



Global Geospatial Information Management (UN-GGIM)

UN-GGIM Academic Network

Background

The Bureau of the United Nations Global Geospatial Information Management (UN-GGIM) at its meeting convened in New York 7-9 December 2015, discussed the merits and establishment of an Academic Network to operate under the auspices of UN-GGIM, as a means to capture and include the role and contributions of academia in global geospatial information management. It was agreed that the chairs of the Regional Committees would submit an initial list of three to five leading Universities offering geoinformatics programs in their countries, and the Secretariat would augment this with a number of leading global universities with geospatial programs, particularly those that have been strong supporters of UN-GGIM over the past five years.

An exploratory UN-GGIM Academic Network meeting was convened on 19 April 2016, as a side event to the Fourth High Level Forum on UN-GGIM in Addis Ababa, Ethiopia, from 18-22 April. The meeting was co-chaired by UN-GGIM's inaugural Chair of the UN-GGIM Committee of Experts, Dr. Vanessa Lawrence CB, and Mr Greg Scott, the UN-GGIM Inter-Regional Advisor. It was anticipated that the Academic Network would operate along the same lines as the Joint Board of Geospatial Information Societies (JB-GIS), and would be able to self-organise and contribute to the activities of UN-GGIM in a similar productive manner. This first Academic Network meeting explored its objectives, terms of reference, and strategic advisory role in the global community.

Acknowledging the discussion at the first *Academic Network Meeting*, and referring to the Addis Ababa Declaration at the conclusion of the Fourth High Level Forum, which endorsed UN-GGIM facilitating the establishment of an Academic Network as a strategic knowledge, research and education arm to assist its activities and objectives, UN-GGIM has formed an Academic Network Task Team with selected senior members from different regions to assist with the following initial tasks:

- 1) Draft Terms of Reference for the UN-GGIM Academic Network
- 2) Suggest a process for membership in the Network
- 3) Draft potential roles and responsibilities for members to be an effective and active Network
- 4) Prepare an initial workplan and a timeframe for the Academic Network's activities
- 5) Prepare and present a report and draft materials of the above tasks for consideration at the upcoming sixth session of the UN-GGIM Committee of Experts Meeting in NY in August 2016.

In order to proceed with the formation of the Academic Network Task Team, the UN-GGIM Secretariat has appointed Professor Abbas Rajabifard from the University of Melbourne to chair the Task Team. The Academic Network Task Team was formed with the following members:

- Prof. Abbas Rajabifard, The University of Melbourne, Australia (Chair)
- Prof. Huayi Wu, Wuhan University, China
- Prof. Joep Crompvoets, KU Leuven, Belgium
- Prof. David Coleman, University of New Brunswick, Canada
- Prof. Harlan Onsrud, University of Maine, USA

- Prof. Menno-Jan Kraak, University of Twente, The Netherlands
- Prof. Josef Strobl, University of Salzburg, Austria
- Prof. Maria Antonia Brovelli, Politecnico di Milano, Italy
- Prof. Daniel Páez, University of Los Andes, Colombia
- Prof. Jide Kufoniya, Obafemi Awolowo University, Nigeria

The formation of the academic network was approved by the UN-GGIM Expert Meeting in NY in August 2016 and the Task Team was asked to finalize the Terms of Reference and elect inaugural officers. The Task Team has met on 22nd August and has finalized the ToRs and has also elected Prof Abbas Rajabifard from University of Melbourne to be the inaugural chair of the Academic Network. The Team has also elected the Dr Daniel Daniel Páez from University of Los Andes, Colombia as the Secretary and also approved the members of the Task Team to be the inaugural members of the Advisory Board for the Network.

Terms of Reference (ToR)

Objective

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.

The network will facilitate access globally to research and education capabilities for UN-GGIM and its affiliated members in order to identify and respond to challenges and opportunities for UN-GGIM and related UN offices. The UN-GGIM Academic Network will be a coalition of recognized universities and research and education centers involved in research, development and education on geospatial, land information and related matters, run on a volunteer basis.

Functions

The functions of the Academic Network will be to:

- (a) Provide academic counsel and guidance to UN-GGIM concerning strategic knowledge, research, education and training;
- (b) To serve as a strategic academic arm for UN-GGIM and its related organizations and affiliated members in achieving their visions and goals;
- (c) 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 competencies and qualifications needed for 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;
- (d) Provide a platform through which to share the needs of member countries for geospatial information, technology, education and training, and the information of the capacities of academic network members, so that geospatial data, technology, knowledge, education and training can be widely used;
- (e) To advise and support geospatial information and land administration education, and capacity building programs of the UN-GGIM;
- (f) 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;

