



## Three Decades of 3Is Space Education: The International Space University at 30

Prof C Welch  
Prof W Peeters

UN/Austria Symposium  
Access to Space: Holistic Capacity  
Building for the 21st Century

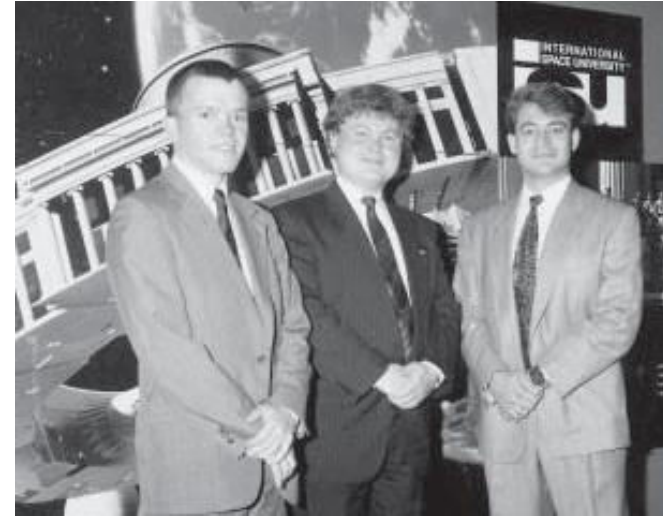
4 Sept 2017

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# 1. Founding of ISU

- In 1985, Peter Diamandis, Todd Hawley and Robert D Richards created the *Space Generation Foundation*.
- Among the ideas that came from the SGF was that of 'an international space university' (another was the SGAC).
- ISU believes in "*a peaceful, prosperous and boundless future through the study, exploration and development of Space for the benefit of all humanity*"



