



**UN-GGIM**  
ACADEMIC NETWORK

Global Geospatial Information Management (UN-GGIM)

# ANNUAL PROGRESS REPORT

June 2018 – June 2019

For

9th UN-GGIM Expert Committee Meeting

New York

**June 2019**



## MESSAGE FROM CHAIR

As the Chair of the UN-GGIM Academic Network and on behalf of the Network, I am delighted to present this report to the 9th UN-GGIM Committee of Experts meeting in New York, August 2019.

Since the official establishment of the Academic Network at the 6th UN-GGIM Committee of Expert, August 2016 in New York, and in line with its working plan (2018-2019), the UNGGIM Academic Network has been very active. The most notorious achievement is the publication of a book on SDGs, which will be launch at the 9th UN-GGIM event in NY, and a series of contributions and participation at several UN-GGIM events and meetings, and international conferences. In addition, we have contributed to the development of IGIF document. We are enthusiastic to report to the 9th UN-GGIM Expert Committee Meeting that during the last year, from June 2018 to June 2019, significant progress has been achieved in the consolidation of the Academic Network as an active body supportive of the main goals of UN-GGIM.

The main achievements of the Academic Network in the past years are:

- Developed a Book on SDGs to be launched during the 9th UN-GGIM Expert Committee meeting;
- The Academic Network participate actively in all key meetings of UN-GGIM, including in high-level and expert meetings, regional congresses and working group sessions;
- We expanded our membership to 45 universities and research centers. We have representation in all continents and with the significant presence in those countries known for their research about geospatial and land matters; Discussion and agreement with FIG Commission 2(Education) for a closer collaboration between two entities, and arrangement for Commission 2 and agreement to proceed with the arrangement for FIG Commission 2 members to become AN member;
- The Academic Network conducted a technical review of reports and technical documents produced by the UN-GGIM secretariat, particularly participated actively in the review of the IGIF-Integrated Geospatial Information Framework;
- Conduction of a successful International Forum as part of the 8th UN-GGIM Expert Committee Meeting in 2018 in NY, with a strategic theme and focus in line with the need of UN-GGIM
- Conducted of an academic network scientific session as part of the first UNWGIC Congress in China (19<sup>th</sup> to 21<sup>st</sup> of November 2018);
- Supported the development of a strategic training framework between the World Bank, the University of Melbourne, University of Twente, with support from other leading professional bodies such as FIG;
- Conducted due process for the re-election of Academic Network Chair and Secretary for the next two years;
- Formed a task force for the development of an Online Training Platform (OTP) for the Network.
- Preparation and design of a joint forum with Geospatial Societies to conduct as part of the 9<sup>th</sup> UN-GGIM event in Aug 2019, with the theme on *“Resilience and Sustainability-Building Technical Capacities”*.

In cooperation with all members in an online open advisory meeting conducted in April 2019, the Network has created a Work Plan for the next two years (2019 – 2021). The goals of this plan are:

- Organize parallel forums, seminars or academic events at key UN-GGIM events and meetings; addressing global major challenges;
- Expanding its member base in all regions;
- Participate actively in Technical Working Groups, Regional Groups and sub-committees on UN-GGIM;
- Build and populate an online registry of technical capacities across the members of the Network;
- Connect activities with other UN-GGIM networks and related Organizations;
- Provide technical support to the UN-GGIM secretary with a review of technical documents as required.

Prof. Abbas Rajabifard  
Chair, UN-GGIM Academic Network  
June 2019



## MEETINGS AND FORMAL ADMINISTRATION PROCESSES DURING THE LAST YEAR

During the 2018-2019 year, the Academic Network Executive Committee and Advisory Board held several meetings and communicated via email for different activities related to the Network. These meetings allow us to address critical technical matters, such as our future working plan, as well as administrative tasks, including membership applications.

The following table shows the details of the significant meetings conducted:

Date	Main Matters Discussed
<p>25 April 2019</p> <p>An Open meeting of the Network, FIG Week, Hanoi, Vietnam</p>	<ul style="list-style-type: none"> <li>• Introduction to Academic Network for potential new members</li> <li>• Report on collaboration with FIG Commission 2 (Education) and agreement to proceed with the arrangement to register all FIG Commission 2 members to become AN member</li> <li>• Progress Report and Workplan 2019-2020</li> <li>• Inputs for the future role and activities.</li> </ul>
<p>11 April 2019</p> <p>An open meeting of the Network meeting</p>	<ul style="list-style-type: none"> <li>• Progress report</li> <li>• Work Plan 2019-2021</li> <li>• Meeting in NYC – August 2019</li> <li>• SDGs’ Book and other projects</li> <li>• Training hub</li> <li>• Other business</li> </ul>
<p>30 July 2018</p> <p>(Forum as a side event as part of 8th Session UN-GGIM)</p>	<ul style="list-style-type: none"> <li>• Chair report</li> <li>• Academic agenda for future activities</li> <li>• High-level meeting preparation</li> <li>• Preparation for the first UNGGIM Congress</li> </ul>
<p>21<sup>st</sup> November 2018</p> <p>Room: E302, Exhibition Centre UNWGIC Daqing, China</p>	<ul style="list-style-type: none"> <li>• Chair report</li> <li>• Review of academic agenda</li> <li>• Development of topics for SDG book</li> </ul>

