



# SPACE GENERATION ADVISORY COUNCIL

In Support of the United Nations  
programme on Space Applications



# GNSS TODAY AND PREPARING FOR THE FUTURE FROM THE NEXT GENERATION

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Co-Founder of Youth for GNSS  
Space Generation Advisory Council

ICG-10  
Boulder, Colorado  
2 November 2015



# CONCEPT OF THE “SPACE GENERATION” AND SGAC ORIGINS

# SGAC Origins

- Conceived at the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) in Vienna in 1999 (same as ICG!)
- 160 students and young professionals invited to contribute
- Product was the Vienna Declaration where the States resolved:

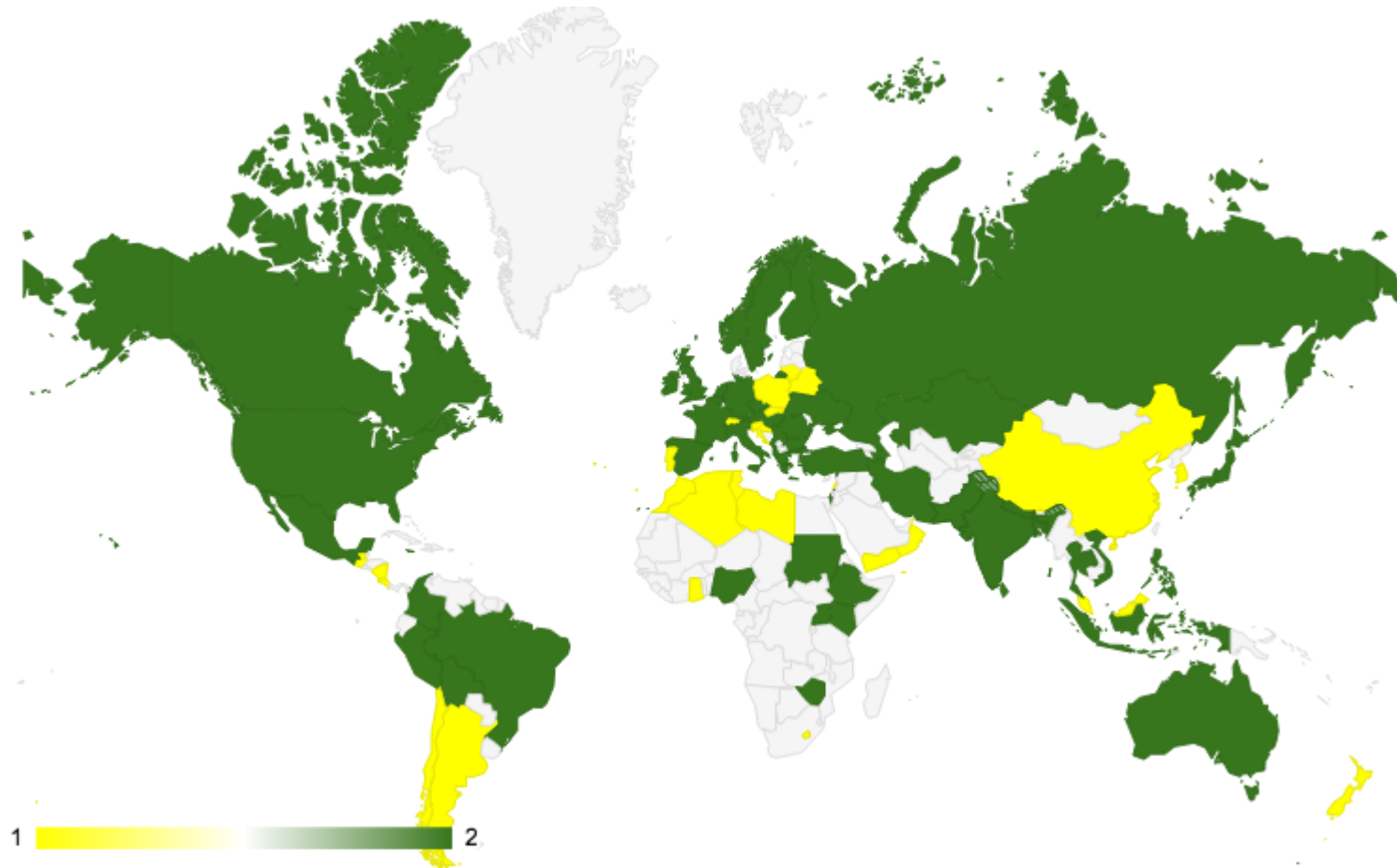
*“To create, within the framework of the Committee on the Peaceful Uses of Outer Space, a consultative mechanism to **facilitate the continued participation of young people from all over the world**, especially young people from developing countries and young women, in cooperative space-related activities...”*

