

International Workshop on Sustainable Development Indicators

New sources of data for SDG monitoring: The use of geospatial information

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Mexico's Open Data Cube project

- **INEGI** will initiate a face-to-face collaboration with **Geoscience Australia** to detail a possible local implementation process in Mexico
- **Goal**
 - ✓ Implement Open Data Cube's open source technology, and adopt it in INEGI's processes related to satellite images
 - The technology includes a platform for the storage, organization, management and analysis of satellite images
- **Expected benefits**
 - ✓ Exploitation of the true potential of satellite images
 - ✓ Promote more timely and accessible information
 - ✓ Encourage exchange of data analysis methodologies

Mexico's Open Data Cube project

Forests



Farming



Wetlands



Urban growth



15.3.1 Proportion of land that is degraded over total land area (II)

2.4.1 Proportion of agricultural area under productive and sustainable agriculture (III)

6.6.1 Change in the extent of water-related ecosystems over time (II)

11.3.1 Ratio of land consumption rate to population growth rate (II)

Indicator 15.1.1 Forest area as a proportion of total land area

Example of deforestation

Marqués de Comillas, Chiapas
Satellite images (2006 and 2013)





INDICATOR 2.4.1

Proportion of agricultural area under productive and sustainable agriculture

Tier III

Conceptual issues

Five principles of sustainable food and agriculture (FAO):

- Improving efficiency in the use of resources is crucial to sustainable agriculture
- Sustainability requires direct action to conserve, protect and enhance natural resources
- Agriculture that fails to protect and improve rural livelihoods, equity and social well-being is unsustainable
- Enhanced resilience of people, communities and ecosystems is key to sustainable agriculture
- Sustainable food and agriculture requires responsible and effective governance mechanisms

Conceptual issues

Some proxy definitions:

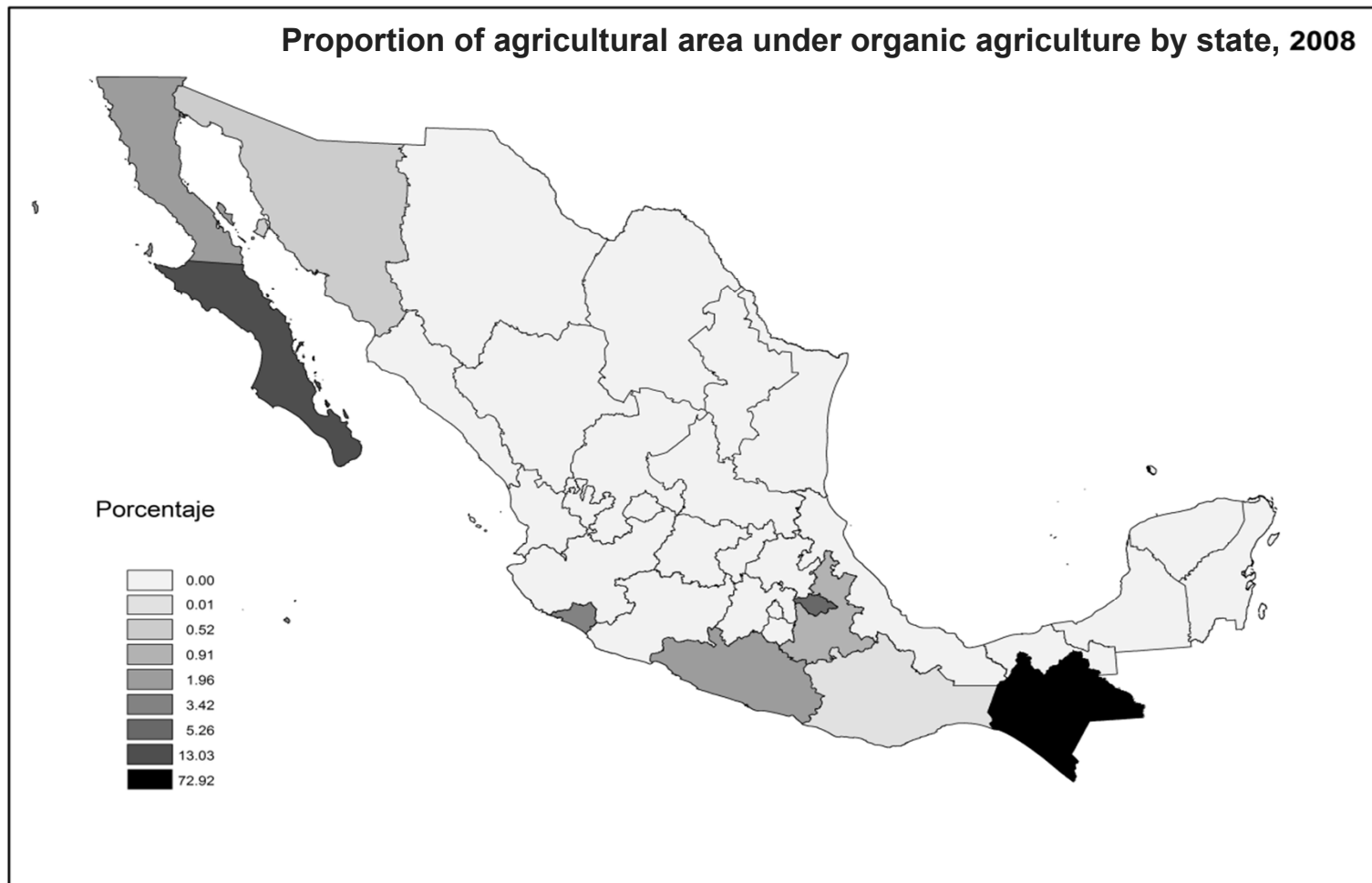
- **Organic agriculture** is a production system that tries to make the most of farm's resources, emphasizing soil fertility and biological activity and, at the same time, minimizing the use of non-renewable resources, fertilizers, and synthetic pesticides to protect the environment and human health (FAO)
- **Protected agriculture** is one that is carried out under production methods that help to exercise a certain degree of control over diverse environmental factors, thereby minimizing the restrictions that bad weather conditions cause on crops (Agriculture Ministry)

Organic agriculture

Organic agriculture planted area by state
(Hectares)

Concept	2008	2009	2010	2011	2012	2013P
Sown surface	11 268	13 217	17 151	17 236	26 385	24 454
Baja California	221	591	289	277	2 448	1 897
Baja California Sur	1 468	1 269	1403	1 560	1 505	1 020
Colima	385	385	385	258	258	258
Chiapas	8 217	10 588	11 105	11 125	11 162	11 062
Guerrero	221	0	0	0	0	0
Jalisco	0	0	0	0	229	59
Nayarit	0	0	0	0	4 906	4 700
Oaxaca	1	0	3 229	3 232	4 941	5 284
Puebla	103	370	740	757	752	164
Sinaloa	0	0	0	0	0	10
Sonora	59	14	0	0	0	0
Tamaulipas	0	0	0	0	150	0
Tlaxcala	593	0	0	27	35	1
	2008	2009	2010	2011	2012	2013P
National (%)	0.051	0.061	0.078	0.078	0.120	0.111

% of organic agriculture planted area



% of protected agriculture planted area

