

ArcGIS Solution for the SDGs

Supporting Esri's commitment to the SDGs

<https://doc.arcgis.com/en/arcgis-solutions/latest/reference/introduction-to-sustainable-development-goals.htm>

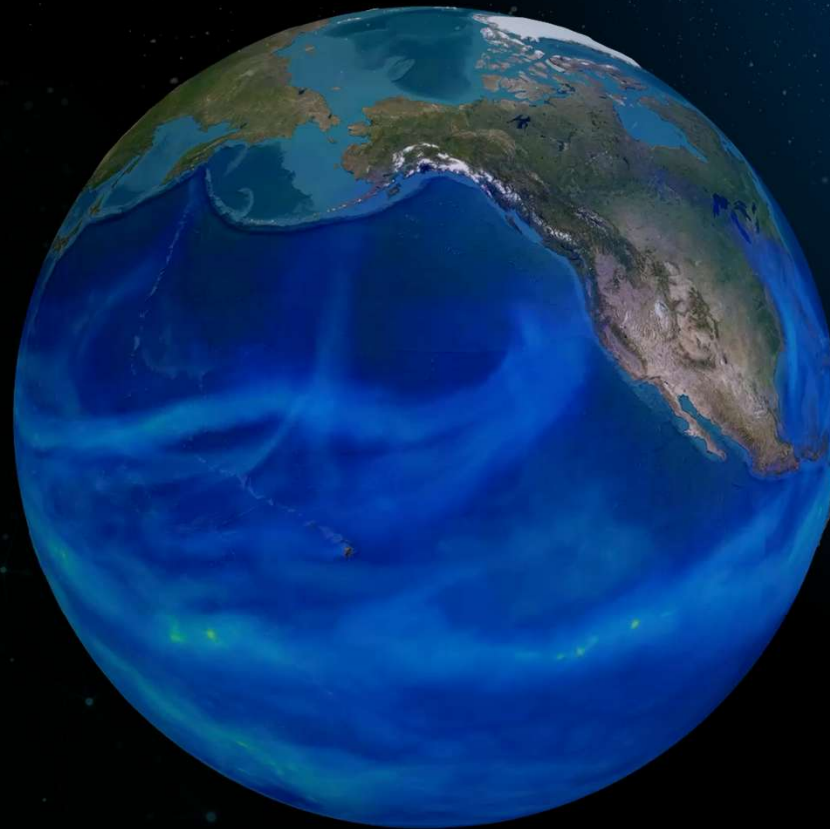


Purpose of Esri's SDG Initiatives

Democratize access to "timely, high-quality, and disaggregated data to drive targeted responses, help anticipate future needs, and shape needed actions" with geospatial context

Maps Tell Stories About Everything

Stimulating a Sense of Wonder and Curiosity



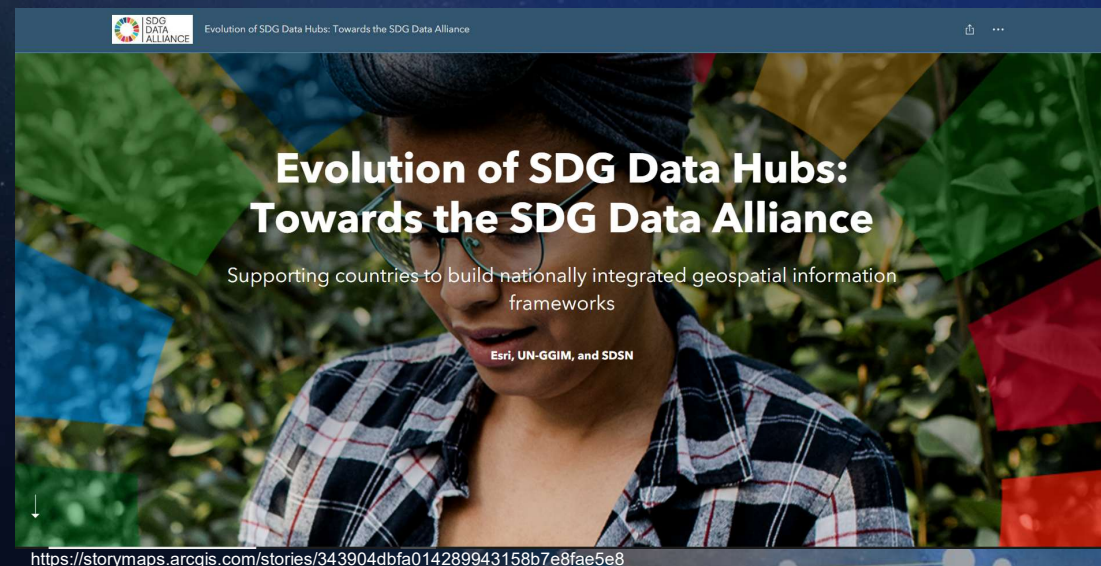
Data Courtesy of European Space Agency



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Context

- ArcGIS Solution for SDGs launched on 15 Nov 2022
- Builds off earlier collaboration with UN and members states on the “Federated Information System for the SDGs” (FIS4SDGs) Research Exercise Guided by the SDG Data Alliance
- Supports:
 - Global Development Agencies
 - Governments
 - International Organizations
 - Nonprofits and NGOs
 - Academia
 - Private Sector