# SGAC Purpose

- Create a global volunteer base of university students and young professionals in the space sector who have a passion for making a difference in the space sector and a commitment to action
- Connect them to peers and top space professionals from various organisations
- Give the next generation of space sector leadership opportunities and a voice in global space policy



# SGAC Network



6 Regions, 100+ Countries, 4,000+ Members

# Regional Workshops

## Space Generation Workshops (SGWs)

- 2 day workshop held regionally
- Focus in on the space issues important to the region
- Space technology utilisation and development within the next decade
- Projection of regional space activities in the future
- Discussions about competition, cooperation and peaceful uses of outer space



## SGAC SGx Series

- 1 day event held around the world
- Focus in on national space issues
- SGxAustria, SGxUSA, SGxColombia, SGxNamibia .....
- Network, meet potential employers
- What's important to you and your country?
- What benefits are nations getting from the government/private/commercial investment in space?



# Space Generation Congress

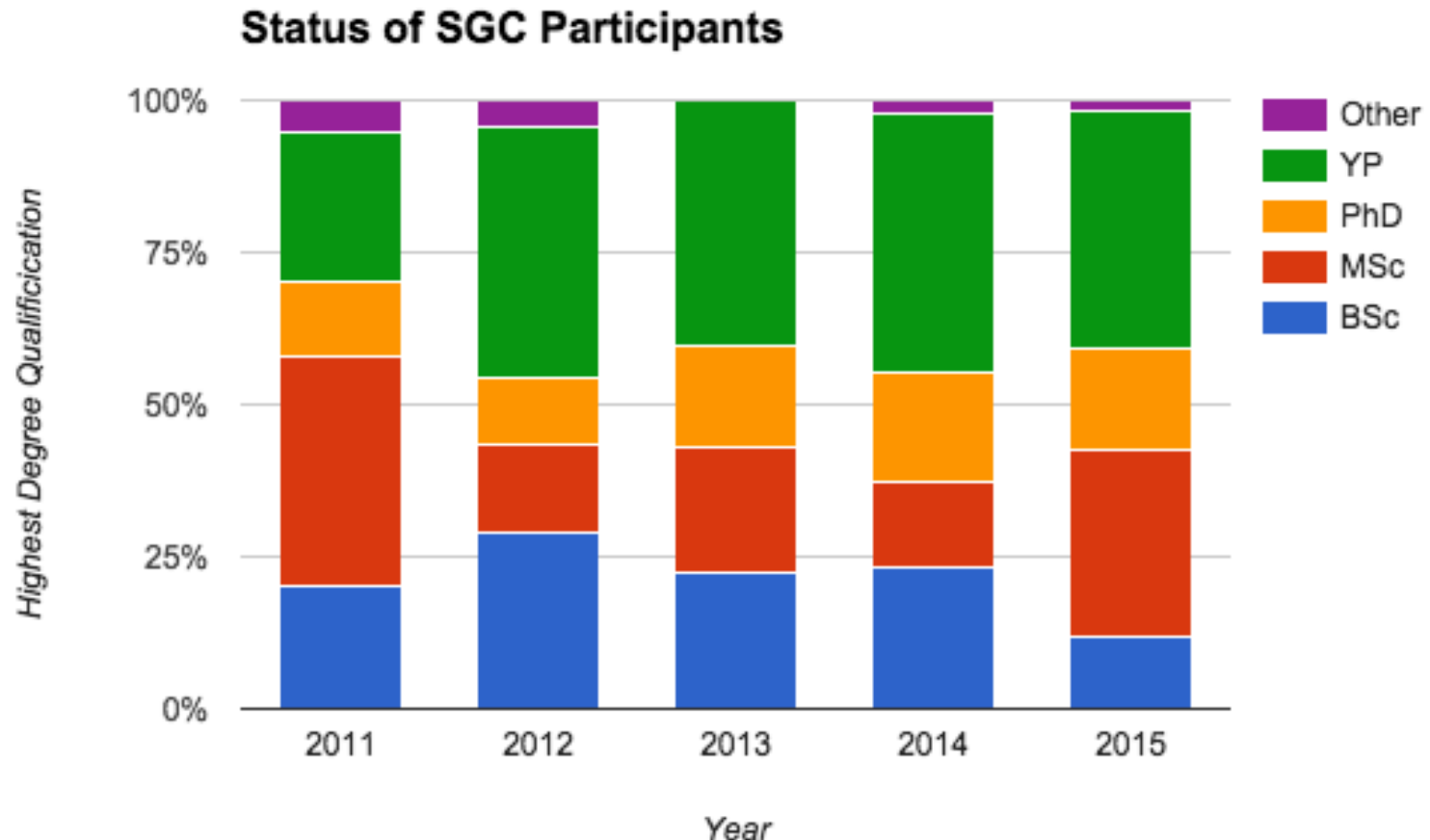
The 14<sup>th</sup> Edition of SGC was held (8 - 10<sup>th</sup> October 2015) in Jerusalem, Israel