Additionally, the Executive Committee had multiple meetings to address key administrative issues as well as the implementation of the communication strategy, mainly the website, and attendance of a representative at different UNGGIM meetings. The Chair (Prof Abbas Rajabifard) and the Secretary (A/Professor Daniel Paez) met on three occasions in Melbourne, Hanoi and Washington to plan activities and complete administrative tasks.

## MEMBERSHIP DURING 2018-2019

Increasing our membership is a crucial element of success for the Academic Network. According to the ToR, the members of the Network are comprised of relevant universities, academic institutions or research centers where

geospatial information research and education are accomplished, and these interested members want to collaborate with UN-GGIM and contribute to the Academic Network voluntarily.

Currently, the Academic Network has 42 members (and 3 under assessment) from all continents. This coverage allows the Academic Network to serve the needs of UN-GGIM global issues properly, as well as provide advice and support to regional and technical matters.

We have developed and approved a voting process; new institutional members are voted in when they meet the established objective membership criteria as determined by a majority vote of the existing members of the UN-GGIM Academic Network. After reviewing applicant documentation, an online voting service utilizing a simple majority voting method and providing anonymity for voters is used for the voting process at <http://www.opavote.org/>.

We have received and accepted 21 new applications in the past year, which have assessed and found all are eligible to join (currently there are 3 applications under assessment). In addition to the current members, at the recent FIG Week in Hanoi, there was a strategic discussion between Chair of UN-GGIM Academic Network and the Chair of FIG-Commission 2 (Education), to have a closer collaboration between the two entities in order to deliver more value to our communities. The chairs have also agreed to arrange a process to register FIG Commission 2 members to become AN member. The process will be developed in this year.

The current members of the Academic Network are:

Country	University and Main Delegate
Antigua & Barbuda	<a href="#">Institute of Technology</a> Mr Michael Charles
	Prof. Daniel Del Cogliano & Dra.
Argentina	<a href="#">Universidad Nacional de La Plata</a> Alejandra Mabel Geraldí
Australia	<a href="#">The University of Melbourne</a> Prof. Abbas Rajabifard
Austria	<a href="#">University of Salzburg</a> Prof. Josef Strobl
Austria	<a href="#">Vienna University of Technology</a> <a href="#">(TU Wien)</a> Prof. Georg Gartner
Belgium	<a href="#">Katholieke Universiteit Leuven (KU Leuven)</a> Prof. Joep Crompvoets
Brazil	<a href="#">University of Brasilia</a> José Leandro de Araújo Conceição



Burkina Faso	<a href="#">Ecole Superieure Polytechnique de la Jeunesse</a>	Prof. TRAORE Sekou
Canada	<a href="#">Ryerson University</a>	D Songnian Li
Canada	<a href="#">University of New Brunswick</a>	Prof. David Coleman
Canada	<a href="#">University of Waterloo</a>	Prof. Saied Pirasteh
Chile	<a href="#">University of Santiago</a>	Prof. Ricardo Crespo
China	<a href="#">Southwest Jiaotong University</a>	Mr Gui Gao
China	<a href="#">Wuhan University</a>	Prof. Huayi Wu
Colombia	<a href="#">University of Los Andes</a>	Prof. Daniel Paez
Denmark	<a href="#">Aalborg University Copenhagen</a>	Prof. Jamal Jokar Arsanjani
Germany	<a href="#">University of Münster</a>	D Christoph Brox, Prof. Dr Edzer Pebesma
Greece	<a href="#">National Technical University of Athens</a>	Prof. Chryssy Potsiou & Prof. Charalabos Ioannidis
Italy	<a href="#">CNR IREA</a>	Prof. Paola Carrara
Italy	<a href="#">Roma Tre University</a>	Dr Roberto Bianchini
Italy	<a href="#">Politecnico di Milano</a>	Prof. Maria Antonia Brovelli
Kazakhstan	<a href="#">The Institute of Geography</a>	Prof. Dinara Abiyeva
Kyrgyzstan	<a href="#">Kyrgyz State University of Construction, Transport and Architecture</a>	Dr Akylbek Chymyrov