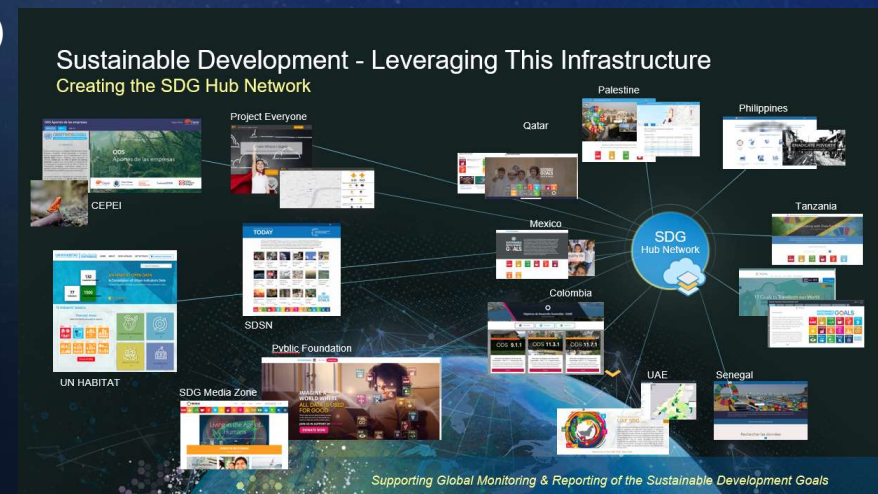




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Esri's SDG Approach - Partnership Driven

- Multistakeholder Partnerships
 - SDG Data Alliance
 - Academic Partners - SDSN, University of Minnesota, Other Esri University Partners
- Nonprofit Organizations and NGOs
 - Sustainable Development Solutions Network (SDSN)
 - Local2030 Islands Network
- Development Agencies
 - United Nations
 - Development Banks
- Private Sector



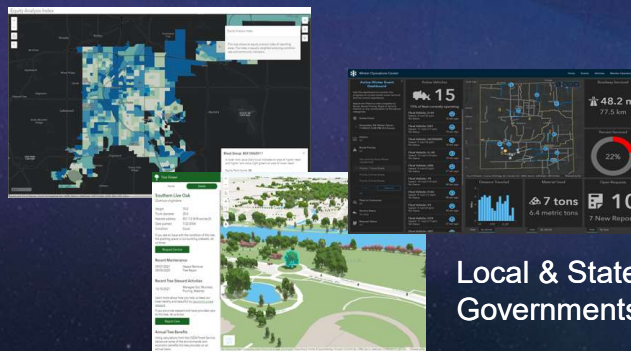


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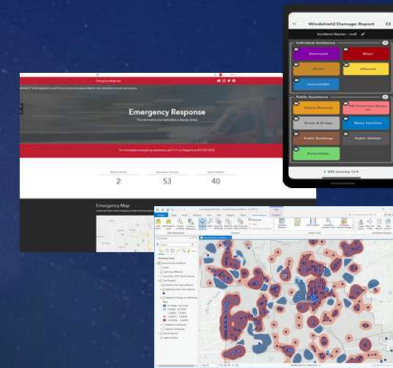
ArcGIS Solutions Ready-to-Use Applications and Configurations

Preconfigured

- Tools
- Data Models
- Apps
- Workflows
- Maps
- Initiatives
- Add-Ins
- Dashboards



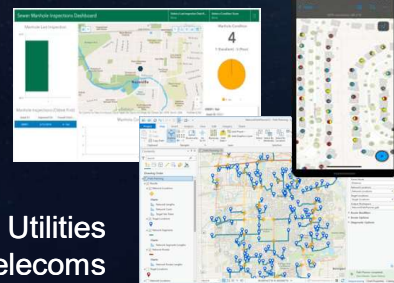
Local & State Governments



Emergency Management & Public Safety



Health & Human Services



Utilities & Telecoms



Defense & Security

Industries

- Land Records
- Planning and Development
- Public Works
- Emergency Management
- Utilities / Network Management
- Elections
- Natural Resources
- Conservation
- Transportation
- Defense
- Public Safety
- Telecommunications
- Health & Human Services

- Extensive (150+)
- Easy to Deploy
- Fully Supported
- ... Included as Part of ArcGIS

