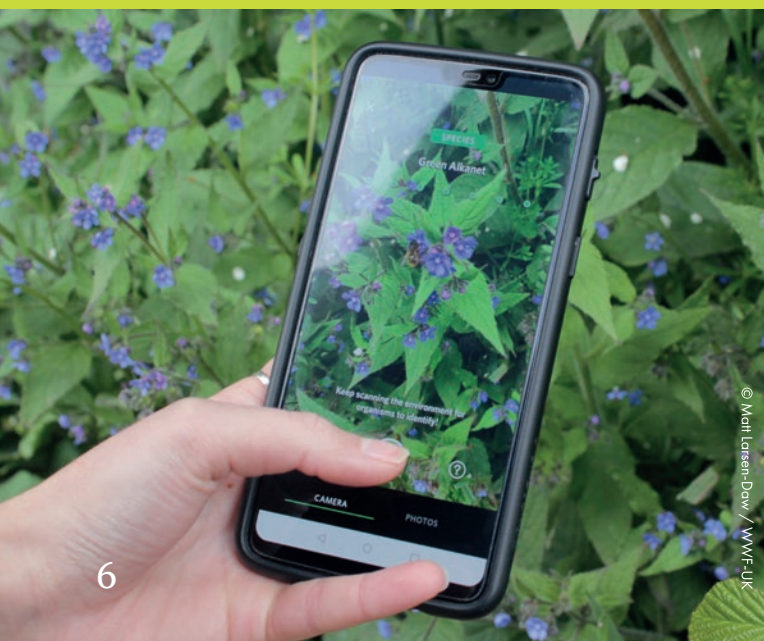
Promoting their message. For example, via a student magazine, local media or an assembly presentation.

EXTENSION:

Once students have created their own Living Planet Report and assessed the level of biodiversity in their local area, they can now make an action plan to improve it. If the same or future students write another report the following year, they can be compared to assess the increase or decrease of biodiversity and explore the reasons behind it.

SEEK APP

The free Seek app allows real-time identification of organisms through live image recognition when a plant, animal or fungus is scanned with the camera of a tablet or phone. As well as helping identify species, it provides a practical introduction to taxonomy and provides information about the species identified, helping to build understanding of the interconnected ecosystem explored through the activity. If connected to a free iNaturalist account (which can be set up through the app by anyone over 13) observations can be submitted to a global database, helping scientists monitor global biodiversity.



APPENDIX I:

CURRICULUM LINKS

KEY 1 = LPR document as a whole/lesson 1 2 = Freshwater Debate 3 = Create your own LPR

<p>ENGLAND</p> <p>Key Stage 2</p> <p>Key Stage 3</p> <p>Key Stage 4</p>	<p>Science: Living things and their habitats (3); Working scientifically (1, 2, 3)</p> <p>Geography: Location Knowledge (1, 2); Human and physical geography (1, 2)</p> <p>English: Reading (1, 2, 3); Writing (1, 2, 3)</p> <p>Science: Working scientifically (1, 2, 3); Biology (1, 2, 3)</p> <p>Geography: Location Knowledge (1); Human and physical geography (1, 2, 3)</p> <p>English: Spoken English (2); Writing (2, 3)</p> <p>Science: Working scientifically (1, 2, 3); Biology (1, 2, 3); Physics (2)</p> <p>Geography: Locational knowledge (1, 2, 3); Maps, fieldwork and geographical skills (1, 3); Place: Processes and relationships (2, 3); People and the environment: processes and interactions (1, 2)</p> <p>English: Reading (1); Writing (2, 3); Speaking (2)</p>
<p>NORTHERN IRELAND</p> <p>Key Stage 2</p> <p>Key Stage 3</p> <p>Key Stage 4</p>	<p>Contributors to society: Ethical awareness (1,2)</p> <p>Contributors to the economy and the environment: Education for sustainable development (1, 2, 3)</p> <p>Contributors to society: Ethical awareness (1,2)</p> <p>Contributors to the economy and the environment: Education for sustainable development (1, 2, 3)</p> <p>Science: Organisms and health; Earth and Universe</p> <p>Environment and Society/Geography: Develop enquiry and fieldwork skills (3); Develop critical and creative thinking to solve geographical problems (2, 3); Develop a sense of place (1, 2, 3)</p> <p>English: Talking to include debate, role-play, interviews, presentations and group discussions (2); Reading and viewing for key ideas (1)</p> <p>Biology: Cells, living processes and biodiversity (1, 2, 3); Practical Skills (3)</p> <p>Geography: Understanding our Natural World (1, 2); Living in Our World (1, 2); Fieldwork (3)</p> <p>English: Writing for Purpose and Audience and Reading to Access Non-fiction and Media Texts (1, 2); Speaking and Listening (2)</p>
<p>SCOTLAND</p> <p>Curriculum for Excellence</p>	<p>Sciences: Inquiry and investigative skills (1, 2, 3); Scientific analytical thinking skills (2); Skills and attributes of scientifically literate citizens (1, 2, 3); Planet Earth (1, 3); Topical Science (1, 2, 3)</p> <p>Literacy: Listening and Talking Understanding, analysing and evaluating (1, 2, 3); Reading (1, 2, 3); Writing (1, 2, 3)</p> <p>Social: People, place and environment (1, 2, 3); People in society, economy and business (2)</p>
<p>WALES</p> <p>Curriculum for Wales</p>	<p>Science and technology: (1, 2, 3)</p> <p>Language, Literacy and Communications</p> <p>Humanities: Geography (1, 2, 3); Social studies (1, 2); Outdoor Learning (1, 3)</p>

APPENDIX II:

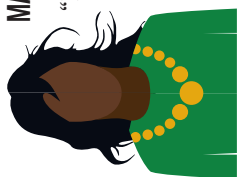
FRESHWATER: DEBATE STAKEHOLDER CARDS

Give students time to research for their role and encourage them to play the ‘devil’s advocate’ to open up the debate about solutions that they may agree with. They may need to invent some additional details about their character. At the end, characters can make personal pledges to say what they would do differently.