- (g) To bring to the attention of UN-GGIM and its regional organizations state-of-the-art research and academic competence trends on global geospatial information, write white papers on any related topics, and offer education and training in those fields;
- (h) To create a communication platform for member countries to bring to the attention of the Academic Network key problems, needs and areas of research that are of high interest to local, national and regional organizations;
- (i) To create an inventory of leading international education programs open to and recommended for UN-GGIM actors;
- (j) To address governance, data management, financial, institutional, technology adoption and sustainability issues related to the management of geospatial information;
- (k) To encourage members to undertake work that is able to contribute to the Sustainable Development Goals of the UN and other areas as appropriate, including: access to land and property rights; ownership; land degradation; rapid urbanization; and climate change, in coordination with other expert entities;
- (l) To undertake activities that foster collaboration between universities and research groups at an international level, including identifying and addressing common research topics and overarching trends;
- (m) To promote and encourage close collaboration between key universities and their national geospatial counterparts; and
- (n) To encourage the development and sharing of geospatial analytics.

Membership, Composition and Terms of Office

- (a) The members of this Network will be comprised of relevant universities, academic institutions or research centres where geospatial information research and/or education are accomplished and also want to voluntarily collaborate with UN-GGIM;
- (b) Only universities, academic institutions and research centres headquartered in nations that are part of the UN may apply for membership;
- (c) To be qualified for membership, each member institution must have an established track record. Member institutions through their organizations be involved in research and/or education relating to: surveying; photogrammetry; remote sensing; mapping; cartography; computing; geospatial information science; geospatial analysis; web geo-services; socio-economic and environmental modelling; as well as application areas associated with the management of geospatial information that make use of geospatial data and technologies, such as: infrastructure design and development; water; land administration; agriculture; forestry; geology; hydrology; urban planning; transport; market research; and governance, legal, financial and institutional issues associated with the use and management of geospatial data and technologies;
- (d) In order to become a member, an Expression of Interest (EOI) Form should be submitted to the Academic Network Secretariat together with a statement on the capabilities and contributions of research and education that the member institution is willing to share with UN-GGIM member countries. Only one form should be presented by each institution. In the case of multiple applications, the Academic Network will consider only that signed by the institutional applicant's chief administrator (or person holding a similar title). The statement must include: [i.] a description of the applicant institution's present programs in education and research related to one or more of the geospatial topics and application areas identified in the previous paragraph, including details about degree programs, courses, faculty, research, and public service activities;

[ii.] plans to continue to support, expand or contract any of the identified programs; [iii.] a statement about how the institution will contribute to the objectives of the UN-GGIM Academic Network; [iv.] the names and contact information for the initial official lead delegate from the institution and any additional delegates; and [iv.] similar documentation as may be required by the Board. The official listing of delegates from a member organization may be changed with three days' prior notice by the Secretariat of the chief administrator of the member organization or the lead delegate from that organization. The lead delegate is the party that will receive any electronic ballots from the UN-GGIM Academic Network to be cast by the member organization;

- (e) Through its delegates or other members, each member organization is expected to contribute substantively to the work of at least one UN-GGIM Academic Network committee or initiative each year;
- (f) There is no limit to the number of universities, academic institutions and research centres from any one country that may qualify for and be admitted to membership. However, member institutions from any one country may never exceed 10% of the qualified voters in any election or other action when a vote is taken by the membership;¹
- (g) New institutional members are voted in when they meet the established objective membership criteria as determined by majority vote of the existing members of the UN-GGIM Academic Network.² After reviewing applicant documentation, an online voting service utilizing a simple majority voting method and providing anonymity for voters will be used for the voting process, such as the system provided at <http://www.opavote.org/> or a similar system. Current lead delegates will be given five days to cast their yes or no votes. All voters receive the results of the election process from the online system at the same time that the Secretariat receives the results;
- (h) Membership is free of charge. The Chair and Secretary of the Academic Network will send primary operational and business correspondence to delegates from each member institution. Any person affiliated with a member institution (faculty, researcher, administrator, student, etc.) typically may receive general correspondence from the organization, volunteer to contribute to committee work, and attend meetings of the Academic Network. The Secretary of the Network will maintain both lists and add individuals to the list of affiliated persons either by the individual's own request or nomination by another Network officer or institution delegate;
- (i) The Academic Network will elect a Chair, Deputy Chair, 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 Secretary serves as Secretariat for receiving membership applications, maintaining contact lists and distribution of business correspondence for the Executive Committee. Ideally the Chair, Deputy Chair and secretariat should each represent a different UN-GGIM region and/or type of institution, but the mix is dependent upon the open election process. The Advisory Board will be representative of the different UN-GGIM regions and gender balance will be considered as well. The Chair, Deputy Chair, Secretary and Advisory Board will serve for a two-year period, renewable once for an additional one year as determined by election. The Executive Committee will meet at least once a year;

¹ As an example, if the total UN-GGIM Academic Network membership has 100 members at the time of an election and 12 member institutions are headquartered in Country A, only 10 ballots may be cast by the member institutions from Country A. If Country A members do not have an agreed process among themselves for casting the ballots, the UN-GGIM Executive Committee will send the ballots to the lead delegates of the first 10 institutions from that country admitted to membership or by other equitable means as may be developed by the Executive Committee in the future.

