


Transforming our world -
The 2030 Agenda For
Sustainable Development




Kunming Forum on UN-GGIM

Cities of the Future: Smart, Resilient and Sustainable

Visioning an Integrative Data Ecosystem for the Future


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Cities of the Future...



Since 2007 more than half the world's population live in cities, where 80% of global GDP is now generated. By 2050, 2 out of 3 people will live in cities, with 90% of that growth in Asia and Africa.



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Cities of the Future...

80%

of global economic activity generated in cities – mostly in industry and services benefiting from density

2 billion

additional residents in cities between 2000-2030

1 billion

live in slums today to be near jobs and opportunity

1½ billion

exposed to cyclones and earthquakes in large cities by 2050 (up from 680 million 2000)

1.2 million km²

of new urban built up area by 2030—equivalent to a whole new world; rapid spatial expansion makes it difficult to provide services, houses, and transport

80%

of Greenhouse Gas emissions +

70%

of energy consumption is attributable to cities.

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Cities of the Future...

World Bank data show that 500 million people were lifted out of poverty in China between 1981 (then 81%) and 2012, when the number of people living on less than \$1.90 a day fell to 6.5%.

Extrapolation of World Bank data estimates 4.1% of population of China below poverty line in 2014, compared to 13.5% of US citizens from the US Census Bureau.

“look for the basic reasons for China’s success in poverty reduction. Its improvements were achieved by urban migration, better transportation infrastructure and the subsequent relocation of poor people from certain regions to more developed urban areas, where employment and improved access to education is available. An economy on the move has triggered employment opportunities for millions”

Chris Peterson

US is ahead of China — in poverty stakes

Statistics can be a blur, but recently one piece of data stood out like a beacon. According to World Bank statistics, China now has fewer people living below the poverty line than the United States.

China Daily, 6-7 May 2017

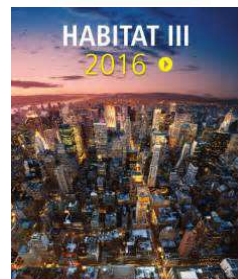
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Cities of the Future...

Urbanization is not only an outcome of development, but a formidable engine to achieve development. Cities are key to tackling global challenges, such as poverty, social inequalities, and climate change. With more than 80% of global GDP generated in cities, urbanization, if managed well can contribute to sustainable and inclusive growth, in harmony with nature, by addressing inequalities, increasing productivity, and promoting job creation, social well-being, citizen participation, innovation and emerging ideas.

The battle for sustainable development will be won or lost in cities. By 2050, the urban population alone will be larger than the current total world population, posing massive sustainability challenges in terms of housing, infrastructure, basic services, and jobs among others. There is a need for a radical paradigm shift in the way cities and human settlements are planned, developed, governed and managed. The decisions we make today will shape our common urban future.



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A bit of history...rewinding the clock...

"I believe we need a 'Digital Earth' - a multi-resolution three-dimensional representation of the planet, into which we can embed vast quantities of geo-referenced data.

Imagine a young child going to a Digital Earth exhibit at a local museum. After donning a head-mounted display, she sees Earth as it appears from space. Using a data glove, she zooms in, using higher and higher levels of resolution, to see continents, then regions, countries, cities, and finally individual houses, trees, and other natural and man-made objects.

We have an unparalleled opportunity to turn a flood of raw data into understandable information about our society and our planet. This data will include not only high-resolution satellite imagery of the planet, digital maps, and economic, social, and demographic information. If we are successful, it will have broad societal and commercial benefits in areas such as education, decision-making for a sustainable future, land-use planning, agricultural, and crisis management; and to collaborate on the long-term environmental challenges we face."