Malaysia	<a href="#">Geomatika University College</a>	Prof. Mohd Firdaus
Malaysia	<a href="#">Universiti Putra Malaysia (UPM)</a>	Prof. Helmi Zulhaidi Mohd Shafri
	<a href="#">Geography Institute – The National</a>	
Mexico	<a href="#">Autonomous Univ</a>	Prof. Jorge Prado Molina
Netherlands	<a href="#">University of Twente</a>	Prof. Menno-Jan Kraak
Nigeria	<a href="#">Obafemi Awolowo University</a>	Prof. Jide Kufoniyi
Nigeria	<a href="#">University of Lagos</a>	Prof. Muyiwa Agunbiade
	<a href="#">NOVA Information Management</a>	
Portugal	<a href="#">School</a>	Prof. Marco Painho
Serbia	<a href="#">University of Novi Sad</a>	Prof. Miro Govedarica
South Africa	<a href="#">University of Pretoria</a>	Prof. Serena Coetzee
Trinidad and Tobago	<a href="#">The University of the West Indies</a>	Prof. Bheshem Ramlal
UAE	<a href="#">Khalifa University</a>	Dr Marouane Temimi
UK	<a href="#">Taylor and Francis Group</a>	Mrs.Irma Britton
	<a href="#">Texas A&amp;M University-Corpus</a>	Prof. Gary Jeffress, Prof. Michael
USA	<a href="#">Christi</a>	J. Starek
USA	<a href="#">Harvard University</a>	Prof. Wendy Guan
USA	<a href="#">University of Alabama</a>	Dr Johanna Engström
USA	<a href="#">University of California, Berkeley</a>	Dr Charlotte Smith
USA	<a href="#">University of Maine</a>	Prof. Harlan Onsrud

Ukraine	<a href="#">KNUBA – Kyiv National University</a>	Prof. Roman Shults
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Uruguay	<a href="#">University of the Republic</a>	Prof. Rosario Casanova
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## COMMUNICATIONS AND PROMOTION

### Publishing of the Book on SDGs Connectivity Dilemma and a Roadmap

In line with UN-GGIM capacity building and awareness directions, and as a result of the outcomes of the Academic Network three International Forums as part of UN-GGIM major events over the last 2 years (2017-2018), the Academic Network has worked on a book on “SDGs Connectivity Dilemma: Land and Geospatial Information for Urban and Rural Resilience”. This book has been completed and will be launch during the 9<sup>th</sup> UN-GGIM Meeting of experts in NYC (August 2019).

The book will address the relevant challenges in our societies and as a means of contribution to UN-GGIM strategic direction and aims to assist the wider community. This book will provide a roadmap towards implementing SDGs and will respond to the knowledge gaps in this area.

The contributions to the book are coming from several Academic Network members and a selected member from other UN-GGIM networks and practitioners. The book will be published as an Open Access Book by Taylor and Francis as one of the major and well-recognized publishers. We are planning to Launch the book at the upcoming UN-GGIM event in NY this year.

### WEBSITE AND MEDIA

During this second year of the network, the website was updated ([unggim.academinetwork.org](http://unggim.academinetwork.org)), LinkedIn account ([linkedin.com/company/unggiman](https://www.linkedin.com/company/unggiman)) and Twitter account (@UNGGIMAN) maintained. The website has proven to be an invaluable tool to connect members and disseminate information about the Network activities and at the same time, an essential tool to conduct key administrate tasks such as accepting new submissions.

In order to facilitate membership, engage and share material with the broader geospatial community, the Academic Network website is available in 4 languages: **English, French, Spanish and Arabic.**

Welcome to UN-GGIM Academic Network



The primary objective of the UN-GGIM Academic Network is to support the aims and objectives of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) as UN-GGIM sets the agenda for the development of global geospatial information and promotes its use to address key global challenges.



For more information about the UN-GGIM please visit: [ggim.un.org](http://ggim.un.org)

Language:

[English](#) [Français](#) [Español](#) [العربية](#)

UPCOMING Forum 2018

We are excited to announce that UN-GGIM Academic Network's second annual forum will be held at the Eighth Session UN-GGIM at the UN Headquarters on Monday July 30, 2018 in CR3 from 14:00-18:00. The forum will focus on urban settlements, resilience, and sustainability. Check back to learn more about the forum theme and program. [Read More](#)

News

- [Call for Session Proposals at the UN World Geospatial Information Congress](#)
- [UPCOMING Academic Network Forum 2018!](#)
- [Professors Strobl and Rajabifard Met in Australia](#)
- [Overview: Academic Network Forum 2017](#)
- [Academic Network Forum 2017](#)

Tweets by @UNGGIMAN

UN-GGIM Academic Network Retweeted

 UN-GGIM: Europe @UNGGIMEurope

Very interesting overview of the @UNGGIMAN from @GISStrobl. More details at [unggim.academicnetwork.org](http://unggim.academicnetwork.org) #GGIMEurope

 UN-GGIM Academic N...