## 2. ISU Educational Philosophy

- ISU '3Is':
  - Three aspects of ISU are key to success in meeting the present and future challenges of international space cooperation:
    - **Interdisciplinary**
    - **International**
    - **Intercultural**
- ISU disciplines
  - 3Is Space
  - Space Engineering
  - Space Sciences
  - Human Performance in Space
  - Space Applications
  - Space Management and Business
  - Space Policy, Economics and Law
  - Space Humanities

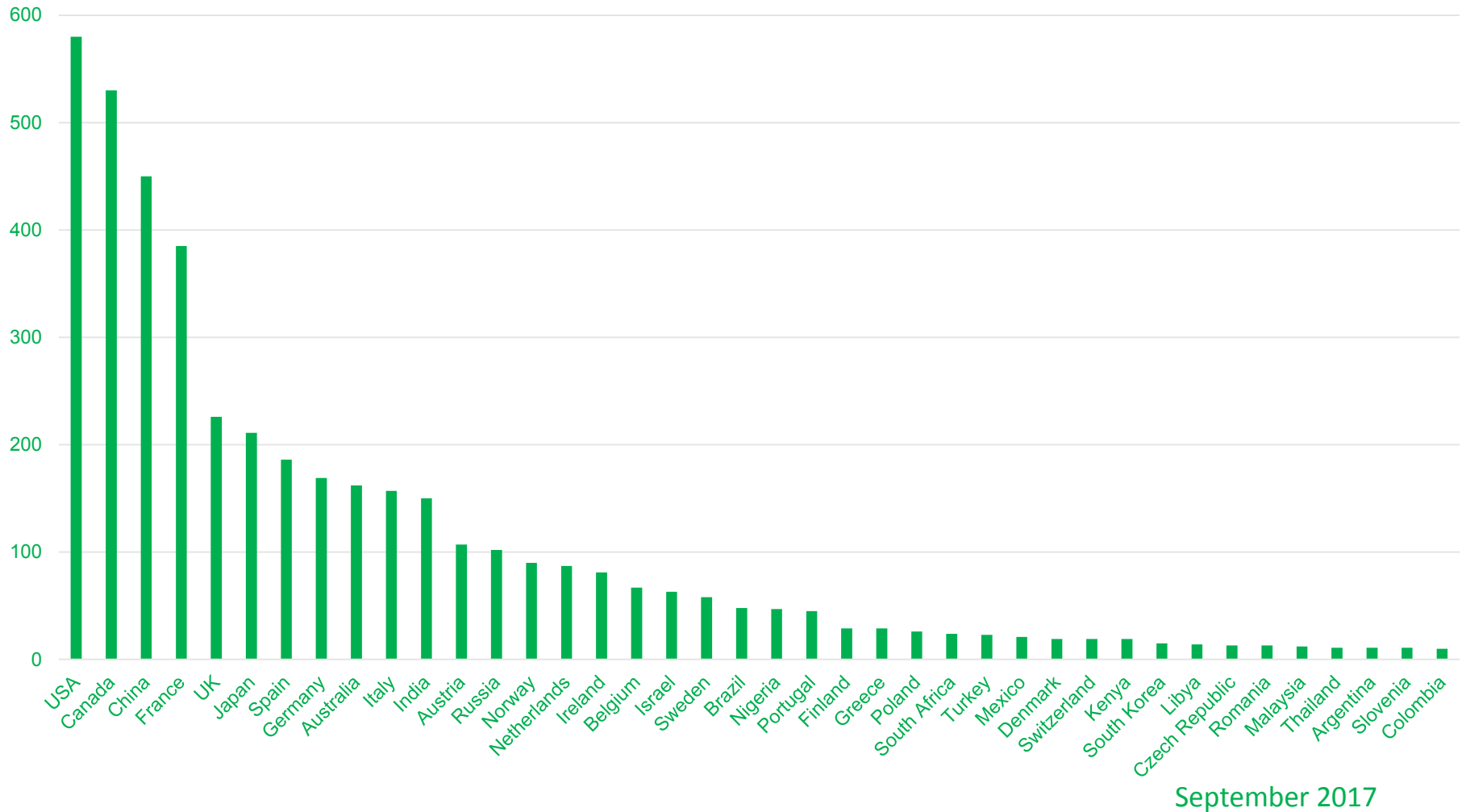
ISU students, faculty and visiting lecturers are drawn from a broad range of backgrounds, providing a rich environment in which to implement this **3Is** educational philosophy.