... Helping Organizations Quickly Realize Value

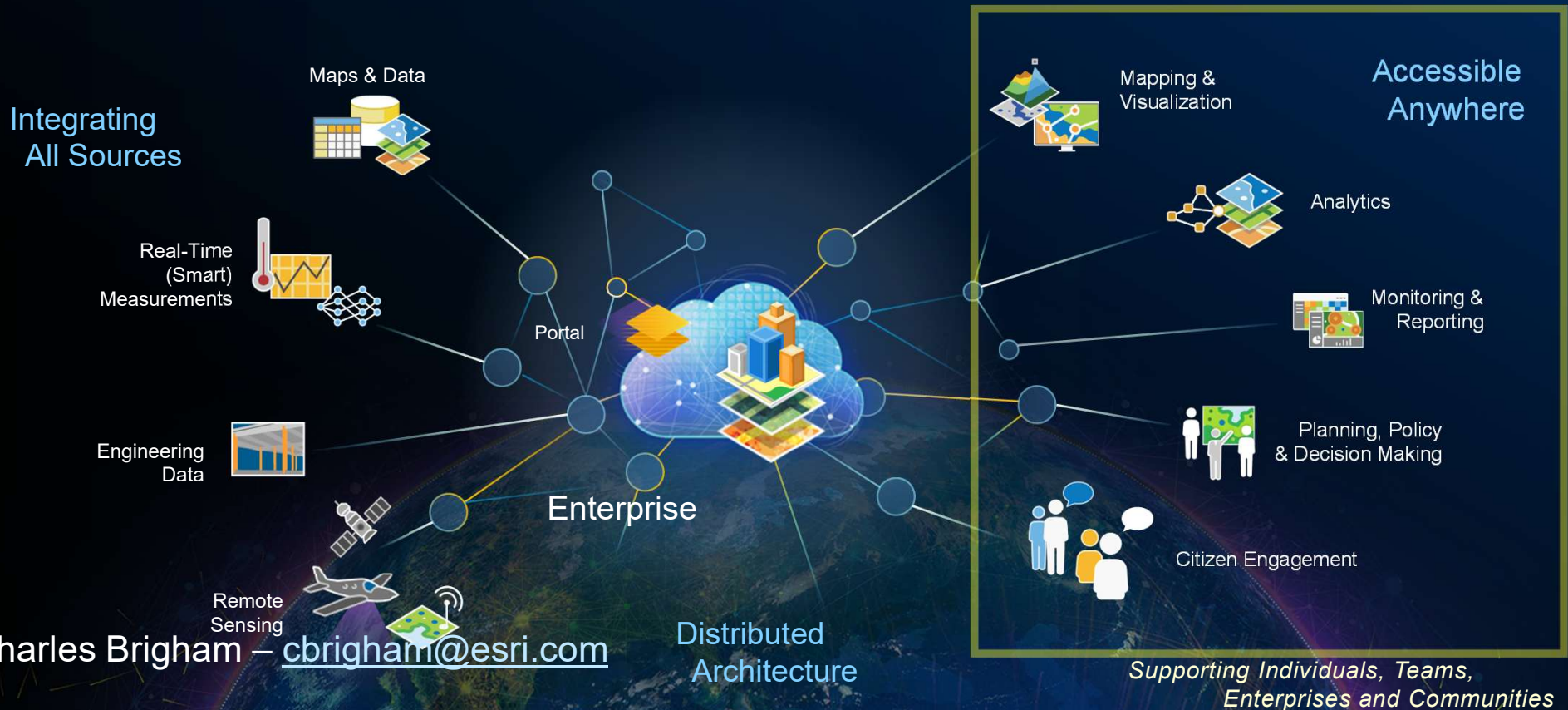
The Geographic Approach – essential to Sustainability

Integrates All the Factors



Enterprise GIS – Where does Hub Technology Fit?

Managing, Sharing and Applying Geographic Information



Hub Initiative Templates

Customizable, branded and modern websites for organizing and discovering information & tools.

Charts & Maps

StoryMaps

Authoritative Data

Surveys and Polls

Events

Dashboards

Teams

The screenshot displays the Los Angeles Vision Zero website with the following sections labeled on the right:

- Banner:** A header image with the text "Los Angeles Vision Zero" and "You can't see it."
- Narrative:** A text-based introduction to the initiative.
- Performance:** A dashboard with three charts: "Moving to a Safer Los Angeles" (donut chart), "Vision Zero Performance Dashboard" (donut chart), and a line graph showing "Vision Zero Performance Dashboard" over time.
- Apps:** A grid of four interactive map applications: "High-Risk Intersections", "Vision Zero in Neighborhoods", "Roadability in LA", and "Customize Your Vision Zero Los Angeles".
- Data Catalog:** A section titled "Indicators & Related Data" with three main categories: "Safety", "Transportation", and "Health".
- Maps:** A section titled "Understanding Our City" with four map tiles: "Threat Emergency in Los Angeles", "Los Angeles Transit Atlas", "Senior Population", and "Job Proximity Index".
- Ways to Engage:** A section titled "Be a Part of the Vision Zero Solution" with three sub-sections: "Join Us on Social Media", "Attend a Meeting", and "Spread the Word".
- Participating Agencies:** A footer section featuring logos for "VISION ZERO LOS ANGELES", "CALTRANS", "LADOT", and "Public Health".



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ArcGIS Solution for SDGs

KEY COMPONENTS

- Integrates Goal, Target, & Indicator ontology
- Thematic mapping preview
- SDG Indicator monitoring dashboard
- Community Engagement survey

RELATED APPLICATIONS

- VNR StoryMap
- Scorecard-style dashboard
- Indicator-level status reporting

The screenshot displays a web interface for tracking Sustainable Development Goals. The main heading is "What We Are Tracking" with a sub-heading "Select an indicator below to explore progress we are making on this Sustainable Development Goal." The selected indicator is "No Poverty" (Indicator 1.1.1: Proportion of the population living below the international poverty line). The dashboard includes a sidebar with a search bar and a list of US states. The main content area features a table with the following data:

Year	Subcategory	Value
2019	18 to 64 years	7
2018	18 to 64 years	6.9
2017	18 to 64 years	7.3
2016	18 to 64 years	8.1
2015	18 to 64 years	8.4
2014	18 to 64 years	8.8
2013	18 to 64 years	9.6
2012	18 to 64 years	13.4

At the bottom of the interface, there are tabs for "Chart", "Map", and "Table".