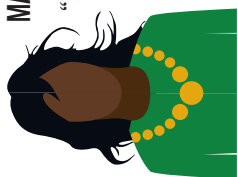
NICK BRINE, RESTAURANT OWNER

“My customer base relies on stocks of locally caught freshwater crayfish, salmon and trout. We are famous for our fresh and local catch and I am worried about anything that might affect that. Also, the new dam will spoil the view from our balcony area which is packed in the summer and known as the best viewing spot in the town”.



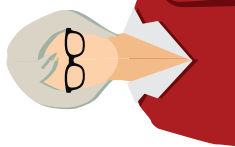
MAYOR ROWENA RUSH

“I have received many letters and a petition with over 300 signatures from local residents asking me to ban the development of the new dam. Many of the residents are very unhappy that the building of the dam will cause noise disruption and fear it may damage Pebblebank wetland reserve”.



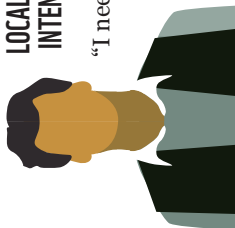
SUSAN SALMON, TEACHER AT BROOKHAM JUNIOR SCHOOL

“I am worried that the treasured wetland area will be damaged and will no longer be accessible to families and schools that like to enjoy the area. I have asked my school community to write to our Mayor to oppose the development”.



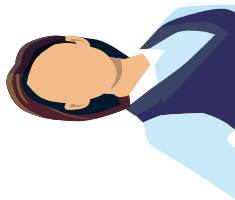
LOCAL FARMER, INTENSIVE BARLEY FARM

“I need a lot of water for my crops and the dam will provide me with regular water flow which is vital. All I want to do is make sure the people in our community are fed and I have enough money to keep my farm going”.



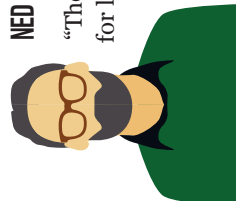
VANESSA VALLEY, DIRECTOR OF THE DAM CONSTRUCTION COMPANY, DAMDIRECT

“This dam is being built to provide renewable energy and prevent flooding and is in accordance with Damdirect’s 10 step plan to improve the environment for a more sustainable future. The resulting reservoir is essential for providing necessary freshwater to thousands of people”.



NED REED, WETLAND RESERVE MANAGER

“The new dam will be disastrous for local species as it will disrupt freshwater flow and will impact migratory patterns of fish. This dam development could see the disappearance of birds on our floodplains and the extinction of fish and other aquatic species. The new dam should not be built, and the old dam should be removed to restore river flow and allow the wetland area a chance at recovery”.



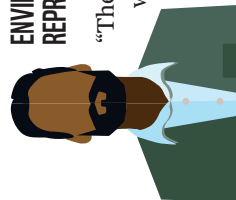
LOCAL MP, MIKE MEANDER

“Concerned residents have raised important issues with me surrounding noise pollution and damage to the wetland area. A small number of residents will be displaced, however, building the new dam is cheaper than repairing the old one, and the dam will provide a range of economic benefits as well as providing our town with hydroelectric power and improved waste management”.



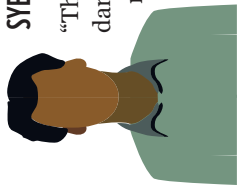
ENVIRONMENT AGENCY REPRESENTATIVE, OTTO HUTCHINS

“The development of this dam would be devastating to the freshwater ecosystems not only of the Brookham area but further afield as dams disconnect rivers from wetlands and floodplains resulting in erosion of land and reduced sediment load which is essential for freshwater habitats”.



SYED NAVEED, BROOKHAM RESIDENT

“This is an outrage. The new dam proposed is so close to my house that I will have to move. The price of my property has plummeted, and I remember the disruption that the other dam caused ten years ago. I cannot go through that again; the dam development must be stopped”.



APPENDIX III:

LIVING PLANET REPORT – STUDENT PLANNING SHEET

Task: Think about what you’ll need, challenges you may face and how long each stage will take. If you are working in a group, decide who is responsible for each stage of the project.

Actions	What will we need?	What challenges might we face?	Whose responsibility?	Timeframe
1 <i>EXAMPLE</i> Mapping out the area in which we want to record biodiversity.	<ul style="list-style-type: none">• Pencils and paper• Knowledge of the local area• Google maps	Lack of greenspace in school grounds	Name	30 minutes
2				
3				
4				
5				
6				
7				
8				
9				
10				



Working to sustain the natural world for the benefit of people and wildlife.

together possible™

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www.wwf.org.uk/schools email: education@wwf.org.uk