## 3. ISU Community

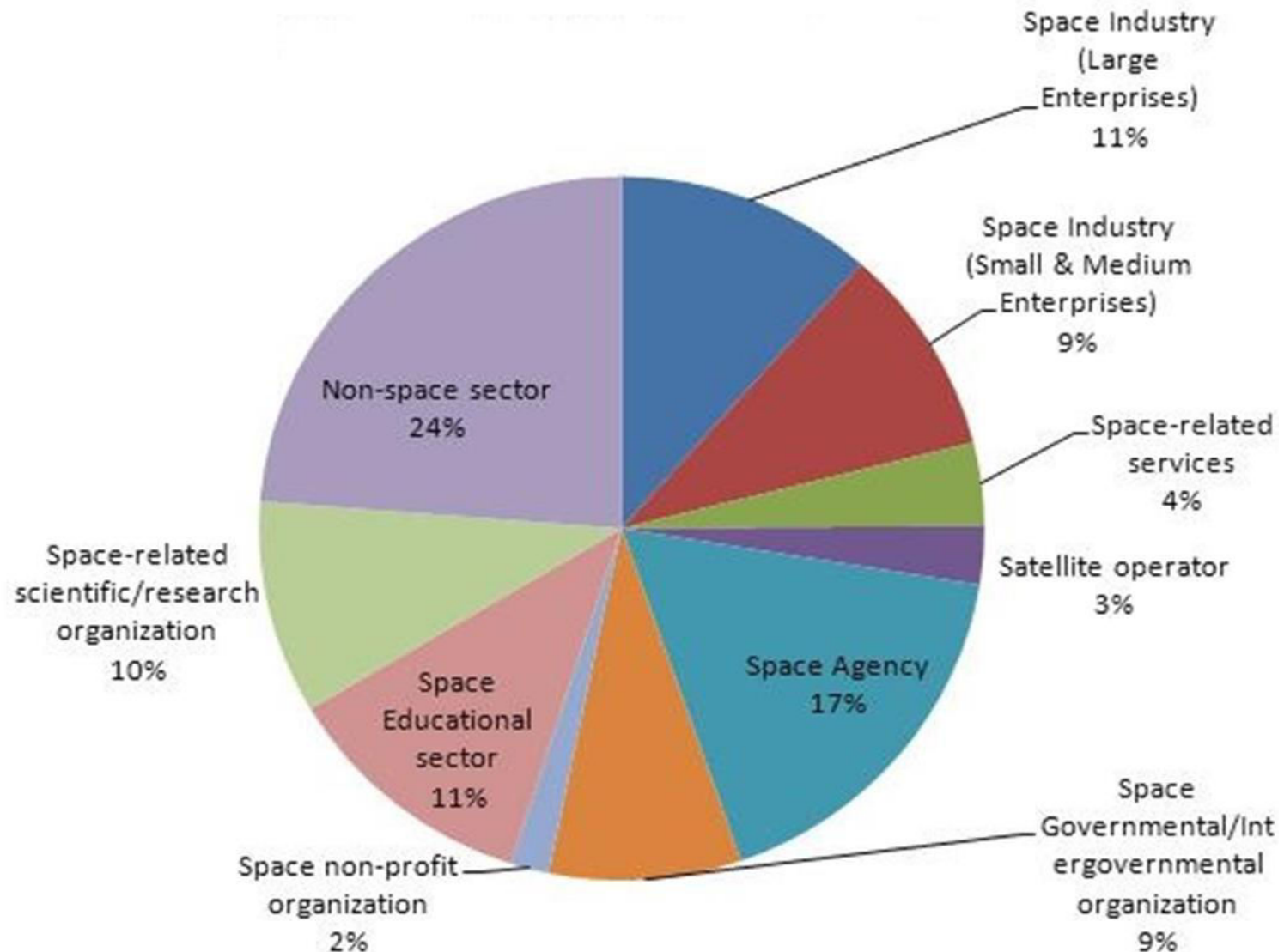


**The 4400+ ISU alumni come from over 105 countries**

## 3.1 ISU Alumni Nationality (top 40 countries)



## 3.2 ISU Alumni sector distribution



## 4. ISU Development and Achievements

Date	Milestone
1987	ISU Founding Conference and Incorporation in USA
1988	First Summer Session at MIT in Cambridge, Massachusetts
1993	Strasbourg Selected as Location for ISU Central Campus
1994	ISU Relocates to Strasbourg and Incorporates in Alsace
1995	First Master in Space Studies (MSS) Program based in Strasbourg
2002	Official Opening of ISU Central Campus Building
2003	First Executive Space Course (ESC) held in Strasbourg
2004	Official Accreditation by the French Ministry of Education
2010	Awarded Sir Arthur Clarke Award for International Achievement
2011	First Southern Hemisphere Space Studies Program
2012	Awarded Herbert Curien Award for Promotion of Space to Society
2015	MSS research/thesis year added
2016	Lease Agreement in Strasbourg prolonged for 15 years
2017	Initiation of US partner Institute with FIT in Florida
2017	First ISU experiments on board of ISS, MMARS1.