View the Solution on the [ArcGIS Solutions Gallery](#)



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Sustainable Development Goals

Focused Maps and Apps





Solution Requirements

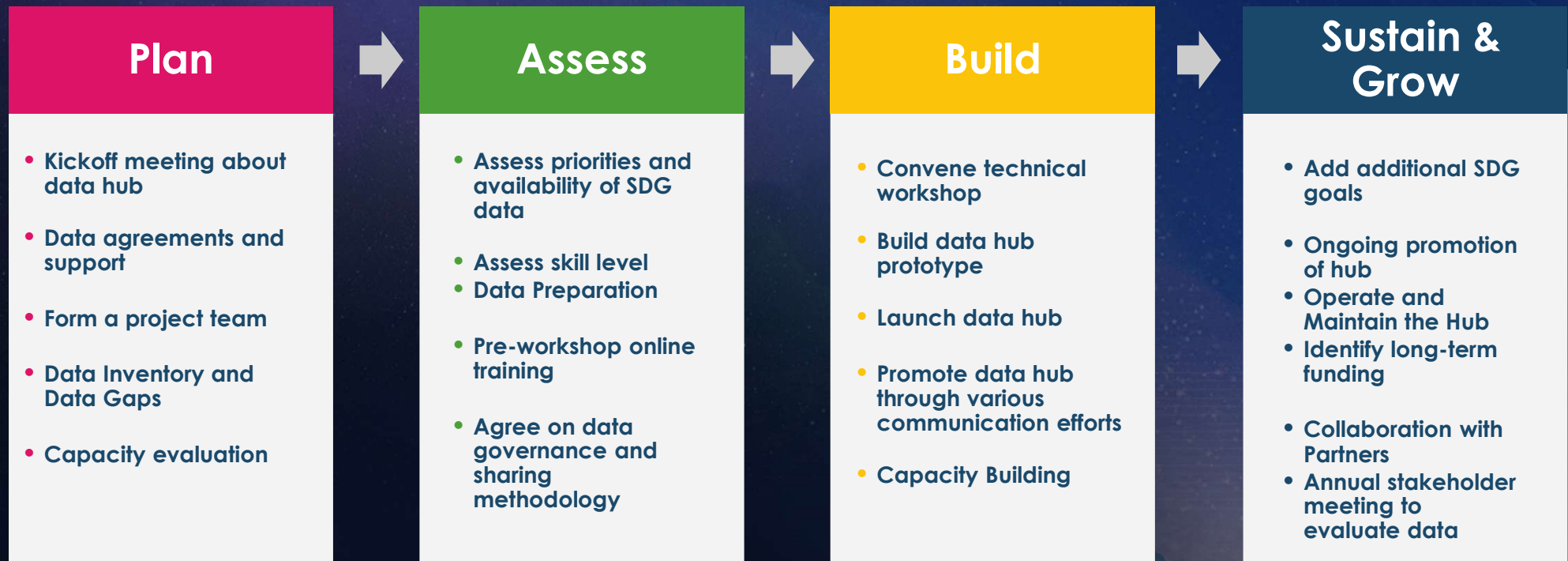
- ArcGIS Software requirement: 1 ArcGIS Online Creator named user
- Basic knowledge of ArcGIS Online
- Basic knowledge of Microsoft Excel
- Basic knowledge of SDGs or related KPI frameworks

learning resources online...

<https://doc.arcgis.com/en/arcgis-solutions/latest/reference/introduction-to-sustainable-development-goals.htm>



SDG Data Hub Implementation Process





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Current State

Current State

- Solution for the Sustainable Development Goals
 - An ArcGIS Solution supported in Online & Enterprise
 - Bring your own data & geography
- Voluntary Local/National Review (VL/NR) StoryMap Template
 - Get up and running with a StoryMap template to present on your progress on the SDGs
- Feature Service to SDG Schema Web App
 - Convert any feature service in ArcGIS to the required schema for the SDG Solution
 - Fast Data ETL from any feature service

Sustainable Development Goals

Deploy now | Share

Learn more about Sustainable Development Goals

Overview

Sustainable Development Goals can be used to share Development Goals, and their key indicators, with the world.

In 2015, the United Nations (UN) General Assembly agenda establishes 17 Sustainable Development Goals, and ensure that by 2030 all people enjoy peace, prosperity, and well-being. These goals address the most pressing global challenges of our time, including climate change, and violent conflicts have weakened the world's ability to address these crises and evaluating progress on resulting goals investment in timely, high-quality, and disaggregate and shape urgently needed actions.

Digital Voluntary SDG Review [Year]

Feature Service to SDG Solution

Export data from a feature service to use in your SDG Solution

Add Layer | Configure | Filter | Preview | Export

Select Layer: County Health Rankings 2023 - County, State, Nation

SDG Indicator Code: HEALTH_RNK

Map Attribute Fields: Select the fields in your feature service to the required SDG Schema schema fields.

Additional SDG Solution Values: Pre-populate SDG Solution Schema values for certain fields.