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MEETINGS AND WORKSHOPS ATTENDED

Second Academic Network International Forum

During the 8th UN-GGIM meeting in 2018, we have successfully conducted our second International Forum called **“The SDGs Connectivity Dilemma: Urban Settlements, Resilience, and Sustainability”**. This forum took place in New York on the 30th July 2018, with participation of over 100 participants. Opening Remarks and Keynote speakers of the forum included:

- Prof. Abbas Rajabifard
- Mr Stefan Schweinfest (UN)
- Dr Wael Zakout (World Bank)
- Mr Kyoung-Soo Eom (UN)

Similarly, during the first United Nations Geospatial Information Congress in China, the Academic Network conducted a workshop named “A Sustainable and Resilient World: Capacity Building and Geospatial Research for Implementing the SDGs”. During this forum, the presenters discussed the multi-dimensional contribution of the Academic Network as a critical player in promoting and sharing geospatial data and integration approaches, developing legal and policy



instruments, implementing institutional management models, providing technical solution and standards, enhancing interoperability of systems and geospatial data, and improving access to quality and timely data.

## Delegates to UNGGIM Bodies

In order to fulfil the mission of an advisory body to UNGGIM, the Academic Network has delegates on each of the UNGGIM bodies. The table below shows current representatives as of June 2019.

Body	AN Delegates
UNGGIM Asia-Pacific	<ul style="list-style-type: none"> <li>• Huayi Wu</li> <li>• Abbas Rajabifard</li> </ul>
UNGGIM Americas	<ul style="list-style-type: none"> <li>• Rosario Casanova</li> <li>• Johanna Engström</li> <li>• Charlotte Smith</li> </ul>
UNGGIM Arab States	<ul style="list-style-type: none"> <li>• Marouane Temimi</li> </ul>
UNGGIM Europe	<ul style="list-style-type: none"> <li>• Joep Crompvoets</li> <li>• Maria Brovelli</li> <li>• Miro Govedarica</li> </ul>
UNGGIM Africa	<ul style="list-style-type: none"> <li>• Serena Coetzee</li> <li>• Jide Kufoniyi</li> </ul>
Subcommittee on Geodesy (formerly WG on Global Geodetic Reference Frame)	<ul style="list-style-type: none"> <li>• Akylbek Chymyrov</li> <li>• Riccardo Barzaghi</li> </ul>
Expert Group on the Integration of Statistical and Geospatial Information	<ul style="list-style-type: none"> <li>• Jamal Jokar</li> <li>• Edzer Pebesma</li> <li>• Huayi Wu</li> </ul>
Expert Group on Land Administration and Management	<ul style="list-style-type: none"> <li>• Chryssy Potsiou</li> <li>• Joep Crompvoets</li> <li>• Miro Govedarica</li> </ul>
Working Group on Development of a Statement of Shared Principles for the Management of Geospatial Information	<ul style="list-style-type: none"> <li>• Daniel Paez</li> </ul>
Working Group on Trends in National Institutional Arrangements in Geospatial Information Management	<ul style="list-style-type: none"> <li>• Joep Crompvoets</li> <li>• Bheshem Ramlal</li> </ul>

Working Group on Geospatial Information and Services for Disasters	<ul style="list-style-type: none"> <li>• Abbas Rajabifard</li> <li>• Akylbek Chymyrov</li> <li>• Maria Brovelli</li> <li>• Chryssy Potsiou</li> <li>• Songnian Li</li> <li>• Marco Painho</li> <li>• Huayi Wu</li> </ul>
Working Group on Global Fundamental Geospatial Data Themes	<ul style="list-style-type: none"> <li>• Serena Coetzee</li> <li>• Jide Kufoniyi</li> </ul>
Working Group on Legal and Policy Frameworks for Geospatial Information Management	<ul style="list-style-type: none"> <li>• Joep Crompvoets</li> <li>• Babis Ioannidis</li> <li>• Bheshem Ramlal</li> <li>• Jide Kufoniyi</li> </ul>
Working Group on Marine Geospatial Information	<ul style="list-style-type: none"> <li>• Gary Jeffress</li> <li>• Michael Starek (TAMU-CC)</li> </ul>
Inter-Agency and Expert Group on Sustainable Development Goals Indicators (IAEG-SDGs) - Working Group on Geospatial Information	<ul style="list-style-type: none"> <li>• Jamal Jokar</li> <li>• Georg Gartner</li> <li>• Babis Ioannidis</li> <li>• Songnian Li</li> <li>• Menno-Jan Kraak</li> </ul>
UNGGIM Private Sector Network	<ul style="list-style-type: none"> <li>• Antonio Medrano</li> </ul>
UN-GGIM Coalition of Geospatial Societies	<ul style="list-style-type: none"> <li>• Daniel Paez</li> <li>• Menno-Jan Kraak</li> </ul>

## Other Events

During the period June 2018 and June 2019, members of the Academic Network participated actively in multiple events across the world. During these events, the Academic Network was promoted and key UN-GGIM matters discussed. This participation allows the Network to expand its understanding of the needs of member countries as well as provide technical advice when required.