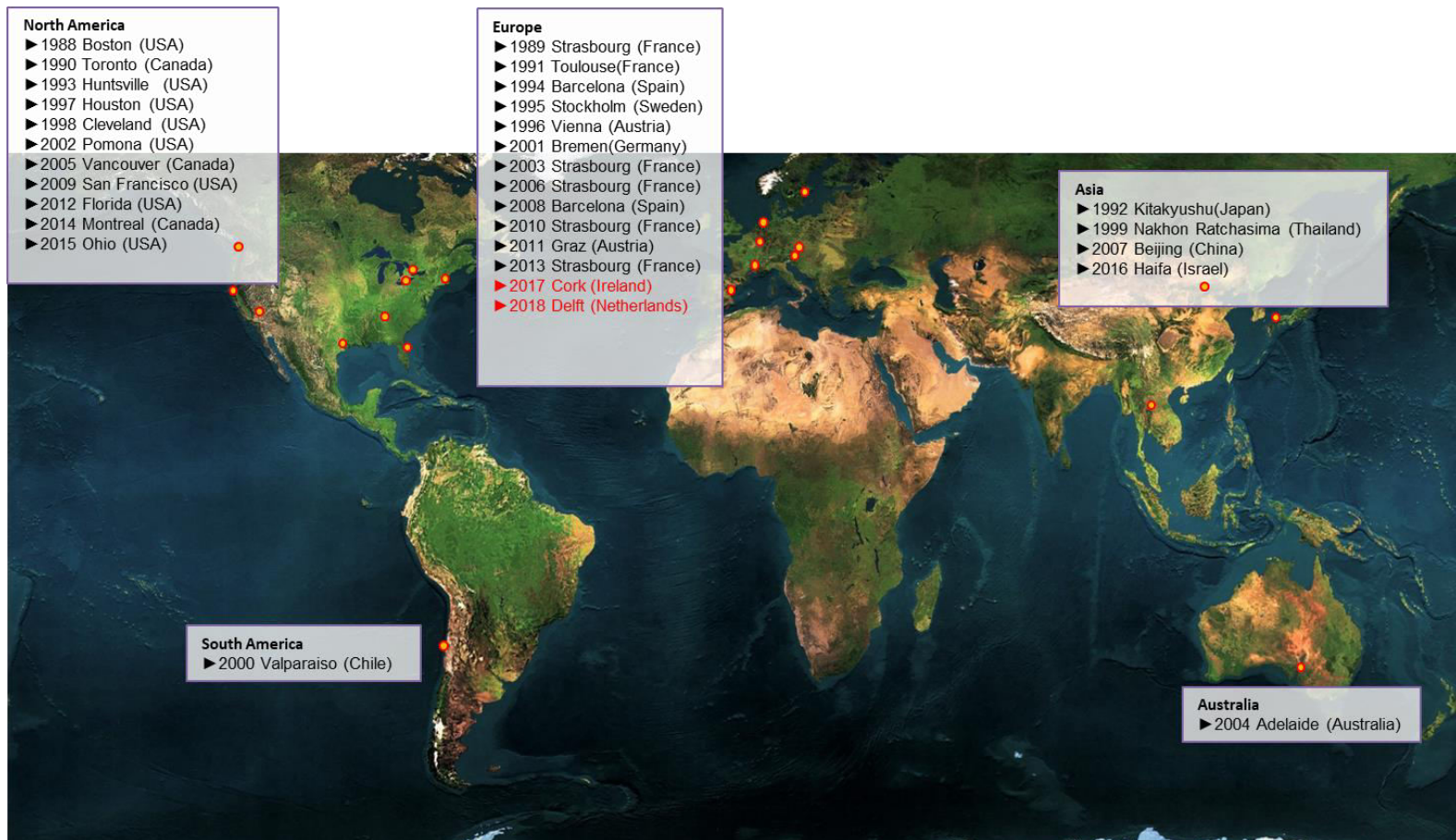
## 5. ISU Programs

- Over the last three decades years, ISU has continually developed its programs and activities.
- They are dedicated to the development of future and current space professionals from all nations seeking advancement in space-related fields.
- MSc in Space Studies (MSS)
- Space Studies Program (SSP)
- Southern Hemisphere Summer Space Studies Program (SH-SSP)
- Executive Space Course (ESC)



## 5.1 ISU Program Locations

- Central campus faculty based at the Strasbourg HQ.
- Approximately 70 other ISU 'global faculty' plus adjunct and associate faculty.
- A wide range of visiting lecturers.

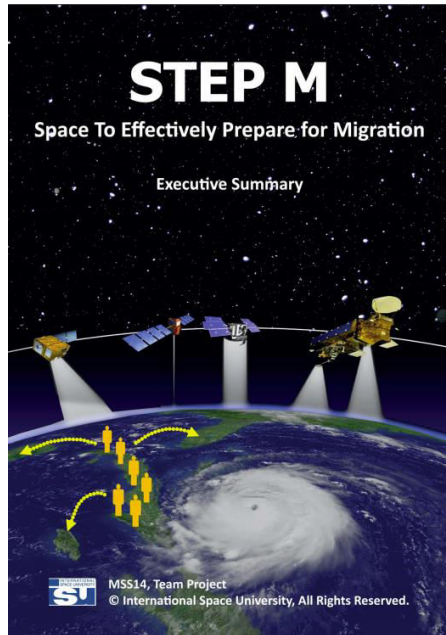


## 6. ISU 3Is Team Projects

- A 3Is Team Project (or White Paper) is a core component of every ISU program.
- The project develops students' ability to organize themselves to work on a significant space-related problem in a 3Is team environment, integrating their other learning.
- The team project topics are chosen by ISU to be relevant to the current global situation.