Category: HEALTH, Subcategory: RANK, Year: 2023

Indicator	geoid	value	year	category	subcategory
1	HEALTH_RNK	01001	9 2023	HEALTH	RANK
3	HEALTH_RNK	01003	3 2023	HEALTH	RANK
4	HEALTH_RNK	01005	62 2023	HEALTH	RANK
5	HEALTH_RNK	01007	51 2023	HEALTH	RANK
6	HEALTH_RNK	01009	18 2023	HEALTH	RANK
7	HEALTH_RNK	01011	63 2023	HEALTH	RANK
8	HEALTH_RNK	01013	56 2023	HEALTH	RANK
9	HEALTH_RNK	01015	22 2023	HEALTH	RANK
10	HEALTH_RNK	01017	37 2023	HEALTH	RANK
11	HEALTH_RNK	01019	35 2023	HEALTH	RANK



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Feature Layer to SDG Solution

Browse Feature Layers

Living Atlas

India: Fruit Production (2019-20)
Feature Layer

Overview

Summary
This layer shows fruit production statistics of India during 2019-20.

Status
Living Atlas Subscriber

Owner
Esri India

Sharing
Everyone (public)

Item updated
Oct 22, 2021

Description

Details

Layers (1)
Fruit Production_2019-20

India: Growth of Net State Domestic Product At Current Prices (2012-21)
Feature Layer | Last edited: Feb 24, 2022 | Living Atlas

India: Fruit Production (2019-20)
Feature Layer | Last edited: Oct 22, 2021 | Living Atlas | Subscriber

India: Production of Major Minerals Specified under MCDR Act (2018-21)
Feature Layer | Last edited: Mar 8, 2022 | Living Atlas

India: Major Crops Production (2011-21)
Feature Layer | Last edited: Mar 8, 2022 | Living Atlas

Close

Convert any feature service to the required schema for the SDG Solution



Feature Layer to SDG Solution

Feature Service to SDG Solution
Export data from a feature service to drop into your SDG Solution

Report an Issue | Adam Pfister | apfister_sdg

Add Layer | Select Layer
If your layer has multiple sublayers, select one

India: Fruit Production (2019-20) - Fruit Production 2019-20

Filter | Preview | Export

SDG Indicator Code
Enter in your SDG Indicator Code

2.1.1

Map Attribute Fields
Select the fields in your feature service to the required SDG Solution schema fields

Replace field

geoid fid	objectid (objectid)
State	State (state)
Country	Country (country)
Item	Item (item)
Fruit Cultivation Area (Ha)	area_ha (area_ha)
Production (MT)	production_mt (production_mt)
shape	shape (shape)
indiadata.sde.IN_ST_FruitProduction_2019_20.area	indiadata.sde.IN_ST_FruitProduction_2019_20.area

Cancel

India: Fruit Production (2019-20) - Fruit Production 2019-20

Country	India
Fruit Cultivation Area (Ha)	385.69
indiadata.sde.IN_ST_FruitProduction_2019_20.area	308,255.29
Item	Fruits
Production (MT)	7,916.39
State	Madhya Pradesh

Convert any feature service to the required schema for the SDG Solution



Feature Layer to SDG Solution

Feature Service to SDG Solution
Export data from a feature service to drop into your SDG Solution

Report an Issue Adam Pfister
apfister_sdg

Add Layer

Select Layer
If your layer has multiple sublayers, select one

India: Fruit Production (2019-20) - Fruit Production 2019-20

SDG Indicator Code
Enter in your SDG Indicator Code

2.1.1

Map Attribute Fields
Select the fields in your feature service to the required SDG Solution schema fields

Replace field

objectId (objectId)	objectId
State (state)	State
Country (country)	Country
Item (item)	Item
Fruit Cultivation Area (Ha) (area_ha)	Category
Production (MT) (production_mt)	Subcategory
shape (shape)	Year

Additional Fields

indiadata.sde.IN_ST_FruitProduction_2019_20.area (indiadata.sde.IN_ST_FruitProduction_2019_20.area)

Cancel

India: Fruit Production (2019-20) - Fruit Production 2019-20

Country	India
Fruit Cultivation Area (Ha)	385.69
indiadata.sde.IN_ST_FruitProduction_2019_20.area	308,255.29
Item	Fruits
Production (MT)	7,916.39
State	Madhya Pradesh

Convert any feature service to the required schema for the SDG Solution



Feature Layer to SDG Solution

Feature Service to SDG Solution
Export data from a feature service to drop into your SDG Solution

Report an Issue | Adam Pfister | apfister_sdg

Select Layer
If your layer has multiple sublayers, select one

India: Fruit Production (2019-20) - Fruit Production 2019-20

SDG Indicator Code
Enter in your SDG Indicator Code

2.1.1

Map Attribute Fields
Select the fields in your feature service to the required SDG Solution schema fields

Click to set geoid

geoid field set to State

Click to set value

value field set to Production (MT)

Additional SDG Solution Values
Pre-populate SDG Solution Schema values for certain fields

Category: Fruits

Subcategory: All

Year: 2020

Add Additional Attribute Fields
Select any additional fields to include in the export

Map: India: Fruit Production (2019-20) - Fruit Production 2019-20

Export Preview (Total: 36 | Selection: 0)

indicator	geoid	value	year	category
2.1.1	Kerala	1,731.44	2020	Fruits
2.1.1	Goa		2020	Fruits
2.1.1	Mizoram	344.91	2020	Fruits
2.1.1	Odisha	1,917.07	2020	Fruits
2.1.1	Karnataka	7,055.4	2020	Fruits
2.1.1	Sikkim	55.45	2020	Fruits
2.1.1	West Bengal	3,614.14	2020	Fruits
2.1.1	Nagaland	315.05	2020	Fruits
2.1.1	Meghalaya	393.51	2020	Fruits
2.1.1	Arunachal Pradesh	125.84	2020	Fruits
2.1.1	Tamil Nadu	5,662.37	2020	Fruits
2.1.1	Jharkhand	1,148.11	2020	Fruits
2.1.1	Assam	2,542.3	2020	Fruits

Convert any feature service to the required schema for the SDG Solution



Feature Layer to SDG Solution

The screenshot displays the 'Feature Service to SDG Solution' interface. On the left, a data table lists fruit production values for various Indian states in 2020. On the right, a map of India shows the geographical distribution of these values, with a pop-up window providing summary statistics for India's fruit production in 2019-20.