The following table lists the events in which the Executive Committee and the Advisory Board have actively participated and promoted the UN-GGIM Academic Network:

Date	Event	Academic Network representative/Participant
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August 2018	FOSS4G, Tanzania	Multiple Members
September 2018	Commission 7 Annual meeting in Bergen - Norway	Daniel Paez, Chryssy Potsiou, Charalabos Ioannidis
September 2018	International Symposium and Workshops: A Smart Sustainable Future for All, Australia	Abbas Rajabifard
September 2018	NSDI Days in Zagreb, Croatia	Joep Crompvoets
October 2018	ISPRS Technical Symposium Commission IV, Netherlands	Maria Antonia Brovelli and Songnian Li
October 2018	UNGGIM ANA Mexico City, MX	Rosario Casanova Charlotte Smith
October 2018	General Assembly EuroGraphics, Prague, Czech Republic	Joep Crompvoets
November 2018	The ESA Earth Observation phi-week	Maria Antonia Brovelli
November 2018	UNWGIC, China	Abbas Rajabifard, Multiple members, Chryssy Potsiou, Michael Starek, Gary Jeffress Menno-Jan Kraak, Huayi Wu
	UNWGIC, China (UN-GGIM Extended Bureau meeting)	Ababs Rajabifard, Menno-Jan Kraak, Maria Brovelli
November 2018	133 Board of Delegates meeting of EuroSDR, Berlin, Germany  TUFÉ congress, Athens, Greece, Nov 2018 ( <a href="https://tufe2018.com/">https://tufe2018.com/</a> ). Please note agreement signed here: <a href="http://www.fig.net/news/news_2018/11_cooperation_FIG_UIA_ECCE.asp">http://www.fig.net/news/news_2018/11_cooperation_FIG_UIA_ECCE.asp</a>	Joep Crompvoets  Chryssy Potsiou
January 2019	Board meeting of FIG	Daniel Paez
February 2019	11th session of the UNECE Working Party on Land Administration, 27 - 28 February 2019 in Geneva	Chryssy Potsiou
March 2019	First Consultation on IGIF, a joint initiative between UN-GGIM and World Bank, Washington DC	Abbas Rajabifard

March 2019	World Bank Land & Poverty Conference, Washington DC	Abbas Rajabifard, Joep Crompvoets, Daniel Paez
April 2019	Geospatial World Forum, Amsterdam (Extended UN-GGIM Bureau meeting)	Menno-Jan Kraak
April 2019	FIG Working Week, Vietnam	Abbas Rajabifard, Daniel Paez, Multiple members, Chryssy Potsiou, Miro Govedarica
May 2019	ESA Living Planet Symposium	Maria Antonia Brovelli, Miro Govedarica
May 2019	AAG, Washington D.C.	Georg Gartner Menno-Jan Kraak
May 2019	5th International Partnership for Technology in Peacekeeping Symposium	Maria Antonia Brovelli
June 2019	UN-GGIM Europe	Menno-Jan Kraak
June 2019	ISPRS GeoSpatial Week	Maria Antonia Brovelli, Joep Crompvoets, Songnian Li, Menno-Jan Kraak
June 2019	AGILE, Limassol, Cyprus	Marco Painho
June 2019	GEOINT Symposium, Texas, USA	Marco Painho
July 2019	International Cartographic Conference	Georg Gartner, Maria Antonia Brovelli, Menno-Jan Kraak

The Network has already planned for participation in the coming months, including:

Date	Event	Participant
August 2019	FOSS4G 2019	Multiple Members
September 2019	Western Balkan Regional cadastre/SDI conference, Neum, Bosnia & Herzegovina	Joep Crompvoets
October 2019	EuroGeographics General Assembly, Manchester, UK	Joep Crompvoets
November 2019	ISPRS and GEO workshop on Geospatial enabled SDGs Monitoring for the 2030 Agenda	Maria Antonia Brovelli, Songnian Li
November 2019	Conference on Location-based Services, Vienna, AT	Georg Gartner

November 2019	Africa GIS, Kigali, Rwanda	Joep Crompvoets Jide Kufonyi
May 2020	FIG Working Week 2020, Amsterdam Holland	Multiple members, Miro Govedarica
May 2020	INSPIRE Conference, Dubrovnik, Croatia	Joep Crompvoets, Miro Govedarica
June 2020	ISPRS Congress, Nice, France	Joep Crompvoets Jide Kufonyi, Huayi Wu

## FUTURE ACTIVITIES

### RESEARCH PROJECTS

The Academic Network has identified two research projects that will be conducted in the next year, in collaboration with the Network Members and the FIG Commission 7:

#### Cadastral Template 2.0 and Sustainable Development

Using the data collected over 50 countries and in close collaboration with FIG-Commission 7, this research project will discuss global trends and propose effective local, national, and global solutions with an emphasis on how Cadastral Template 2.0 can contribute to the implementation of the SDGs. The Cadastral Template is a spatial data foundation for sustainable development and the significant role of land in development will be expanded in this research to facilitate the SDGs.