Al Gore, 1998: The Digital Earth: Understanding our planet in the 21st Century

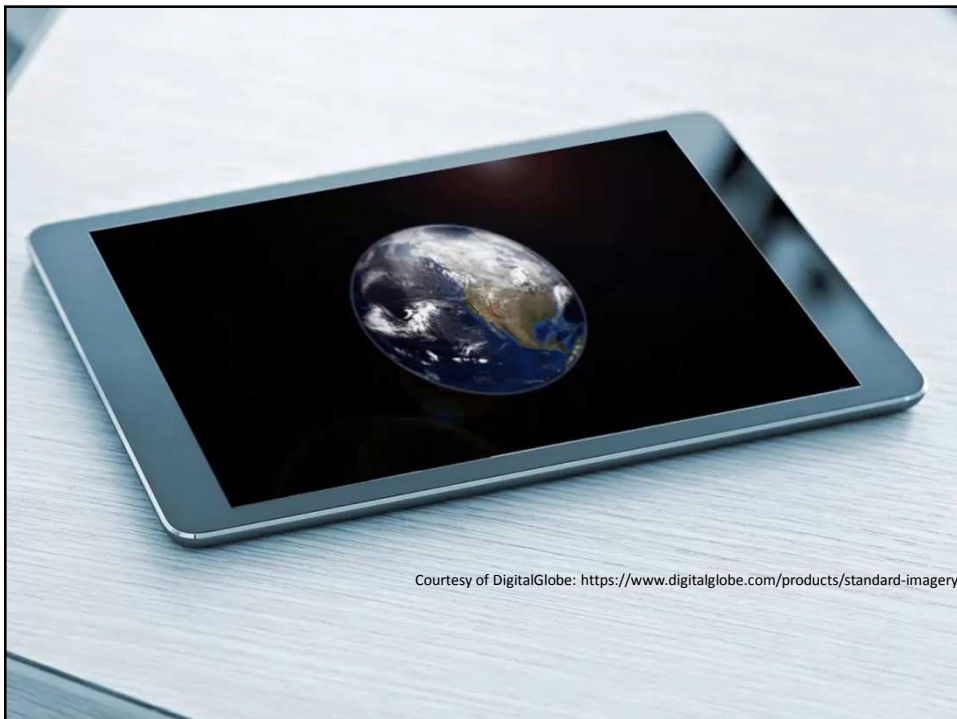
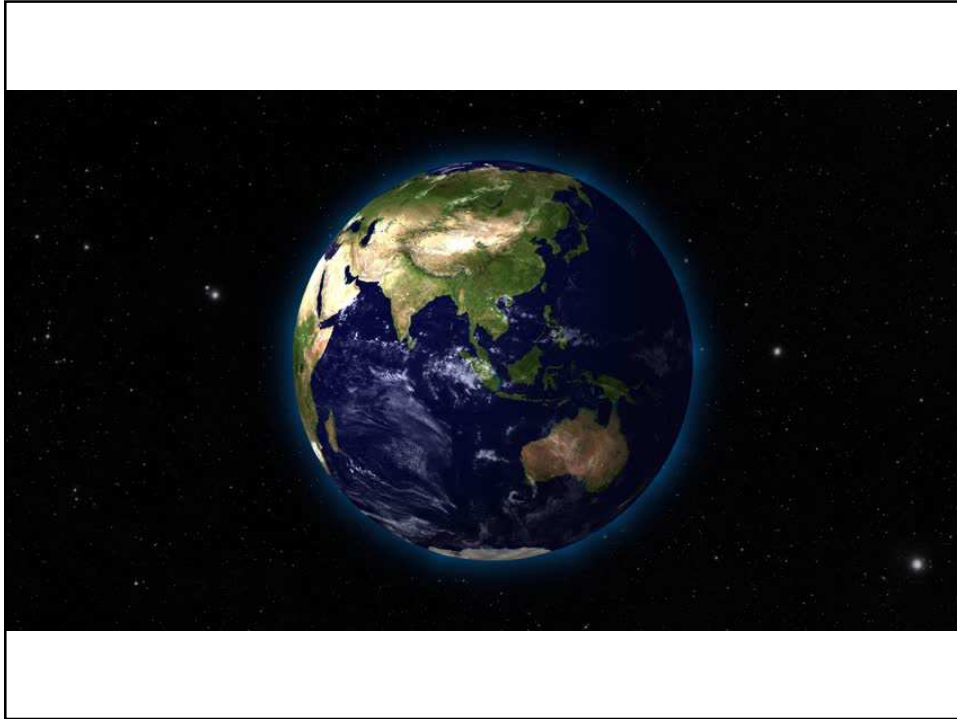