Indicator	geoid	value	year	category	subcategory
2.1.1	Kerala	1731.44	2020	Fruits	All
2.1.1	Goa	344.91	2020	Fruits	All
2.1.1	Mizoram	1917.07	2020	Fruits	All
2.1.1	Odisha	7055.4	2020	Fruits	All
2.1.1	Karnataka	55.45	2020	Fruits	All
2.1.1	Sikkim	3614.14	2020	Fruits	All
2.1.1	West Bengal	315.05	2020	Fruits	All
2.1.1	Nagaland	393.51	2020	Fruits	All
2.1.1	Meghalaya	125.84	2020	Fruits	All
2.1.1	Arunachal Pradesh	5662.37	2020	Fruits	All
2.1.1	Tamil Nadu	1148.11	2020	Fruits	All
2.1.1	Jharkhand	2562.3	2020	Fruits	All
2.1.1	Assam	562.46	2020	Fruits	All
2.1.1	Tripura	527.97	2020	Fruits	All
2.1.1	Manipur	2480.64	2020	Fruits	All
2.1.1	Chhattisgarh	9253.75	2020	Fruits	All
2.1.1	Gujarat	4256.21	2020	Fruits	All
2.1.1	Bihar	2106.12	2020	Fruits	All
2.1.1	Punjab	1197.97	2020	Fruits	All
2.1.1	Haryana	10952.73	2020	Fruits	All
2.1.1	Uttar Pradesh	2020	2020	Fruits	All
2.1.1	Ladakh	2541.16	2020	Fruits	All
2.1.1	Jammu And Kashmir	1004.6	2020	Fruits	All
2.1.1	Rajasthan	2020	2020	Fruits	All
2.1.1	Delhi	7916.39	2020	Fruits	All
2.1.1	Madhya Pradesh	7916.39	2020	Fruits	All

India: Fruit Production (2019-20) - Fruit Production 2019-20:

- Country: India
- Fruit Cultivation Area (Ha): 385.69
- India: data: sds: IN_ST_Fr: 308 255.29
- area: 308 255.29
- Item: Fruits
- Production (MT): 7,916.39
- State: Madhya Pradesh

Export Preview (Total: 36 | Selection: 0)

Indicator	geoid	value	year	category
2.1.1	Kerala	1,731.44	2020	Fruits
2.1.1	Goa	344.91	2020	Fruits
2.1.1	Mizoram	1,917.07	2020	Fruits
2.1.1	Odisha	7,055.4	2020	Fruits
2.1.1	Karnataka	55.45	2020	Fruits
2.1.1	Sikkim	3,614.14	2020	Fruits
2.1.1	West Bengal	315.05	2020	Fruits
2.1.1	Nagaland	393.51	2020	Fruits
2.1.1	Meghalaya	125.84	2020	Fruits
2.1.1	Arunachal Pradesh	5,662.37	2020	Fruits
2.1.1	Jharkhand	1,148.11	2020	Fruits
2.1.1	Assam	2,562.3	2020	Fruits

Convert any feature service to the required schema for the SDG Solution

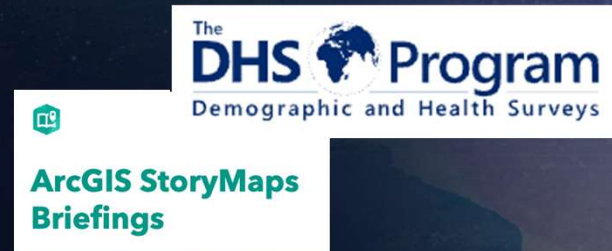
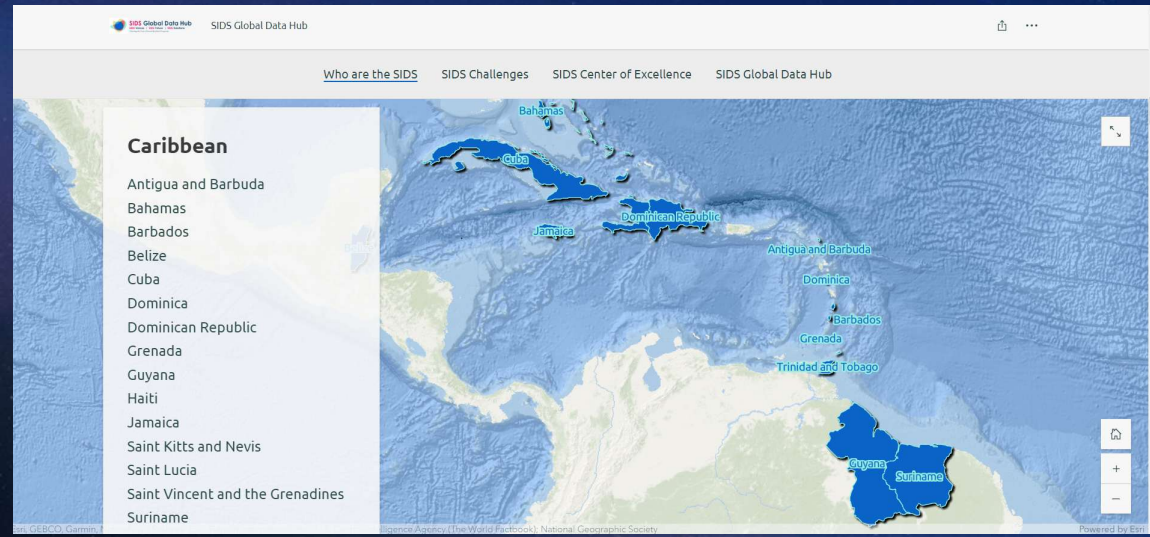