#### The Role of Geospatial Research and Innovation in Implementing the SDGs

The Academic Network will identify research areas that will contribute to the analysis and implementation of the SDGs. All Members of the Network will be invited to partake in this research project.

### ONLINE TRAINING PLATFORM - TASKFORCE

After discussions between members of the AN Executives and leading representatives of America's subsidiary Ricardo Crespo and Rosario Casanova, the need to form a task force to answer key questions regarding the formation, governance and administration of an Oline Training Platform (OTP) was identified.

During the open meeting of the AN Advisory Committee in March 2019, the formation of the task force was approved, and a group of members volunteered to participate in the task force to be led by Dr Daniel Paez.

The main objective of the task force is to provide to AN executive a high-level design and implementation proposal for the formation of an OTP. In particular, it is expected that this proposal will include:

- The overall vision for the OTP
- Governance structure including its relationship with the AN and other institutions

- Administrative scheme for the operation of the OTP including issues of certificates and endorsement by renown universities
- Business case, including funding sources
- Stakeholder map including a proposed relationship with key international organizations in the geospatial sector and the newly created Training Centre of Excellence
- Deployment strategies for the OTP to ensure accessibility in all regions of the world
- Risk analysis (identification, assessment and mitigation strategy)

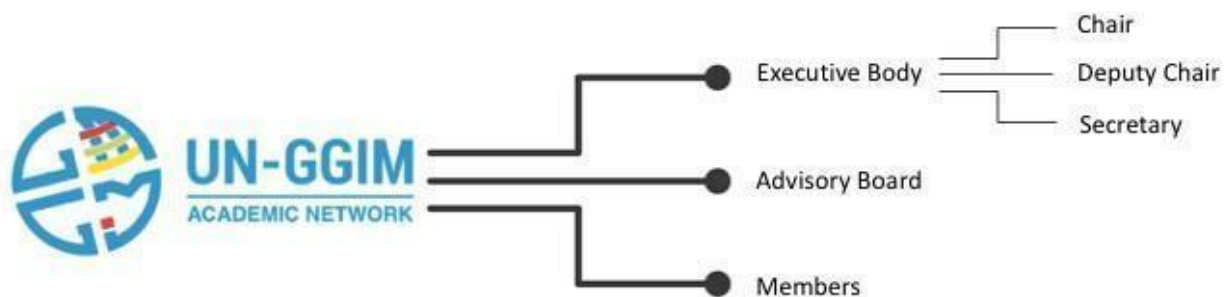
It is expected that once the report is reviewed, Academic Network executive committee would decide on further steps for implementation.

## Appendix A

### Governance and Administration

#### MAIN OFFICERS

According to its approved Terms of References, the Academic Network has an Executive Committee comprised of a Chair, Deputy Chair and Secretary, and an Advisory Board of 7 members for the operation and coordination of the Academic Network. The following chart shows the organizational structure:



In the 2017-2018 year, the elected officers were:



Chair

**Prof. Abbas Rajabifard**  
University of Melbourne  
(Australia)



Deputy Chair

**Prof. Maria Antonia Brovelli**  
Politecnico di Milano  
(Italy)



Secretary

**A/Prof. Daniel Paez**  
University of Los Andes  
(Colombia)

## ADVISORY BOARD

The Academic Network Task Team in charge of developing the Terms of References of the Academic Network has accepted to continue their involvement as the Advisory Board for the Network. During the last year the members of the Advisory Board were:



**Prof. Huayi Wu**  
Wuhan University  
(China)



**Prof. Joep Cromptvoets**  
KU Leuven  
(Belgium)



**Prof. Harlan Onsrud**  
University of Maine  
(USA)



**Prof. David Coleman**  
University of New Brunswick  
(Canada)



**Prof. Menno-Jan Kraak**  
University of Twente  
(Netherlands)



**Prof. Jide Kufoniya**  
Obafemi Awolowo University  
(Nigeria)



**Prof. Josef Strobl**  
University of Salzburg  
(Austria)

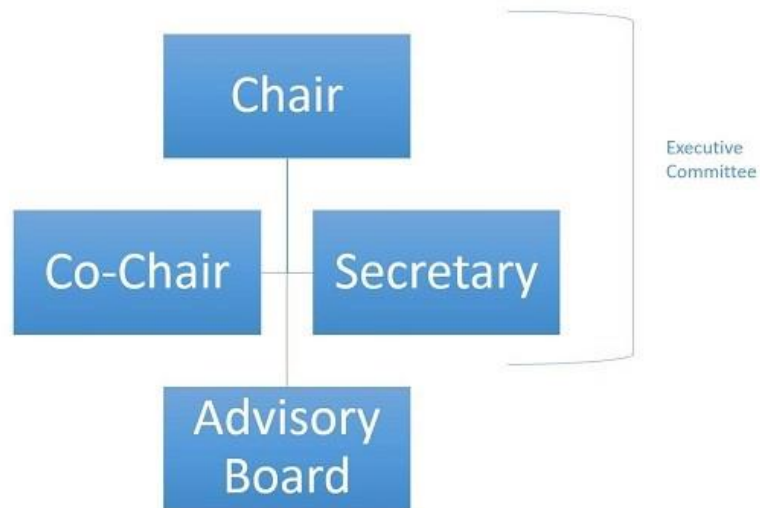


Appendix B  
2019 – 2021 Workplan

## Introduction

This document describes the plan of actions proposed for the UN-GGIM Academic Network for 2019 to 2021. A formal body constituted as part of the United Nations Global Geospatial Information Management (UN-GGIM). The Academic Network is the strategic knowledge, research and training arm of it.

According to its approved Terms of References, the Academic Network has an Executive Board comprises of a Chair, Deputy Chair and Secretary, and an Advisory Board of 7 members for the operation and coordination of the Academic Network. As a group, the Chair, Deputy Chair and Secretary constitute the Executive Committee. The following chart shows the organizational structure:



The first part of the document discusses the general strategic approach for activities that the Academic Network would have for the next two years. Then, explanation of the initiatives to be developed by the Network is discussed.

# Overall Strategic Approach

According to its Terms of References, the UN-GGIM Academic Network has the functions of:

- Provide academic counsel and guidance to UN-GGIM concerning strategic knowledge, research, education and training and to serve as a strategic academic arm for UN-GGIM and its related organizations and affiliated members in achieving their visions and goals.
- Provide a forum for coordination and dialogue among academics and researchers from the geospatial information management community with a view to advance activities related to the administration, management, and use of geospatial information, and to identify and respond to challenges and opportunities in which UN-GGIM and related members can achieve their visions.
- Provide a platform that the needs of member countries for geospatial information data, technology, training and education, and the information of the capacities of academic network members are shared, so that geospatial data, technology, training and education can be widely used through this platform.
- To advise and support geospatial information and land administration training and capacity building programs of the UN-GGIM.
- To offer advice in response to UN-GGIM questions, identify and inform UN-GGIM concerning academic knowledge gaps or problems that may exist or arise, and propose initiatives as appropriate to address such questions and challenges.
- Bring to the attention of UN-GGIM and its regional organizations state-of-the-art research and academic trends on global geospatial information, or write white papers on any of related topics, and also offer training/ education in those fields.
- Create a communication platform for member countries to bring to the attention of the Academic Network key problems and areas of research that are of high interest to local, national and regional organizations.
- Address governance, data management, institutional, technology adoption and sustainability issues related to the management of geospatial information.
- Undertake work that is able to contribute to the Sustainable Development Goals of the UN and other areas as appropriate including, access to land, property rights, ownership, land degradation, rapid urbanization, and climate change, in coordination with other expert entities.
- Undertake activities that foster collaboration between universities and research groups at an international level, including to identify and address common research topics and overarching trends;
- Promote and encourage close collaboration between Universities and their national geospatial counterparts.
- Encourage the development and sharing of geospatial analytics.

## Principles for action

Considering this function and acknowledging that as a voluntary organization requires delicate management of the energy requested by its members, the following principles have been developed for conducting all activities during the next two years:

- Use of electronic resources as much as possible and limit the need for travel as essential for members to participate
- Encourage active participation of all members in the activities with coordination from the advisory board and the Executive Committee
- Work in cooperation with subsidiary networks and other stakeholders to ensure knowledge and advice is adequate to different cultures and language barriers are reduced

## Strategies for success

Considering the opportunities offered by the ability of the Academic Network to cooperate directly with UN-GGIM in its mission, initiatives for the next two years would need to be achieved based on overarching strategies that enable better cooperation with other UN-GGIM internal networks as well as external stakeholders.

Therefore, for all initiatives of the Network, the following Strategies are proposed:

- To ensure participation and reduce duplication, communicate before, during and after actions and activities of the Network with its members as well as key liaison officers of the UN
- Update the website frequently with information relevant to the network and use actively Twitter and LinkedIn to publicise progress on all initiatives and future activities
- Seek cooperation with similar initiatives in other regional or global bodies such as FIG, FAO and UN-Habitat
- When possible, find local or regional activities to ensure initiatives of the Network have a practical result and produce a change to countries

# Initiatives

Seven initiatives have been identified to be the focus of the Academic Network. For each initiative, key performance indicators and a target for them have been identified.