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Courtesy of DigitalGlobe: <https://www.digitalglobe.com/products/standard-imagery>

Technology and society are driving digital transformation, and targeted towards smart cities, but are we yet leveraging this new 'data ecosystem' effectively?

Cities of the future will be integrative data ecosystems

generating and consuming massive amounts of data related to people, their place, and their environment

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Global development policy framework

United Nations Framework Convention on Climate Change

Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda)

UNITED NATIONS SUSTAINABLE DEVELOPMENT SUMMIT 2015 25 - 27 SEPTEMBER

UNITED NATIONS PARIS CLIMATE AGREEMENT SIGNING CEREMONY 22 APRIL 2016

Sendai Framework for Disaster Risk Reduction 2015 - 2030

HABITAT III 2016

TRANSFORMING OUR WORLD: THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

THE OCEAN CONFERENCE UNITED NATIONS, NEW YORK, 5-9 JUNE 2017

ISLAND VOICES GLOBAL CHOICES UN Conference on Small Island Developing States Apia, Samoa | 2014

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SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

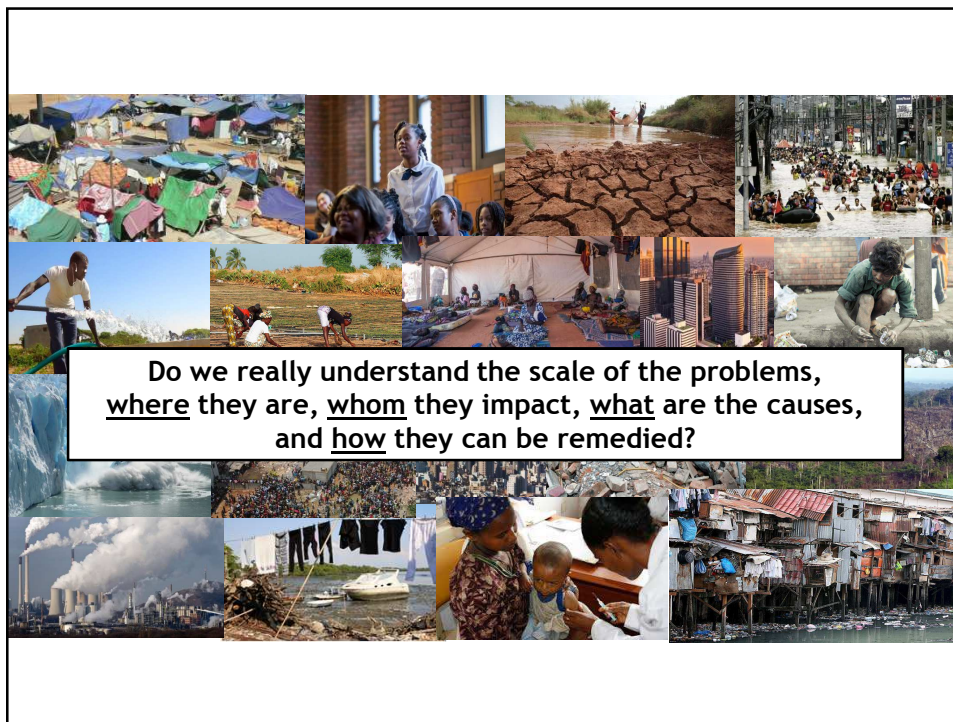
17 PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

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GLOBAL DEVELOPMENT POLICY FRAMEWORK				
The 2030 Agenda for Sustainable Development	Sendai Framework for Disaster Risk Reduction 2015-2030	SIDS Accelerated Modalities of Action (SAMOA) Pathway	Paris Agreement on Climate Change	HABITAT III Urban Agenda

How does Digital Transformation

Achieve Sustainable Development

How do we bridge the Digital Divide?