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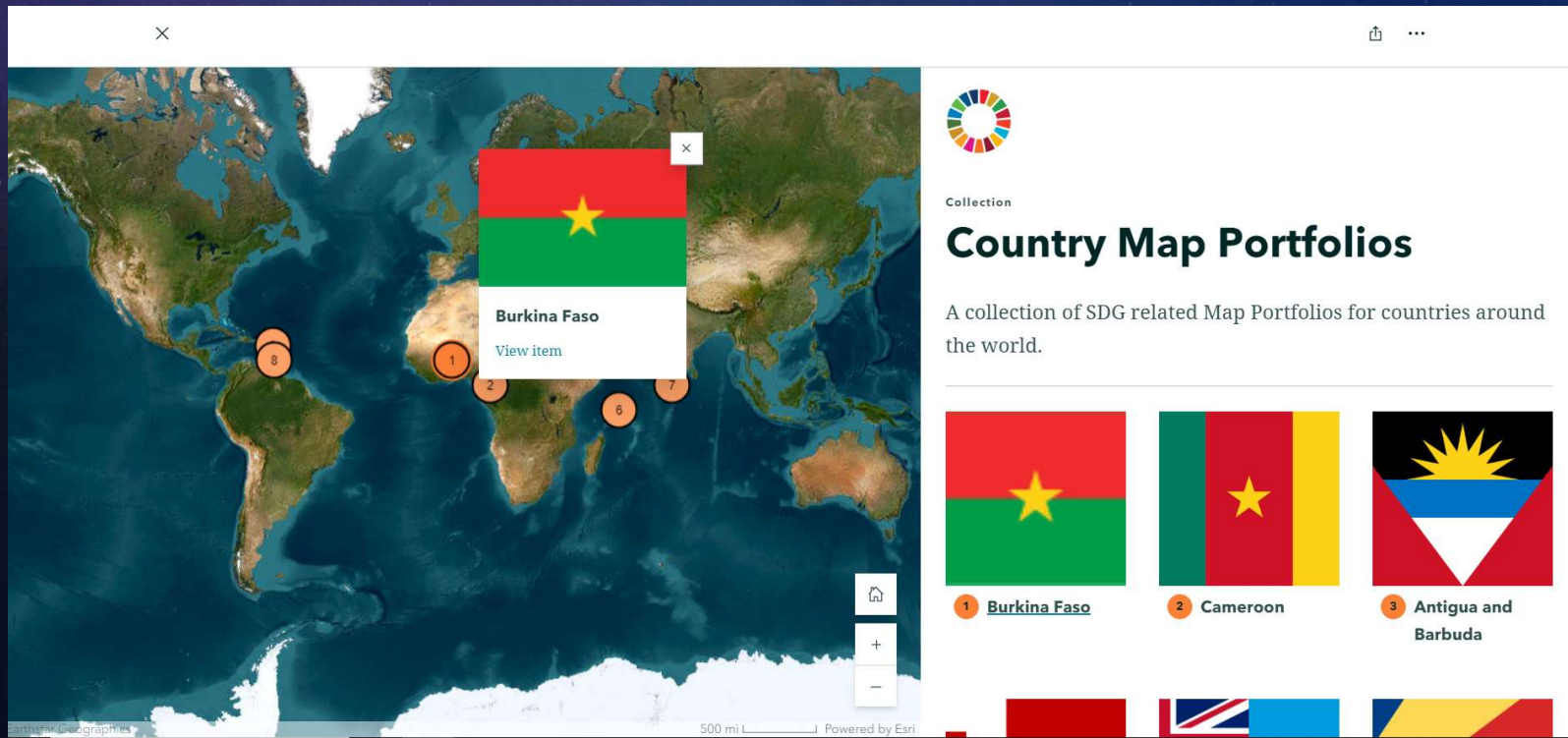
Ongoing...

In process

- Map Portfolio Application
 - Executive Briefing Application
 - Solutions for Development Planning and Decision-Making
- Dynamic Mapping Visualization Web app
 - Easily configured to work with the SDG Solution schema
 - Immediate visualization of indicators, categories, and subcategories
 - Open Source & minimal setup as a target
- USAID DHS to SDG Data Schema ETL
 - Similar to Feature Service to SDG Schema web app
- Calculating SDG Indicators
 - Making use of the large catalogs of data
- Open to ideas....



