Geoscientists without Borders® (GWB) projects that support SDG-6: Ensure availability and sustainable management of water and sanitation for all, also support many other sustainable development goals, such as those shown here.

South Africa (Africa)
Gathering information about aquifers surrounded by a grove of trees.

How can understanding water use by other living things on land help people manage their water supplies?

Java (Indonesia)
Studying tsunami data, sampling sediments, and creating models of effects on the island.

How can studying past events help cities and communities plan in the future?

Myanmar (Asia)
Training local people, including women, so the scientific work can continue.

Why might women and girls be more affected by water scarcity?

Kenya (Africa)
Locating sites where wells could be drilled to provide safe water.

How does making clean water available improve education?

India (Asia)
Installation of a weather station, stream gauges, soil moisture probes, and other measurement equipment.

How can adding measuring devices in a watershed decrease poverty?

Peru (South America)
Investigating flow of water to ensure food sources of the inhabitants.

How can understanding water resources help reduce hunger?

Australia
Gathering information about aquifers surrounded by a grove of trees.

How can understanding water use by other living things on land help people manage their water supplies?

Kenya (Africa)
Locating sites where wells could be drilled to provide safe water.

How does making clean water available improve education?

Geoscientists without Borders® (GWB) is a program that uses Earth Science to help communities to solve problems, including water scarcity. Geoscientists collect, process, and interpret data to provide information and resources that result in sustainable humanitarian benefit to the community. In addition to water management, other GWB projects address problems related to pollution mitigation, preparedness for natural hazards (earthquakes, tsunamis, landslides, volcanoes, etc.), archaeology, and more.

www.seg.org/gwb
People live better lives because of the geoscientists!
The examples discussed on this poster show that
clean water, quality education, equal opportunities,
and other aspects of life are improved by what geoscientists learn about the
Earth. These aspects of life are expressed through
the 17 United Nations Sustainable Development

Geoscientists without Borders® (GWB) has
sponsored humanitarian projects in many
parts of the world that support these goals.
The labeled areas on the map are where GWB
projects have taken place. Where on the map
are the places discussed on this poster? Where
have there been projects that are not discussed
on this poster? You can learn more about all the
projects funded by GWB by going to the GWB
website (https://seg.org/gwb).

GWB Water-Focused Projects and the United Nations Sustainable Development Goals

**SDG 1: No Poverty**
Water moves within one of Earth’s systems, called the
hydrosphere, that has many interacting parts—precipitation,
rivers, lakes, reservoirs, soil, plants, and many others. The
hydrosphere can be studied at a small scale (e.g., a single
lake or stream), or at a large scale (e.g., a region within a
country like India). A GWB project researched the Salri watershed of Madhya
Pradesh, India, by installing many kinds of measuring equipment, including a
weather station, stream gauges, soil moisture probes, and others. Information
from this equipment can help people anticipate the best ways to use water
in agriculture and other ways so that they have steady, dependable income.
Managing water well also helps people stay healthy so they can take advan-
tage of opportunities that allow them to enhance their livelihoods.

Read about this project: [https://go.seg.org/india-1](https://go.seg.org/india-1)

For more information: [https://bit.ly/ESWxSEG1](https://bit.ly/ESWxSEG1)

**SDG 2: Zero Hunger**
Many people depend on growing plants for the food they
eat, for raising livestock, and as a source of income. Plants
need water. In Zurite, Peru, rain is uneven through the year.
In many communities the gathering of water for household
use is a job done by women and girls. Where water is scarce
this can mean long journeys to sources of safe water and
difficult work carrying water back home. In Mon State,
Myanmar, the GWB water management project provided equipment and
software to find secure local water sources. The project also trained local
people, including women, so the scientific work could continue.

Read about this project: [https://go.seg.org/myanmar_earthquake](https://go.seg.org/myanmar_earthquake)

For more information: [https://bit.ly/ESWxSEG5](https://bit.ly/ESWxSEG5)

**SDG 4: Quality Education**
Lack of safe, clean drinking water can affect young people
in many ways. For example, if the water they use is contami-
nated, they can become sick, which means they have to stay
home from school. Others may have to help collect water
for their families instead of attending school. The Kakuma
Refugee Camp in Northwestern Kenya is home to about 200,000 people
who have been displaced from several surrounding countries. GWB funded
a project there to locate sites where wells could be drilled to provide water
to the community and local school children.