Transforming our World: The 2030 Agenda for Sustainable Development



Follow up and review:

76. We will support developing countries, particularly African countries, LDCs, SIDS and LLDCs, in strengthening the capacity of national statistical offices and data systems to ensure access to high quality, timely, reliable and disaggregated data.

We will promote transparent and accountable scaling-up of appropriate public-private cooperation to exploit the contribution to be made by a wide range of data, including Earth observations and geospatial information, while ensuring national ownership in supporting and tracking progress.



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Data, monitoring and accountability:

17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.



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Habitat III - New Urban Agenda



156. The use of digital platforms and tools, including *geospatial information systems*, will be encouraged to improve long-term integrated urban and territorial planning and design, *land administration and management*, and access to urban and metropolitan services.

159. We will support the role and enhanced capacity of national, sub-national, and local-governments in data collection, mapping, analysis, and dissemination, as well as in promoting evidence-based governance, building on a shared knowledge base using both globally comparable as well as locally generated data, including through censuses, household surveys, population registers, community-based monitoring processes and other relevant sources, *disaggregated* by income, sex, age, race, ethnicity, migration status, disability, *geographic location*, and other characteristics relevant in national, sub-national, and local contexts.



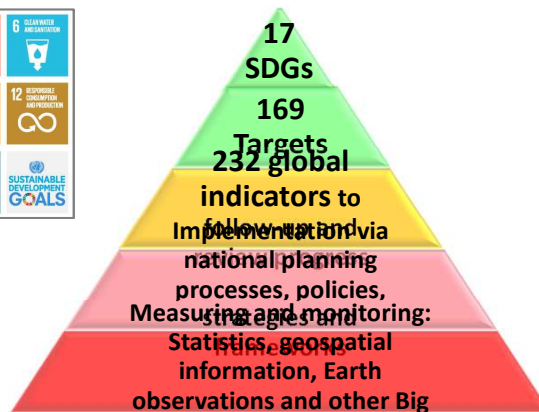
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2030 Agenda: Goals, targets, indicators



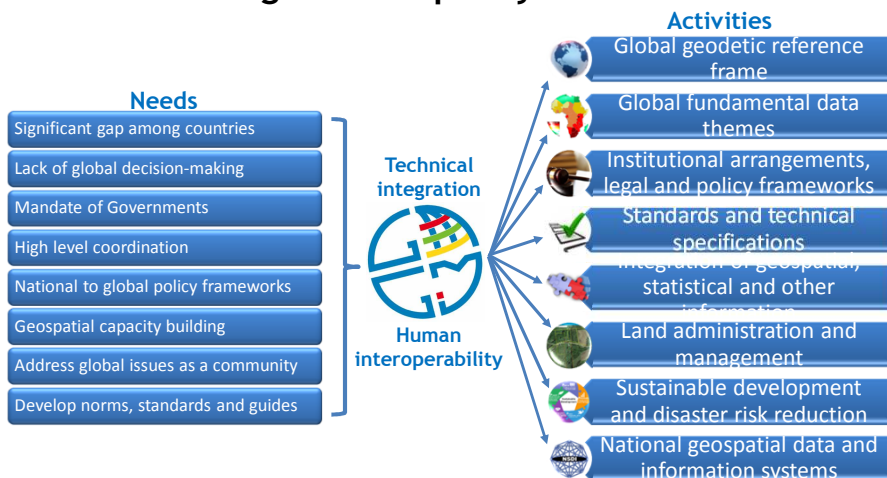
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UN-GGIM: Integration of policy needs and activities



UN-GGIM: Global geospatial policy framework



2017-2021 Strategic Framework

CONTEXT	VISION	<i>Positioning geospatial information to address global challenges</i>				
	MISSION	<i>Operating within agreed policies and institutional arrangements, and as an interconnected global community of practice, the Committee of Experts will ensure that geospatial information and resources are coordinated, maintained, accessible, and able to be used effectively and efficiently by Member States and society to address key global challenges in a timely manner</i>				
	MANDATED STRATEGIC OBJECTIVES	Provide leadership in setting the agenda for the development of global geospatial information and to promote its use to address key global challenges	Provide a forum for coordination and dialogue with and among Member States and relevant international organizations on enhanced cooperation	Provide a platform for the development of effective strategies to build and strengthen national capacity and capability concerning geospatial information, especially in developing countries	Propose work-plans, frameworks and guidelines to promote common principles, policies, methods, standards and mechanisms for the interoperability and use of geospatial data and services	Make joint decisions and set the direction for the production and use of geospatial information within and across national, regional and global policy frameworks



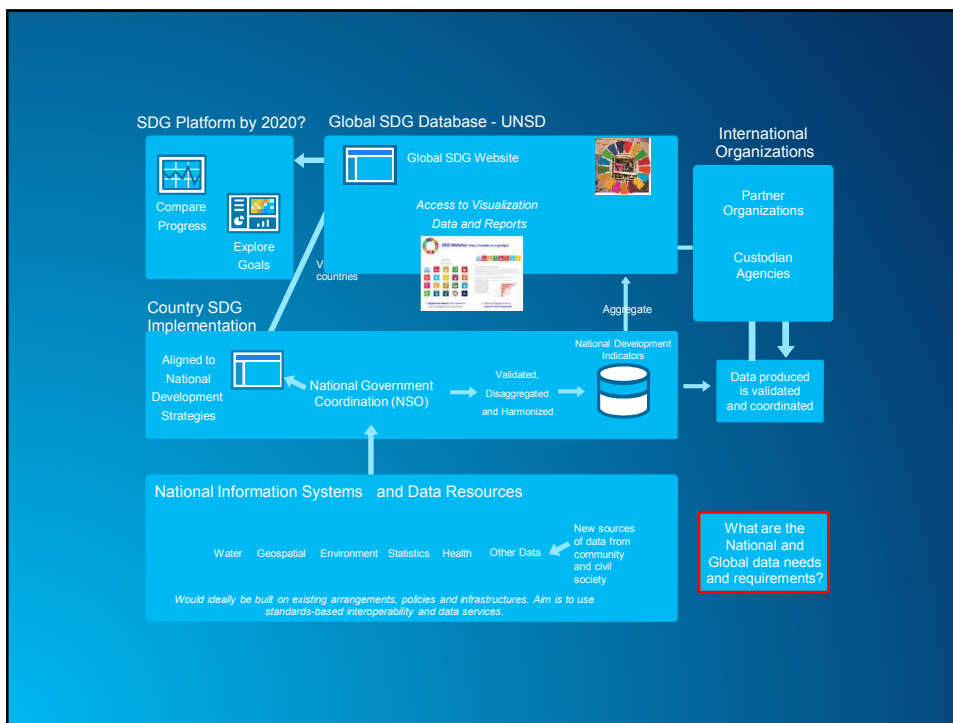
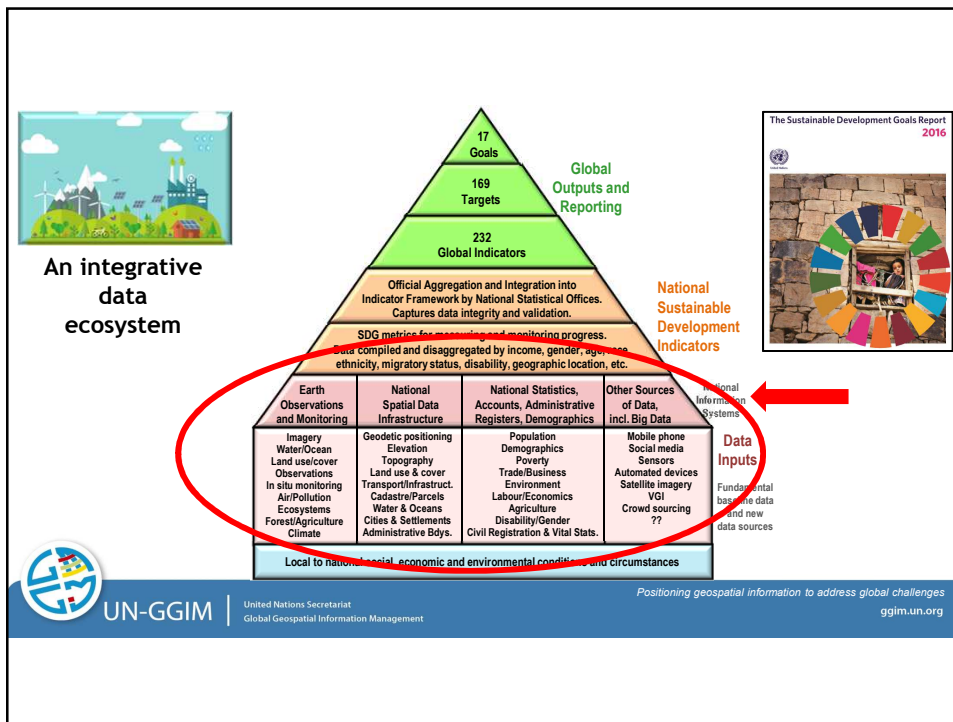
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REQUIREMENTS	GLOBAL POLICY FRAMEWORK	Sendai Framework for Disaster Risk Reduction 2015-2030	SIDS Accelerated Modalities of Action (SAMOA) Pathway	Addis Ababa Action Agenda	Paris Agreement on Climate Change	HABITAT III Urban Agenda		
		GEOSPATIAL CHALLENGES & DRIVERS	Environmental management Urban planning Land management Legal & policy	Disaster management Humanitarian assistance Climate change Health & welfare	Food security Water scarcity Poverty reduction	Sustainable development Education Oceans & marine Sustainable cities	Population National security Institutional governance Socio-economic metrics	
	DIRECT NATIONAL BENEFITS & EFFICIENCIES	<ul style="list-style-type: none"> Reduced duplication of effort in the capture, management, and delivery of fundamental geospatial information Authoritative, reliable and maintained geospatial data available nationally, regionally, and globally Increased return on investment through better coordination, use and reuse of data, information and systems Better evidence-based decision making, supported by good data, science and policy More open, accountable, responsive and efficient governments Presentation and delivery of timely and 'fit for purpose' data in times of need Increased collaboration and integration of national data and information systems across all levels of government Best practices and use cases for enriching national processes on geospatial information management 						
	OPERATING PRINCIPLES	Sound Nat. Policies, Legal Frameworks & Institutional Arrangements	Provision of Fundamental Authoritative Data and Information	Agreed Standards, Methods, Guides and Frameworks	Principles on Geospatial Information and Open Data	Integration and Interoperability of National Information Systems	Information Sharing and Knowledge Transfer	Building Local to Global Capacity & Capability
	DELIVERABLES	<ul style="list-style-type: none"> Geospatial Information for Sustainable Development: 2030 Agenda, Sendai Framework, etc. Integration of Geospatial & Statistical Information: Implement the Global Statistical Geospatial Framework Geospatial Information and Services for Disasters: Implement Strategic Framework Global Geodetic Reference Frame: Roadmap to Implement Determination of global fundamental data themes Marine geospatial information Land administration and management Legal and policy frameworks National institutional arrangements Implementation and adoption of standards for the global geospatial information community National geospatial data and information systems 						







The fact is that no species has ever had such wholesale control over everything on earth, living or dead, as we now have. That lays upon us, whether we like it or not, an awesome responsibility. In our hands now lies not only our own future, but that of all other living creatures with whom we share the earth.

David Attenborough



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