EXPLORE AI
ACADEMY

Integrated project: Access to drinking water

Overview

UNITED NATIONS
SDGs

Overview

The Sustainable Development Goals (SDGs) are an **ongoing global call to action** to end poverty, ensure **prosperity** and **peace** for all people, and **protect** our planet.

There are **17 goals** relating to poverty, health, education, basic services, inequality, climate, peace, and partnership.

UN SDG 6

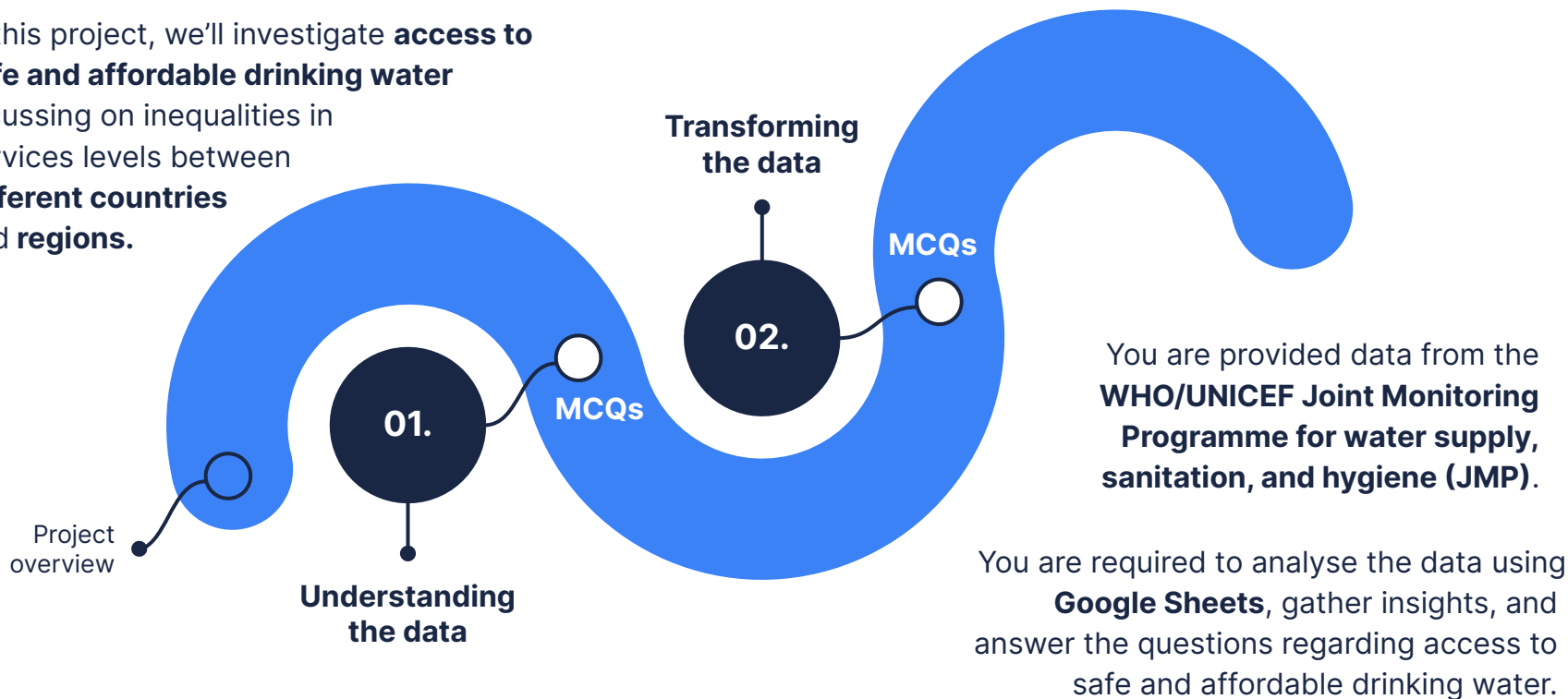| United Nations **Sustainable Development Goal 6**	**Clean water and sanitation** *Ensure availability and sustainable management of water and sanitation for all.*

Due to changes in our climate, droughts are becoming more prevalent and water supplies are decreasing worldwide. This not only affects access to drinking water but also sanitation and hygiene which often results in unnecessary diseases and death.

In order to ensure greater access to water and sanitation, communities across the world need to assist each other in developing and managing water resources.

Integrated project overview

In this project, we'll investigate **access to safe and affordable drinking water** focussing on inequalities in services levels between **different countries** and **regions.**

Transforming the data

MCQs

02.

01.

MCQs

Project overview

Understanding the data

You are provided data from the **WHO/UNICEF Joint Monitoring Programme for water supply, sanitation, and hygiene (JMP)**.

You are required to analyse the data using **Google Sheets**, gather insights, and answer the questions regarding access to safe and affordable drinking water.

WHO/UNICEF JMP data overview

The JMP dataset estimates household **access to drinking water services** between 2000 and 2020 to assess progress toward achieving the sixth SDG.

Estimates on the use of water (2000 – 2020)

Country or area

The specific country or area the values are estimated for.

Year

The specific year the values are estimated for.

Population

The estimated population size in thousands for the specific country and year.

% Urban

The estimated percentage share of the population living in urban areas.

Service levels

The estimated national, rural, and urban percentage share of a specific level of access to drinking water services.

WHO/UNICEF JMP data overview

The dataset uses **service ladders** to benchmark and compare **access to drinking water** across different countries. The ladder defines five different service levels.

Service level	Definition
Safely managed	Drinking water from an improved source that is **accessible on premises**, available when needed, and **free from** faecal and priority chemical **contamination**.
Basic	Drinking water from an improved source, provided **collection time is not more than 30 minutes** for a round trip, including queue time.
Limited	Drinking water from an improved source, for which **collection time exceeds 30 minutes** for a round trip, including queue time.
Unimproved	Drinking water from an **unprotected** dug **well** or unprotected **spring**.
Surface water	Drinking water **directly from** a river, dam, lake, pond, stream, canal, or irrigation canal.

What you need to do

There are **two parts** to this integrated project. You need to import and clean data, create new features and visualisations, interpret the results, and answer the multiple-choice questions.

In part one, we'll answer questions like:

- How do the world population estimates **compare** to the provided dataset populations?
- How does the urban population share **compare** to the rural population?
- What is the **tendency** and **spread** of the different water access features?
- How do these **measures** of water access compare across different types of areas?
- What does the **national access** to water look like based on national **population** size?
- What does the **urban access** to water look like based on urban **population** size?
- What does the rural access look like?
- What is the effect of **national population size** and **urbanisation** on **GNI** and **water access**?

After working through this first part of the project, you will have to answer 10 multiple-choice questions.

What you need to do

In part two, we'll answer questions like:

- How does the **imported dataset differ** from the *Estimates on the use of water (2020)* dataset?
- Which **years are represented** within the dataset?
- What is the **average year difference** per country?
- What is the **Annual Rates Change (ARC)** for the **national**, **rural**, and **urban** areas per country?
- What is the **average** of the **different ARCs** for all countries?
- How does access to basic water **change over time** for **different areas**?
- How does the **ARC differ** between **rural** and **urban** populations?
- How does the **ARC** compare across **different regions**?
- How does the **national population size** influence the **ARC**?

After working through this second part of the project, you will have to answer an additional 10 multiple-choice questions.