## Organise parallel academic events at key UN-GGIM forums and meetings

Considering the need to build capacity among UN-GGIM member countries, this initiative seeks to allow members of the Academic Network to provide a discussion space where theoretical and practical knowledge is shared among practitioners in government, academia and the private sector.

Parallel events should be coordinated with UN-GGIM and local organizer to ensure appropriate integration with the agenda and relevance of the topic. When possible, parallel events should be accessible by web seminar and all presentations uploaded to the Network's website.

KPI: Number of events a year with parallel academic events

Target: 2 events a year

## Expanding the member base in all regions

It is fundamental the expansion of the network across the globe to ensure appropriate support is provided to a large number of member countries of UN-GGIM. In this, there should be a good balance of members across regions, particularly in developing countries in where the need to improve geospatial information management is vital. It is aimed that the network will have 200 members by the end of 2019.

To increase members, the following activities will be conducted:

- Promotion of the network in all parallel events
- Members to promote the Network during their own participation at professional events
- Direct contact of Advisory Board members to local potential members
- Mail out invitations to events and to join the network

KPI: New members per year

Target: 70 members by 2020 and 100 by 2021

## Participate actively in Technical groups, regional groups and sub-committees on UN-GGIM

Most of the technical activities of UN-GGIM are developed at the regional groups and sub-committee level. It is fundamental that members of the Academic Network participate actively in these subgroups and ensure that there are opportunities for the network to support any training or knowledge identified.

As of June 2019, the following regional groups exist in UN-GGIM:

- Asia-Pacific
- Americas
- Arab states
- Europe
- Africa

#### Expert Subcommittee

1. Subcommittee on Geodesy (formerly WG on Global Geodetic Reference Frame)

#### Expert Groups

1. Expert Group on the Integration of Statistical and Geospatial Information
2. Expert Group on Land Administration and Management

#### Working Groups

1. Working Group on Development of a Statement of Shared Principles for the Management of Geospatial Information
2. Working Group on Trends in National Institutional Arrangements in Geospatial Information Management
3. Working Group on Geospatial Information and Services for Disasters
4. Working Group on Global Fundamental Geospatial Data Themes
5. Working Group on Legal and Policy Frameworks for Geospatial Information Management
6. Working Group on Marine Geospatial Information and regional groups are:

To achieve this participation, the following activities will be conducted:

- Open nomination for Network members to participate in these subgroups
- Publication of a current list of representatives in the Network's website
- Official introductory letter of the representative person by the Network's chair, Professor Abbas Rajabifard, to the subgroup chair or president
- Upload of the semestral report of activities in the subgroup by representatives with coordination of the Network Secretary

KPI: % of subgroup with an active representation and submission of semestral reports

Target: 80% of all subgroups of UN-GGIM with a representative and 70% of representative semestral reports are uploaded to the website

## Build and populate an online registry of technical capacities across the members of the Network

A request by country members is to understand the technical and academic capacity in geospatial management in the different regions and countries.

During the next two years, the Academic Network will develop an online platform for academic network members to upload their academic capabilities in areas such as training, research and consultancy.

To achieve this, the following task will be conducted:

- The secretary of the Network, Dr Daniel Paez, will initiate and coordinate a task force team to conduct a design of the online tool
- Consultation of the tool will be conducted with the members
- New and existing members will be encouraged to populate the repository

KPI: a new online repository of capabilities available from academic member institutions Target: tool open for entering information by October 2019 and open for consultation by March 2020

## Provide technical support to UN-GGIM secretariat with a review of technical documents as required

One important mission of UN-GGIM is to provide technical support to UN-GGIM secretariat, its chairs and other executive officers. It is the goal of the Academic Network to develop appropriate systems to respond with agility to requirements to review documents and another technical report.

To achieve this, the following tasks will be conducted:

- Chair of the Academic Network, Professor Abbas Rajabifard, will delegate the responsibility of reviewing the document to one advisory committee member
- The Secretary, Dr Daniel Paez, will provide support to contact members in cases additional assistance is required by the lead reviewer

KPI: time to respond to review documents

Target: 100% of the feedback to documents provided within 6 weeks from the initial request

## Develop an online training platform and training hub for Academic network members' courses (new proposed actions)

Considering the need for building capacity among UN-GGIM members country, the Academic Network during 2019 will build an online platform for Members of the network to provide geospatial courses.

Additionally, it is proposed for 2019 support will be provided for the development of the Training Hub for land administration to be built between the World Bank and several universities under the coordination of the Centre for Spatial Data Infrastructure and Land Administration (CSDILA) at the University of Melbourne

KPI:

- development of the online platform.
- Support to the Training Hub

Target:

- Pilot of the training platform by December 2019 and fully operational by the end of 2020
- Support to the constitution of the training hub by the end of 2020.