² To establish the organization under a usual practice for setting up new member organizations, the ten members of the UN-GGIM Academic Network Task Team as formally approved by UN-GGIM will serve as lead delegates to elect an initial Chair, Co-Chair, and Secretary from among themselves for a two-year period. They will also vote concerning the admission of any institution applicants to the Academic Network received during the two-year period along with other organizations accepted into the Network during that period. The home institutions of the current Academic Network Task Team members will need to apply for admission and no honorary founding member admission will be granted. Near the end of the two-year period, new elections for the Chair, Co-Chair and Secretary will be held.

- (j) Candidates for Chair, Deputy Chair and Secretary may be nominated by any of the three officially listed delegates from any current member organization and only delegates from an existing member organization may be elected to serve as Chair, Deputy Chair or Secretary. After reviewing the documentation of all candidates, the lead delegate of current member organizations qualified to vote will receive an automated email sent to their official address asking them to rank vote all nominees for the position. An online ranked voting service utilizing the instantaneous runoff voting method and providing anonymity for voters will be used for the voting process, such as that provided at <http://www.opavote.org/> or a similar system. Lead delegates will be given five days to cast their ranked votes. All voters receive the results of the election process from the system at the same time that the Secretariat receives the results;
- (k) The executive shall decide on network management, coordination and membership application requirement issues. They shall also review applications (EOIs) for individual institution memberships to ensure that minimum criteria have been addressed in each application prior to submitting the application for vote by the membership. The elected chair has casting vote in case of divisions;
- (l) A member may withdraw from the Academic Network upon informing the Chair or Secretariat with thirty days' written notice. Such notice will be delivered electronically;
- (m) The Academic Network will meet regularly at the UN-GGIM Committee of Experts, High Level Forum, and any other formal meetings;
- (n) If considered appropriate, the Academic Network will establish sub-regional groups in line with UN-GGIM regional committees and or task teams to focus on particular aspects of the programs under its oversight. The Network may meet at any UN-GGIM regional groups' meetings;
- (o) The Academic Network shall have one committee for each UN-GGIM Expert Group and Working Group. The chairs of these committees will be elected by the network members, with one vote per member cast by the lead delegate. As one of the responsibilities of membership, each Network member institution should have at least one delegate registered and actively participating in at least one committee;
- (p) The Academic Network will liaise as required with other international academic groups and non-government organizations that may have an interest in the management of geospatial information to support the implementation of the Sustainable Development Goals; and
- (q) The Academic Network will review, and if appropriate revise, its Terms of Reference every two years, and in conjunction with a change in Chair and Deputy Chair.

Specific activities

To achieve these objectives, the Academic Network's initial work plan will focus on the following:

- (a) Review of the current UN-GGIM WGs' work plan to identify areas for support and input;
- (b) Promotion of the Network to potential member institutions;
- (c) Registry of current capabilities, degree programs, training programs, research, and courses, relevant to UN-GGIM gathered as part of the membership application process as well as through additional means; and,
- (d) Establishing a Registry for Education, Training and Research.

Note: The Registry will contain only the information related to Universities and Research Centers interested in collaborating on a voluntary basis with UN-GGIM. The responsibility for updating the Registry (through a simple web page) rests on the member institutions.

Reporting procedure

The Academic Network will report to the UN-GGIM Committee of Experts and High Level Forum.

Frequency of Meetings and Communication

- (a) The Academic Network will normally operate virtually and will meet in concurrence with related geospatial meetings, and will also officially meet during each UN-GGIM Committee of Experts and High Level Forums.
- (b) The UN-GGIM website, Skype, WebEx, Google Drive and DropBox, in addition to other relevant telecommunication tools will be used by the Academic Network for communication, collaboration, knowledge management and information sharing and dissemination.

1. Secretariat

- 1.1. In support of the activities of the Network the secretary of the Academic Network, in cooperation with the Chair and Deputy Chair, will coordinate, facilitate, monitor and report on the activities of the Academic Network and its sub-groups, coordinate and prepare the agenda for the Academic Network meetings, and issue notices from the Academic Network and any other support activities deemed necessary.
- 1.2. The Network Secretary will liaise and receive support from UN-GGIM Secretariat for the operation of website and other related processes.

2. Other items:

Indicators for success

- Number of Universities/Research Centers joining the network and answering the questionnaire
- Number of members involved in the Network Information of the resources registered in the network that can be shared to UN-GGIM members
- Annual number of Academic Network representatives activity contributing to the network and attending UN-GGIM meetings (High Level Forum, Expert Committee, Regional Committees, Working Groups, etc).