Earth Science for a Sustainable World

american geosciences institute
connecting earth, science, and people
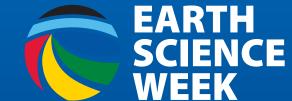
EARTH SCIENCE WEEK

Geoscience Supports the United Nations Sustainable Development Goals

This map shows the locations of a sample of initiatives that illustrate how the geosciences support specific Sustainable Development Goals (SDGs). Information about initiatives in these locations is provided through ArcGIS StoryMaps (see poster back).

www.earthsciweek.org

SDG 2: ZERO HUNGER

Chicago, Illinois, USA — Innovative urban farming techniques expand agriculture and increase access to food while reducing human impacts on the environment. Urban farming projects are also occurring in New York City, New York, and Detroit, Michigan.

SDG 6: CLEAN WATER AND SANITATION

Santa Monica, California, USA — Urban Waters Learning Network (UWLN) engages communities in the restoration of waterways and improving urban water quality. Other UWLN restoration projects take place in Denver, Colorado, and Matawan, New Jersey.

SDG 7: AFFORDABLE AND CLEAN ENERGY

Cerro Pabellon, Chile — Multiple data sources have been used to locate areas that could harness and benefit from the use of geothermal energy as a renewable energy source. There is also data from Paraguay, Argentina, and Bolivia that supports the use of geothermal energy.

SDG 11: SUSTAINABLE CITIES AND COMMUNITIES

Sydney, Australia — Urban greening has occurred over the past three decades which has resulted in benefits to both the environment and human health. There are still improvements to be made and targets to reach in the future.
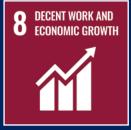
SDG 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Ningde, China — One of the largest lithium-ion battery manufacturing plants uses raw materials sourced from northern China, the Democratic Republic of the Congo, Chile, and Australia to produce rechargeable batteries. Recycling of lithium-ion batteries reduces the need for new raw materials.

SDG 13: CLIMATE ACTION

Hokkaido, Japan — Natural and artificial wetlands used as rice farms could help combat climate change by increasing biodiversity and providing material for biofuel. Urbanization and modernization of farming techniques may impact the future of rice farms.

SDG 14: LIFE BELOW WATER

Illes Medes, Spain — The Marine Ecosystem Restoration in Changing European Seas (MERCES) Project works to restore marine ecosystems and populations that have been negatively impacted by human activity. Illes Medes houses 9 of the 128 MERCES project sites across 12 European countries.

SDG 15: LIFE ON LAND

Kinshasa, Democratic Republic of the Congo — Environmental "hot spots" within tropical forests affected by deforestation are identified using quantitative and spatial data. Actions are being taken to reduce the destruction. Mitigation efforts are also taking place in Brazil and Indonesia.

After reviewing these initiatives, think about additional ways the geosciences can support these SDGs and others shown below.

9000
4000
2000
0
−6,000
−12,000

Approximate elevations and depths in meters

Map: USGS/J. Cody, using an Esri dataset with data from Airbus, USGS, NGA, NASA, NOAA, CGIAR, GEBCO, NCEAS, NLS, OS, NMA, Geodatastyrelsen, GSA, GSI and the GIS User Community.

https://sdgs.un.org/goals

1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS