



Source: ESA ESRIN

Liaison's Report on GSDI Association

An update on selected activities
since WGISS-42

Dr. Gábor Remetey-Fülöpp
Liaison, GSDI-WGISS
Past Secretary-general, HUNAGI (1994-2015)

Outline

- GSDI in the global geospatial community
- WGISS at the GSDI 15 World Conference
- GSDI and the UN Agenda 2030
- GSDI in the GEO activities
- GSDI in the UN-GGIM activities
- GSDI in the Capacity Building
- GSDI NASA WVEC 2017.
- GSDI at the Digital Silk and Belt Road Alliance
- GSDI at national level
- Conclusions

Geospatial Technologies and related Services

IoT,, M2M, cloud services, AI, UAV, ext. reality, virtual globes, social networks, web & location based services

EO, Geospatial and other Apps-oriented data

Data sharing, Open data policy, Bring the data, analysis and information close to the user

Information Systems and Services

Spatial Data Infrastructures, Data revolution, The Big Data Era, Data preservation, Data visualization

In the focal point: the people, users

Developers, Solution providers, Solution seekers, Decision makers

Golden triangle: Academia, Governments and Private sector

NGOs, learned societies, interest groups

Empowering the citizens as users and data providers

Standards, regulations, legislative & technical frameworks

Education and training, Knowledge sharing, Capacity building



GSDI is working in interdisciplinary partnership with others to realize its vision of „a world, where everyone can readily discover, access and apply geographic information to improve their daily life” as Dave Lovell, new President of GSDI Association formulated.

GSDI have **liaisons or Memorandums of Understanding** with

Joint Board of Geospatial Information Societies (**JBGIS**), where the chair is Dave Lovell, President of GSDI

- International Cartographic Association (**ICA**)
- International Federation of Surveyors (**FIG**)
- International Society for Photogrammetry and Remote Sensing (**ISPRS**)
- International Society for Digital Earth (**ISDE**)
- Centre for Disaster Management and Public Safety (**CDMPS** - Univ. of Melbourne)
- **CEOS** Working Group on Information Systems and Services (**WGISS**)
- International Hydrographic Organisation (**IHO**)

Established in 2004, **GSDI Association** today has **38 Organizational Members** from **20 countries** and over **400 individual members** from **55 countries**

To complement & support the work of GEO and UN-GGIM

WGISS at the GSDI 15 World Conference



GSDI 15 WORLD CONFERENCE
15th Global Spatial Data Infrastructure Conference
2016 Nov 29 ▶ Dec 2

SPATIAL ENABLEMENT IN SMART HOMELAND

Smart Disaster Prevention / Smart Transportation / Smart City

TAIPEI NANGANG EXHIBITION CENTER, TAIWAN, R.O.C.
No. 1, Jingmao 2nd Rd., Nangang District, Taipei City 11568, Taiwan

keynote speakers

Mark Reichardt President Open Geospatial Consortium (OGC)	Ed Parsons Geospatial Technologist Google Inc.	Hidenori Tamagawa Professor The Tokyo Metropolitan University, Japan
Menno-Jan Kraak President International Cartographic Association (ICA)	Satoshi Sekiguchi Director-General The Division of Information Technology and Human Factors, AIST, Japan	Participants submitted about 177 papers from more than 43 countries.
Vern Singhroy Senior Research Scientist Canada Centre for Remote Sensing Professor of International Space University, France	Dewayany Sutrisno President Indonesian Society for Remote Sensing (IARSIS) Professor of Spatial Information System of Geospatial Information Agency (BIG)	
Ivan DeLoatch Executive Director Secretariat of Federal Geographic Data Committee (FGDC)	Tien-Yin Chou President The Taiwan Association of Disaster Prevention Industry (TADPI) Professor of Feng Chia University (FCU), Taiwan	It is expected to attract more than 2000 guests from all over the world to attend the conference.
Winnie Tang Founder and Chairman Euri China (Hong Kong) Limited	Tso-Chien Pan President and Executive Director Institute of Catastrophe Risk Management (ICRM) Nanyang Technological University (NTU), Singapore	<p>Online conference registration ends 10/31</p> <p>Online workshop registration opens 10/5</p> <p>Register NOW! </p>

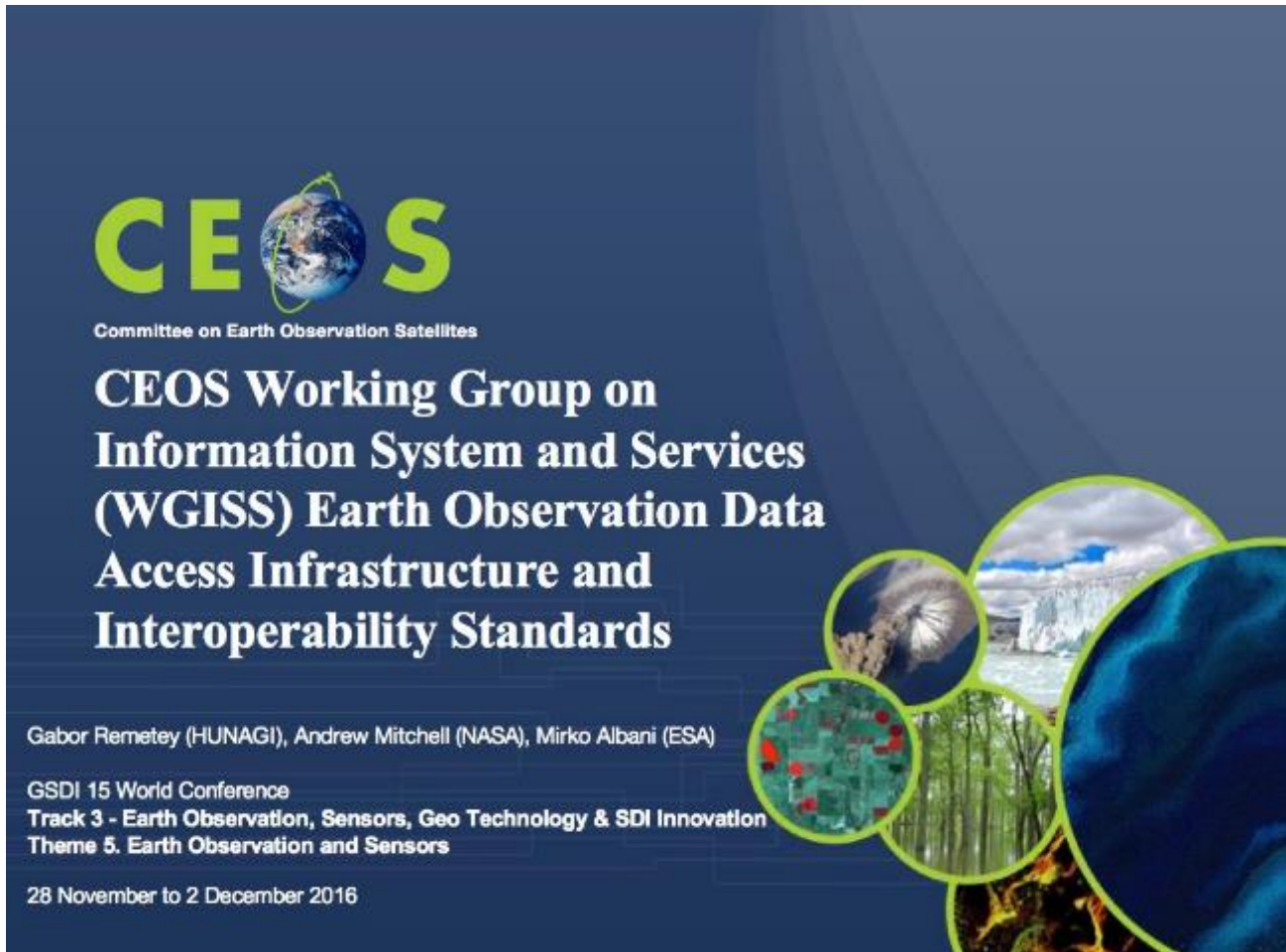
Contact Us: gdi15info@gmail.com

ORGANIZER / GSDI / TADPI / CO-ORGANIZER / GIS FCU

- Spatial Enablement in Smart Homeland
- This theme of the 15th GSDI World Conference attracted the golden triangle (academia, gov't and industry)
- 177 papers from 44 countries accepted
- 20 workshops and 40 exhibitors
- In focus: Smart Disaster Prevention, Smart transportation, Smart City



WGISS at the GSDI 15 World Conference



CEOS
Committee on Earth Observation Satellites

**CEOS Working Group on
Information System and Services
(WGISS) Earth Observation Data
Access Infrastructure and
Interoperability Standards**

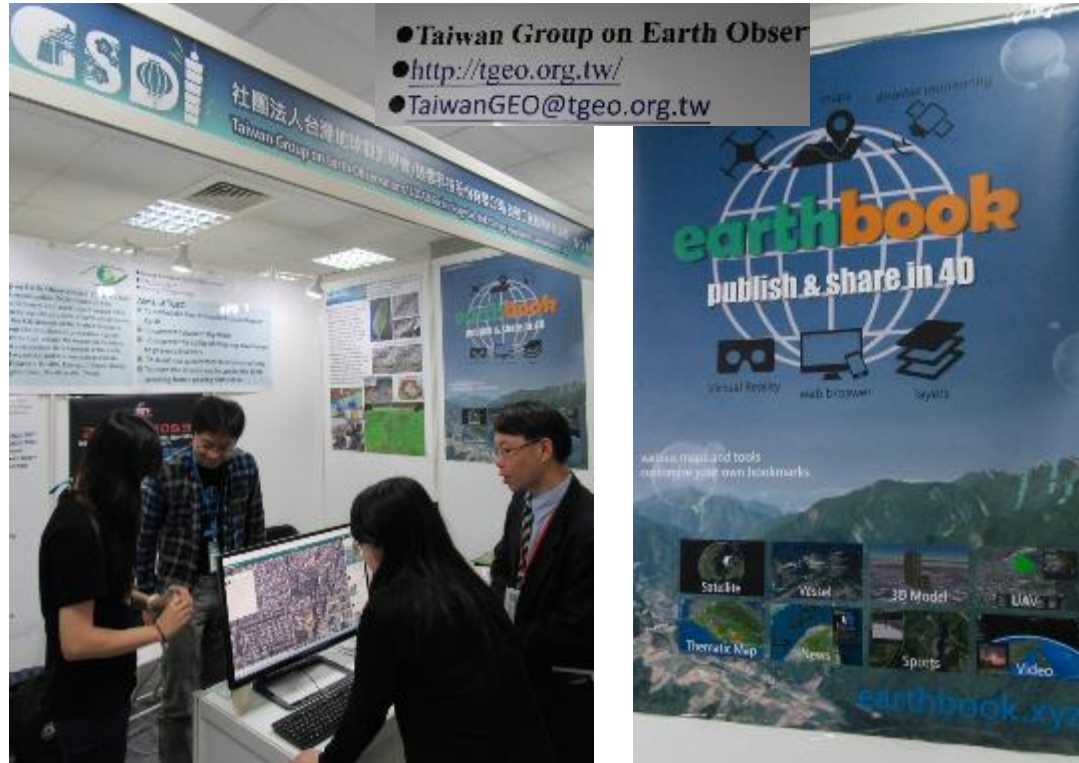
Gabor Remetei (HUNAGI), Andrew Mitchell (NASA), Mirko Albani (ESA)

GSDI 15 World Conference
Track 3 - Earth Observation, Sensors, Geo Technology & SDI Innovation
Theme 5. Earth Observation and Sensors

28 November to 2 December 2016

- WGISS presentation prepared by the WGISS Chair and Vice-Chair was delivered in the Session 'Geo Technology and Innovation for SDI' by the GSDI liaison
- The CEOS video (<https://youtu.be/xWkuDxGdRjs>) was also introduced

WGISS at the GSDI 15 World Conference Earth Observation Activities at the Host



Former GSDI Presidents Profs David Coleman and Abbas Rajabifard with representatives of local academia, government and industry

- GSDI's liaison was invited to the GSDI Council and Board Meetings to share recommendations on potentials of closer cooperation with CEOS WGISS. The 4-page report prepared was introduced by Roger Longhorn, Secretary General of GSDI Association

WGISS at the GSDI 15 World Conference Report to the GSDI Council and Board Meeting

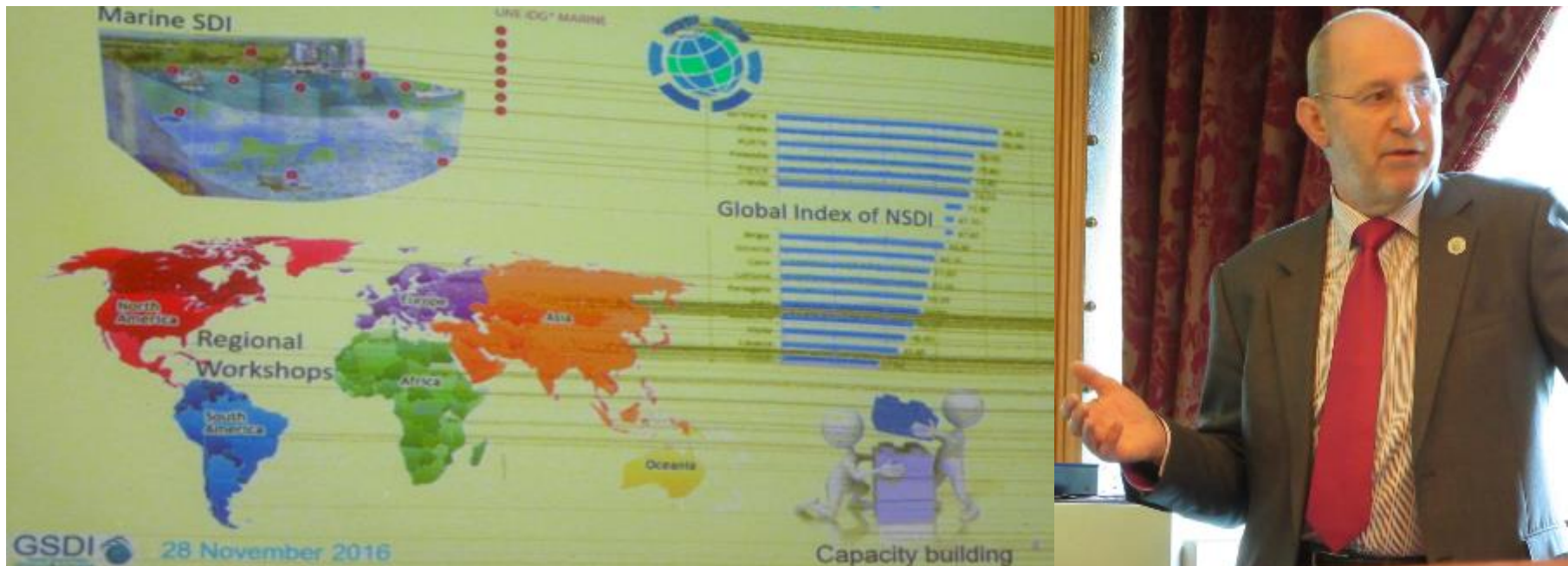


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What GSDI is planning to do ?

- GSDI continues to have an important role to play in SDI development & opportunities to grasp, will support SDI developments and align with UN-GGIM and GEO by
 - Delivering a Global Index of SDI implementation
 - Completing the Marine SDI Best Practice Project
 - Focusing on capacity building work where it is most needed
 - Providing content at Regional Conferences

As summarized by President Dave Lovell at the CGSDI Council Meeting



Extended SDGs for 2016-2030

The UN **S**ustainable **D**evelopment **G**oals have been elaborated by a UN Working Group co-chaired by Csaba Körösi (Ambassador of Hungary to UN) and Macharia Kamau of Kenya in 2014-15.

17 Goals and 169 Targets have been selected and approved by the UN General Assembly

for the years 2016-2030 (**UN Agenda 2030**)

230 indicators approved by UNSC

Monitoring, reporting –

EO and geospatial data&techn

GSDI involvement:

UN STATDIV IAEG SDGS WGGI

GEO - EO4SDGS

OGC SDGS,

CEOS SDGS

UN-GGIM & REG NETWORKS

THE WORLD BANK,

ICA, IAG

IHO

GSDI Liaison's report on GSDI Association. An update. CEOS WGISS 43 Meeting hosted by NASA, Annapolis, MD USA, 3-6 April, 2017

Picture: Eskinder Debebe.

Source:

<http://citiscopes.org/story/2014/10/comparing-mdas-and-sdgs#SDGs>



GSDI 15TH WORLD CONFERENCE Session on Regional and Global SDI Initiatives



Conference Dates
Nov. 28 - Dec. 2, 2016

GSDI in the GEO/GEOSS activities



GSDI promotes the Open Data Principles of GEO/GEOSS

- GSDI at the GEO XIII Plenary Saint Petersburg, November 2016
- GSDI in Capacity Building activities (*workshops, webinars targeted Strategic Projects and Small Grants*)
- GSDI in the Institutional Arrangements
- GSDI in GEO4SDGs webinar contributions in Feb/March



Panel guests J.Foust (Esri) in Industry I.DeLoatch FGDC (Govt.)



Capacity Building WG



GSDI on board among POs



Institutional Arrangement Breakout and GI-18 Workshop (today EO4SDGs)



Steven Ramaga of GEO Sec External Affairs

GSDI involvement in UN GGIM activities



- GSDI has special **consultative status with** UN's Economic and Social Committee (UN **ECOSOC**)
- GSDI supports the UN Global Geospatial Information Management (**UN UN GGIM**) initiative and got observing **membership status in its regional networks**
 - **UN-GGIM: Europe** (GSDI membership voted in Budapest at the General Assembly of UN-GGIM:Europe, October, 2016, with Gregg Scott of UN GGIM Secretariat (UN Statistical Division))
 - **UN-GGIM: Asia and Oceania** (GSDI member since November, 2016)
 - **UN-GGIM: Americas** (GSDI member since October, 2016)
- **UN-GGIM Academic Network**, as a strategy research and training arm, is **chaired by Prof Abbas Rajabifard (UoM), former President of GSDI Association**

GSDI and the International Hydrographic Organization (IHO) Marine SDI Working Group (MSDIWG)

GSDI are participants in the IHO MSDIWG as part of the Association's GSDI Marine SDI Best Practice Project. Activities include:

1. Participation in the **IHO's Marine SDI Working Group meeting in Vancouver**, Canada, 31 January to 2 February 2017
2. **Workplan assignment** to develop and deliver a structured outline Project Plan for identified topic areas with timelines and with identified funding options, relating to **a pilot project for marine/coastal SDI 'best practice'** (which will include sensor and EO input on the data side, and must address a number of issues relating to EO data)
3. To help develop the **IHO Marine SDI WG communication plan 2017-2020**.
4. To **identify definitions, appropriate and relevant standards and components** of (M)SDI and assess these for suitability for C/M SDI.
5. To compile a **compendium of Data Policy statements**
6. **To support development and delivery of e-learning platforms**

GSDI and OGC (a GSDI Member) involvement in coastal/marine Spatial Data Infrastructure

- Members of the Open Geospatial Consortium (OGC) Marine Domain Working Group (Marine DWG), formed in May 2016
- Participated in **OGC Marine Domain WG** meeting in Taipei, Taiwan (6 Dec 2016), Vancouver, CA (30 January 2017) and preparatory work for the meeting held in Delft, Netherlands (20-24 March 2017) where the focus was on:
 - Overview of the Copernicus program,
 - the **Copernicus Marine Environment Monitoring Service (CMEMS)**,
 - Promoting wider use of **Satellite Derived Bathymetry**,
 - Use of **OGC Sensor Web Enablement Standards**, plus
 - Further **development of a comprehensive “MSDI Concept Study”** to aid in capacity building, training, etc. for better, stronger coastal and marine SDI implementations globally.

Strategic Project - “GI-NSDI: Towards a Global Index of National Spatial Data Infrastructures”

- Is of interest to UN GGIM as potential contribution **to assisting states in assessing their national SDI development priorities and successes.**
- Project started in November 2016 and runs through end of 2018.
- Preliminary results will be presented to **UN GGIM Europe** meeting in June and UN GGIM 7th meeting in New York in August.
- Project member Prof Joep Crompvoets and other GSDI members attended the **World Bank annual meeting on “Land and Poverty Conference 2017: Responsible Land Governance - Towards an Evidence-Based Approach”** (20-24 March 2017) and sessions specifically on **SDI and ‘indicators’ for SDIs** in relation to SDGs. See the full 5-day programme at <https://www.conftool.com/landandpoverty2017/sessions.php>.

GSDI in the Capacity Building 3/4

GSDI Coastal/Marine SDI Best Practice Webinar #2 29 March, 2017



Coastal/Marine SDI Capacity Building Webinar

Your Moderator:

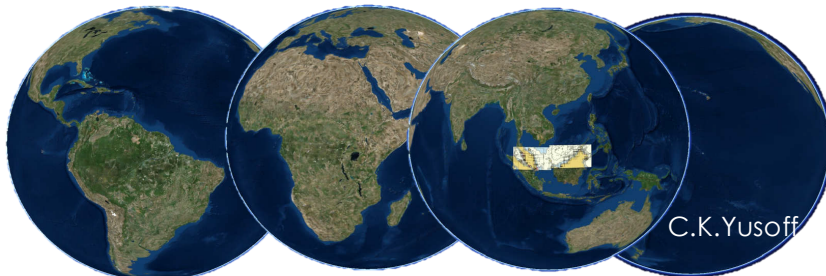
Roger Longhorn, Secretary-General, GSDI Association (gsdiassociation.org)

The Panelists:

- Cdr Kamaruddin Yusoff, RMN, Head of METOC, National Hydrographic Centre of Malaysia
- Mr Jens Peter Hartmann, IC-ENC Vice Chairman, Senior Advisor at the Danish Geodata Agency, Chair of IHO Marine SDI Working Group and the Baltic Sea Marine Spatial Data Infrastructure Working Group (BSMSDIWG).
- Capitao-Tenente, Julierme G. Pinheiro, Asst. of Environmental Data Exchange Section, Navy Hydrographic Center, Brazil

Importance and relevance from the SDI point of view

Approximately 70% of the earth is covered by water

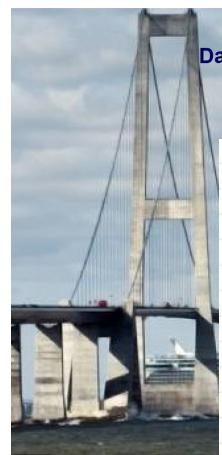


- The 2nd in the series the first in November 2016
- Topic is **data harmonization and interoperability** focusing on **Coastal/Marine SDI**
- **MSDIs from Brazil, Malaysia and Denmark** were presented.
- The bulk of marine data is gathered by EO
 - *in situ* (underwater and on surface sensors),
 - *aerial* and
 - *satellite* imagery.
- Next webinars will be on **Marine Cadastre & Standards**

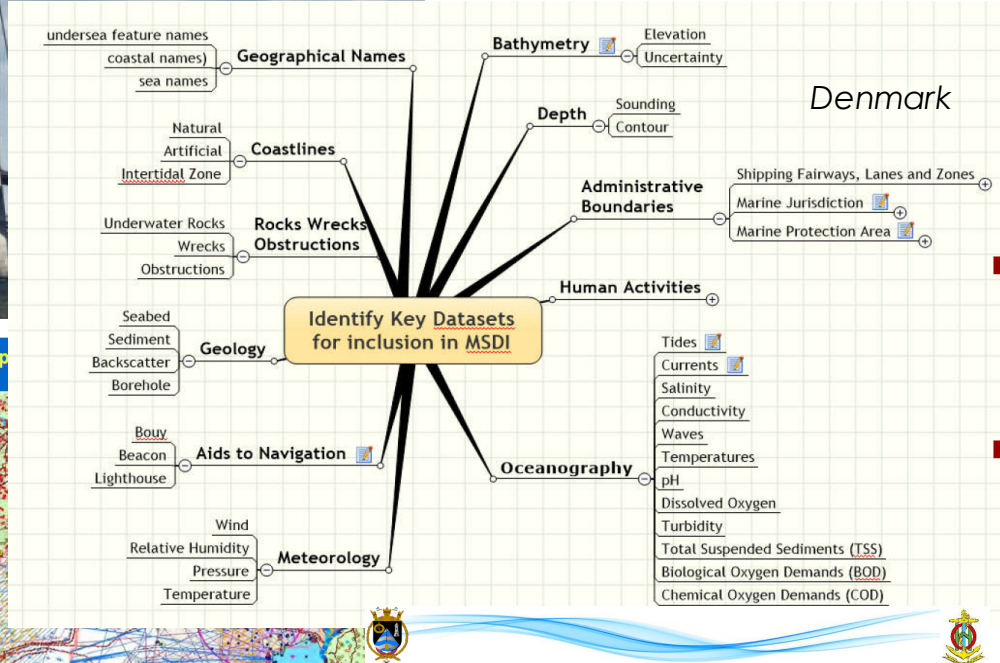
GSDI in the Capacity Building 4/4

GSDI Coastal/Marine SDI Best Practice Webinar #2

29 March, 2017



“National Approach in Data Exchange - Danish Maritime Spatial Data Infrastructure”
 Jens Peter Hartmann
 Danish Geodata Agency



Denmark

DHN-MSDI PRESENT STATE

Intranet Technology Implementation
 Map Viewer – SFV

MSDI = accessible data p
 hinterland
 Denmark
 •Land Use
 •Tourism
 •Oil & Gas
 •Mariculture
 •Coastal Defence
 •Ports & Navigation
 •Military Activities
 •Culture
 •Conservation
 •Dredging & Disposal
 •Submarine Cables

Geographic Content (Data)

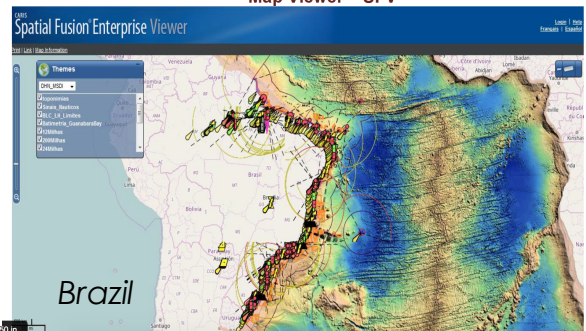


Malaysia



Framework Data Categories

CATEGORIES	LEAD AGENCIES
Aeronautical	DCA
Built Environment	JUPEM
Demarcation	JUPEM
Geology	JMG
Hydrography	NHC
Hydrography	JUPEM
Soil	DOA
Transportation	JKR
Utility	JUPEM
Vegetation	DOA
Special Use	JUPEM
General	JUPEM



Features

- MSDIs and NSDIs interlinked and overlapped
- **Interoperability, standards !**
- Wide range of categories
- **Multiagency environment !**
- Vast number of stakeholders
- **Institutional partnership, co-operation, collaboration and coordination is needed !**
- Best practices from Brazil, Malaysia and were presented.

GSDI at NASA WWEC 2017



NASA World Wind open source virtual globe technology is developed since 2003.

2012 onward: annual **WW Europa Challenge** for students and SMEs

Open-source, -standards, -data is in line with the **Geo for All initiative** of the **OSGeo** Foundation's Committee for Educational Outreach www.geoforall.org GSDI member invited to be **Geo-Ambassador of Geo for All**

The WWEC theme for 2016 and 2017 is for **smart and sustainable cities, 'CitySmart'** to improve the ability for advances in urban management to be shared worldwide!

GSDI was involved in the **Heritage for Planet Earth** where the Del Bianco CitySmart, an open source platform for urban apps supported by ESA-NASA was introduced

WW in the UN SDGs context will be presented in Sydney tomorrow at the Locate17/ISDE10 as keynote (speaker is member of GSDI)

Information on NASA WW:

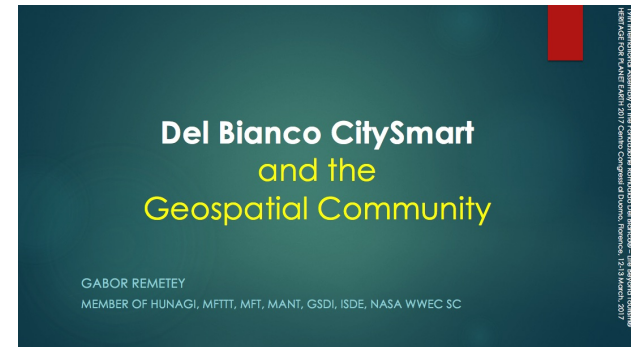
<https://worldwind.arc.nasa.gov/index.html>

Information on WW Europa Challenge:

<http://eurochallenge.como.polimi.it>



GSDI presence at the 'Heritage for Planet Earth'



Co-authors: Patrick J.Hogan (NASA), Prof. Maria A.Brovelli (Politecnico di Milano)



STREAM	CS01.8 Virtual Globes
TITLE	How Open Source Virtual Globe is supporting the SDGs – The Case of NASA World Wind
PRESENTED BY	Gabor Remetey-Fülöpp, Member of HUNAGI, ISDE, GSDI and NASA WWEC Scientific Committee

GSDI in the Digital Belt and Road Alliance

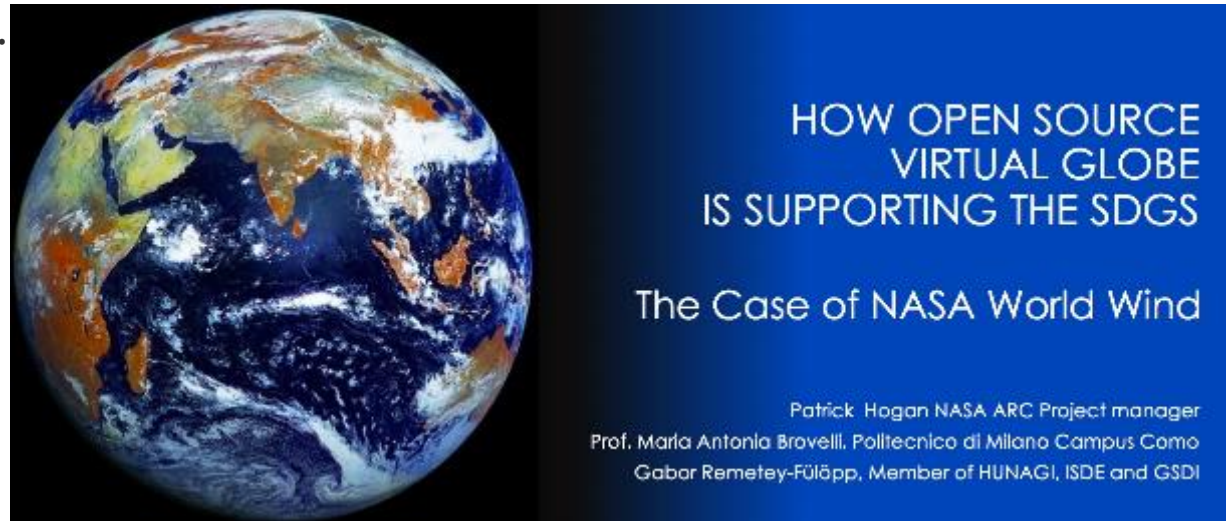
- GSDI provided supportive statement in 2016 and participated the **DBAR** Workshop arranged by RAD1 and CAS **at GEO XIII** in presence of Barbara Ryan, Director of GEO Sec.
- GSDI presence by 2 delegates will be provided at the **Digital Belt and Road Alliance Meeting and Workshop** at the 10th ISDE Symposium and Locate17 Conference held in Sydney, tomorrow, where Prof. Abbas Rajabifard, former President of GSDI will give positive message related to DBAR.
- **Both GSDI delegates** will provide keynote speeches and will chair sessions at the **10th ISDE Symposium and Locate17 Conference**. This latter is the national conference of the spatial and surveying professionals and industries of Australia.

Websites:

[ISDE](#)

[110th ISDE Symposium](#)

[Locate17](#)



GSDI at national level - the case in Hungary

Promoting the use of Spatial Data and EO infrastructure to support the achievement of UN SDGs

Day of the European Surveyors and Geoinformatics as initiated by CLGE

The Hungarian event was arranged by MFTTT and hosted by MoA in Budapest on 22nd March, 2017

MFTTT-GSDI talk: on **the challenges for the geospatial community driven by the UN Agenda 2030**

MoND HSO talk: on **the recent evolution of the EO infrastructure in Hungary**

GIS Open, University of Óbuda, at Székesfehérvár
13-14 April, 2017

Geoinformatics Conference and Exhibition
Debrecen, May, 2017

A földmérés és geoinformatika feladatai az ENSZ Fenntartható Fejlődési Célok programban

A földmérés és térinformatika lehetőségei a globális kihívások megválaszolásában

Dr. Mihály Szabolcs
c. egyetemi tanár, MFTTT

Palya Tamás
MFTTT, BKH-FHH, az INSPIRE magyar delegáltja

Dr. Reményi Tibor Péter Gábor
az MFTTT örökös tagja, a GSDI CEO delegáltja

Európai Földmérők és Geoinformációs Nagyjai, FM Dányi Ignác terem, 2017. március 22.

Further domestic awareness actions are planned

- The recent GSDI Council and Board Meeting well received the report on the liaison between GSDI and CEOS WGISS
- The presentation was delivered on CEOS WGISS activities at the GSDI 15 World Conference in a session attended by President of OGC, local EO scientists and EO/geospatial experts from UN ACE, NASA, K.U.Leuven and from industry.
- GSDI will support the SDI developments and align with UN-GGIM and GEO/CEOS to support the achievement of UN SDGs by
 - Delivering a Global Index of SDI implementation
 - Completing the Marine SDI Best Practice Project
 - Focusing on capacity building work where it is most needed
 - Providing content at Regional Conferences



Acknowledgements



- Roger Longhorn, Secretary-General, GSDI Association

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<http://www.linkedin.com/groups/GSDI-Association-3794985>



- Patrick J. Hogan, NASA World Wind Project Manager, NASA Ames Research Center (ARC-PX) patrick.hogan@nasa.gov



- Maria Antonia Brovelli, Professor of GIS and Remote Sensing, Politecnico di Milano
maria.brovelli@polimi.it



Image sources: NASA , ESA ESRIN and Internet

Thank you for your attention!