Read about this project: [https://go.seg.org/kenya-1](https://go.seg.org/kenya-1)


**SDG 5: Gender Equality**
There are many ways that water availability affects women.
In many communities the gathering of water for household
use is a job done by women and girls. Where water is scarce
this can mean long journeys to sources of safe water and
difficult work carrying water back home. In Mon State,
Myanmar, the GWB water management project provided equipment and
software to find secure local water sources. The project also trained local
people, including women, so the scientific work could continue.

Read about this project: [https://go.seg.org/myanmar_earthquake](https://go.seg.org/myanmar_earthquake)

For more information: [https://bit.ly/ESWxSEG5](https://bit.ly/ESWxSEG5)

**SDG 11: Sustainable Cities and Communities**
Understanding past natural events can help people predict
future events and prepare for them. A GWB project in Java,
Indonesia, studied data on more than 100 tsunamis that
occurred over 400 years, sampled sediments, and created
models. By understanding how seismic events trigger tsunamis,
how water from a tsunami moves over different surfaces, and how different
types of terrain affect water movement, people can better understand how
a future tsunami might affect specific communities. This allows the development
of science-based warning and evacuation plans, as well as education programs
so that people can know how to respond when there is the threat of a tsunami.

Read about this project: [https://go.seg.org/java-waves](https://go.seg.org/java-waves)


**SDG 15: Life on Land**
Water in wells comes from groundwater aquifers, which
may be depleted for many reasons. Most of those reasons
relate to human uses, like over-pumping from wells to serve
growing populations. At the Daypring Children’s Village in
South Africa, a grove of eucalyptus trees was suspected of
using a lot of water from the ground. It was thought that this invasive species
could be decreasing the amount of water that was available for the people
there. By studying aquifers in the area at different times of year, people can
understand the impact of plants on water availability and strike a balance
among the needs of all living things.

Read about this project: [https://go.seg.org/south-africa-1](https://go.seg.org/south-africa-1)


**SDG 3: Good Health and Well-being**
While about 70% of the Earth’s surface is covered by water,
most of that water is saltwater as in oceans. People need
freshwater to live. On Milingimbi Island in Australia, peo-
ple depend on water from aquifers during the dry season.
Water can be contaminated if saltwater seeps into the
aquifer that provides water to the well. This is called saltwater intrusion. Since
Milingimbi Island is surrounded by an ocean, understanding the movement
of saltwater in the ground can help people understand how to protect the
freshwater in wells that people need to stay healthy.

Read about this project: [https://go.seg.org/milingimbi-australia-1](https://go.seg.org/milingimbi-australia-1)

For more information: [https://bit.ly/ESWxSEG3](https://bit.ly/ESWxSEG3)

**SDG 7: Affordable and Clean Energy**
Projects funded by GWB by going to the GWB
website (https://seg.org/gwb).

**SDG 8: Decent Work and Economic Growth**
Treating wastewater from industrial plants can provide
water for many uses. Similarly, the GWB funded a project
in Mexico City that tests water quality and provides the
information that people can use to make decisions about
what to do with this water.

Read about this project: [https://go.seg.org/mexico-city](https://go.seg.org/mexico-city)

For more information: [https://bit.ly/ESWxSEG8](https://bit.ly/ESWxSEG8)

**SDG 9: Industry, Innovation and Infrastructure**
Pollution Mitigation

**SDG 10: Reduced Inequalities**

**SDG 14: Life Below Water**

**SDG 15: Life on Land**

**SDG 16: Peace and Justice, Strong Institutions**

**SDG 17: Partnerships for the Goals**

**SDG 18: Peace, Justice, and Strong Institutions**

**SDG 19: Peace and Justice, Strong Institutions**

**SDG 20: Peace and Justice, Strong Institutions**

**SDG 21: Peace and Justice, Strong Institutions**

**SDG 22: Peace and Justice, Strong Institutions**