- Held in conjunction with the International Astronautical Congress
- 126 delegates from 41 countries
- 14 speakers, and 7 subject matter experts
- SGC 2016 will be held in Guadalajara, Mexico (22 -24<sup>th</sup> September 2016)
- 45 Scholarship awarded including 8 Technical Paper Competitions and 5 SGAC Young Leaders Scholarships





# Space Generation Congress Statistics



**Trend:** Highest Qualification shifting higher  
More MSc, PhD, and YP  
Higher quality Working Group results

# YGNSS BACKGROUND AND ACTIVITIES

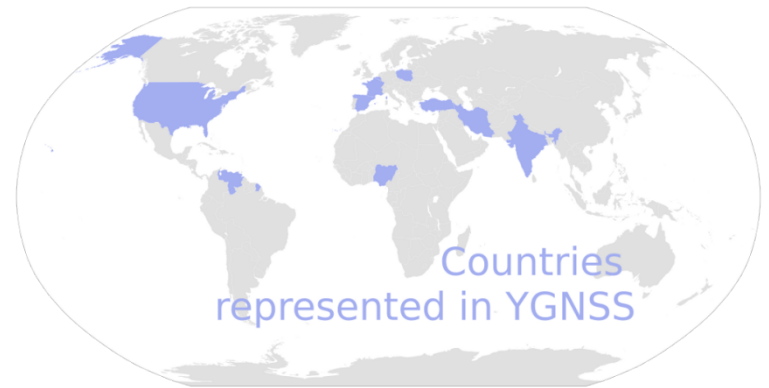
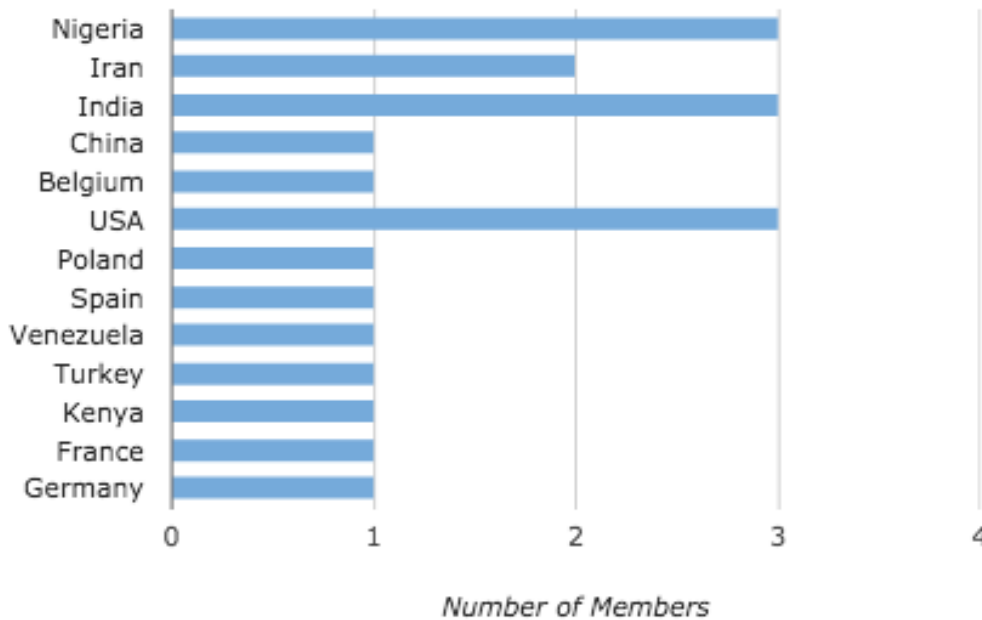
# Youth for Global Navigation Satellite Systems (YGNSS)