Map Portfolios – Extending to other data catalogs



The image shows a web application interface. On the left is a world map with several orange circular markers numbered 1 through 8. A popup window is open over Burkina Faso, displaying its flag (red, green, and white horizontal stripes with a yellow star in the center) and the text "Burkina Faso" and "View item". On the right is a sidebar with a white background. At the top of the sidebar is a colorful circular logo. Below it, the text "Collection" is followed by the title "Country Map Portfolios" in a large, bold font. Underneath the title is a short description: "A collection of SDG related Map Portfolios for countries around the world." Below the text are three large flag icons, each with a numbered circle to its left: 1 Burkina Faso, 2 Cameroon, and 3 Antigua and Barbuda. At the bottom of the sidebar, there are three smaller flag icons: a red one, a Union Jack, and a yellow and blue one.

Map Portfolios – Extending to other data catalogs

The screenshot shows a web interface for "Country Map Portfolios". At the top, there is a logo for "Country Map Portfolios" and a navigation bar with "01 / 08" and a share icon. Below the navigation bar, the Burkina Faso flag is displayed on the left, followed by the text "Collection" and "Burkina Faso Map Portfolio". A "Get started" button is located below the title. To the right of the title, there are six map thumbnails arranged in a 2x3 grid, each with a numbered label: 1. Undernourished, 2. Population, 3. Protected Areas, 4. Biodiversity Intactness, 5. Livestock, and 6. Wildland-Urban Interface. A seventh map thumbnail is partially visible at the bottom left.

Country Map Portfolios

01 / 08

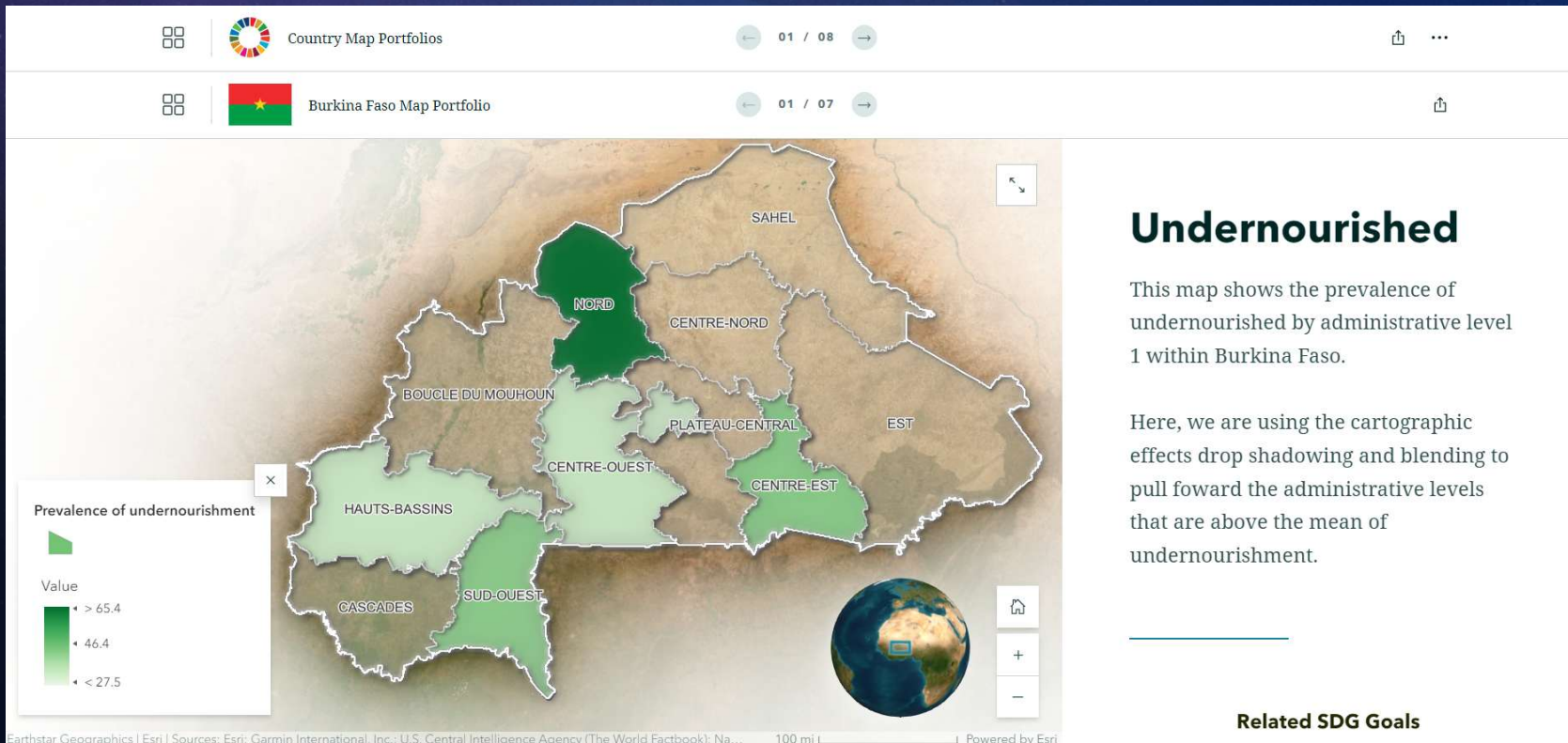
Collection

Burkina Faso Map Portfolio

Get started

- 1 Undernourished
- 2 Population
- 3 Protected Areas
- 4 Biodiversity Intactness
- 5 Livestock
- 6 Wildland-Urban Interface

Map Portfolios – Extending to other data catalogs





ArcGIS Solution for the SDGs

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