- Background
  - GNSS is embedded in our daily life (mobile phones, GPS...), and now almost every country in the world has satellites on orbit to provide data to the users. However, there is a huge lack of information in the society about them.
- Key Objectives
  - Provide support to education and public outreach of all GNSS systems
  - Reach out to the new Generation of Engineers and GNSS Professionals
  - Connect and cultivate the next generation of GNSS professionals

# YGNSS Structure

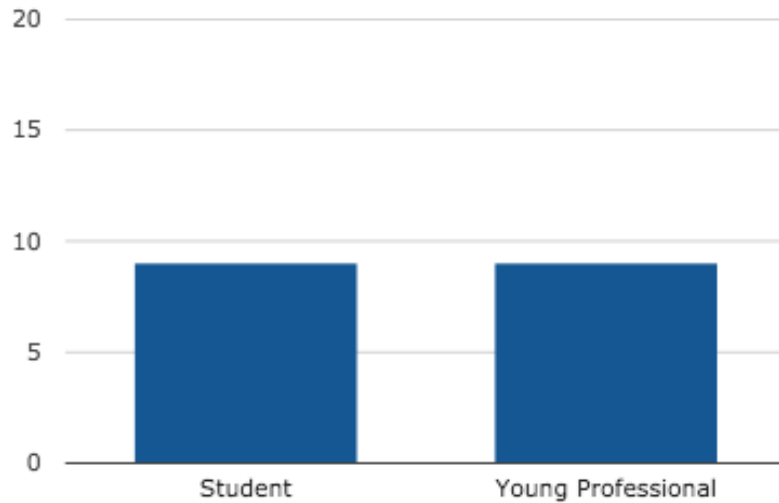
Multi-national team of volunteer members with different backgrounds

## Nationality

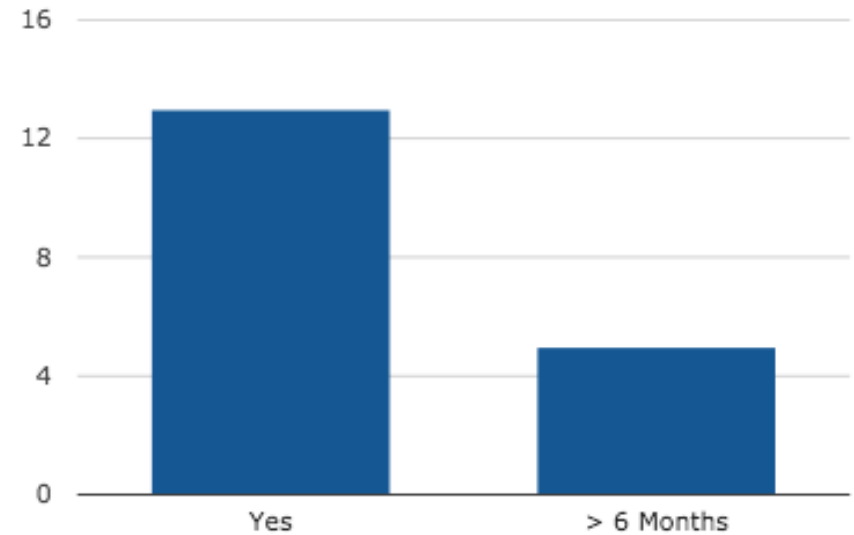


# YGNSS Structure

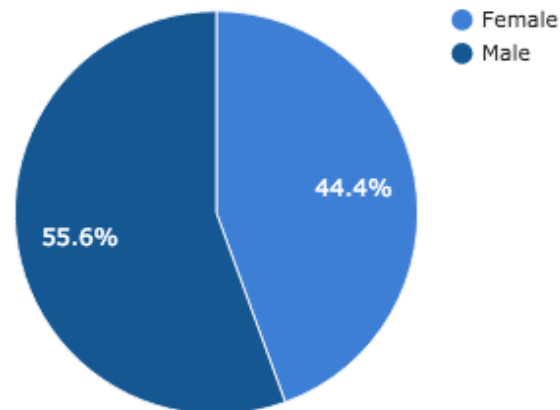
## Highest Qualification



## Active



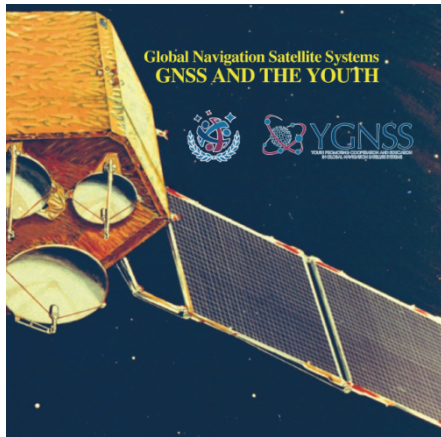
## Gender



# YGNSS Workshops

- 2013 – GNSS and Earth Observation for Disaster Management Workshop (Beijing, China)
  - Collaboration with Space Technologies for Disaster Management Project
  - Participants: ≈25 attendees from 15 countries
  - Speakers: UN SPIDER, George Washington University Space Policy Institute, Beihang University, Mexican Space Agency
  - Set the basis for 2015 workshop
- 2015 – YGNSS Workshop on Interoperability and International Cooperation (Boulder, Colorado)
  - Addressing relevant issues of the current GNSS landscape
  - Participants: 25 participants from 9 countries
  - Speakers: European Space Agency, Chinese Academy of Science, NASA, UNAVCO, Regional Centre for Space Science and Technology Education for Latin America and the Caribbean, University of Colorado-Boulder

# Other Achievements



- Conference Paper : "Challenges Faced by GNSS Today"
  - Group Publication presented in IAC 2014 Toronto
  - Review of the frontiers in GNSS research today : input for YGNSS decisions on future projects
  - Translated to Spanish, French and Chinese
- GNSS and the Youth Brochure
- ICG-10 Logo Competition

# Future Projects

- Flood Warning App
  - Badagry is one of the most vulnerable places to flooding in Nigeria.
  - Develop an app that uses GNSS and Meteorology Data to foresee Floods and advise the safe exit route
- Farming Survey
  - Define an action vector for the GNSS-aided develop of farming in developing countries and the increase of efficiency in developed countries
- GPS-Galileo Interoperability Tutorial
  - Integration of Galileo & GPS in a mission planning tool
  - Educate on benefits/Issues of GNSS multisystem scene



<http://lagostoday.blogspot.fr>



<https://commons.wikimedia.org>



# How can SGAC members prepare today for tomorrow's GNSS world?

- Interacting with the professionals/ mentoring opportunities
- Participating in workshops & exchange of ideas
- Encouraging members to continue their enthusiasm with projects and continuously being aware of topics

SGAC is a vehicle that complements traditional academic training and offers a door to practice young professional development

# Thank You!

--- From the Current to Future Generation of GNSS user community



YGNSS Workshop on Interoperability and International Cooperation (1 November 2015)

[www.spacegeneration.org](http://www.spacegeneration.org)