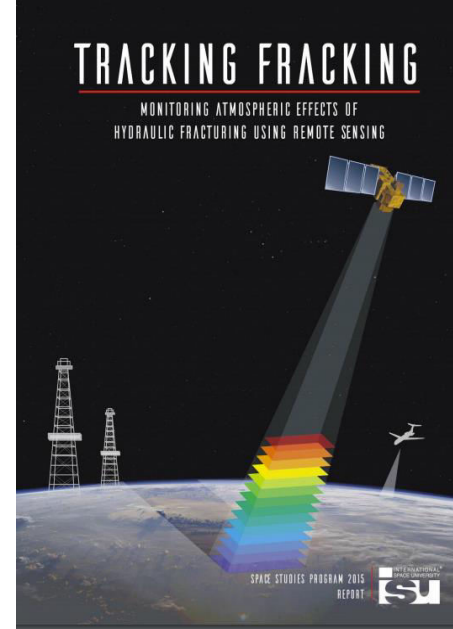
## *Some recent topics*



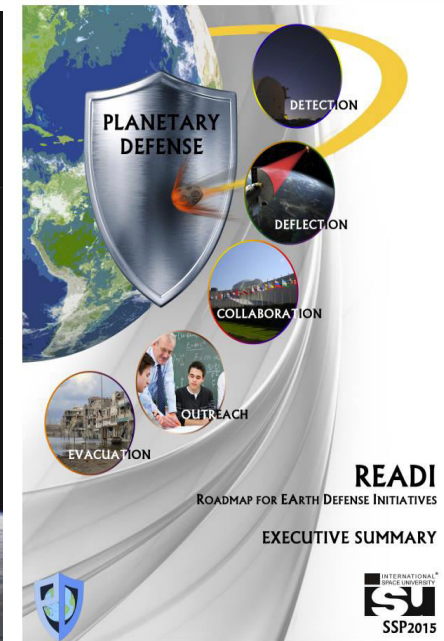
Space to  
Effectively  
Prepare for  
Migration



Space for  
health



Monitoring  
effects of  
hydraulic  
fracturing



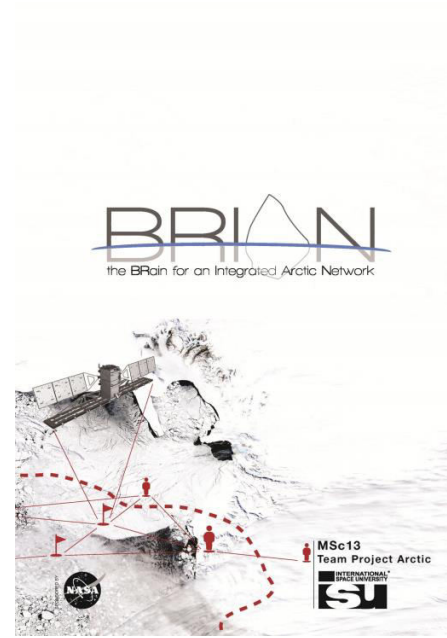
Roadmap for  
Earth  
defense  
initiatives



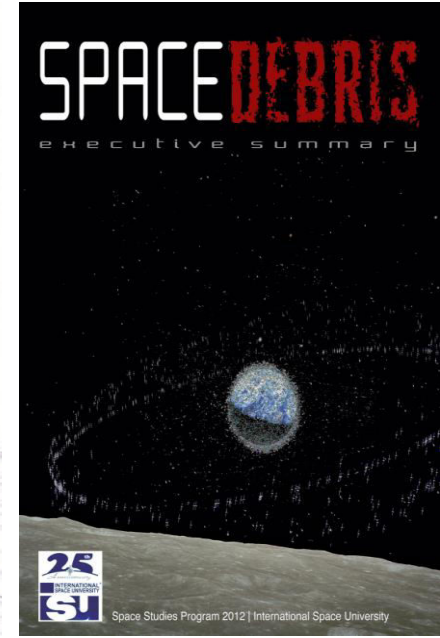
Space  
solutions for  
water  
management



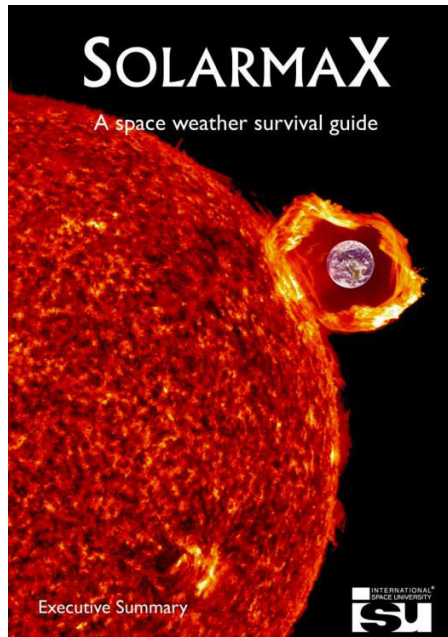
Tools for  
disaster  
management  
in the global  
south



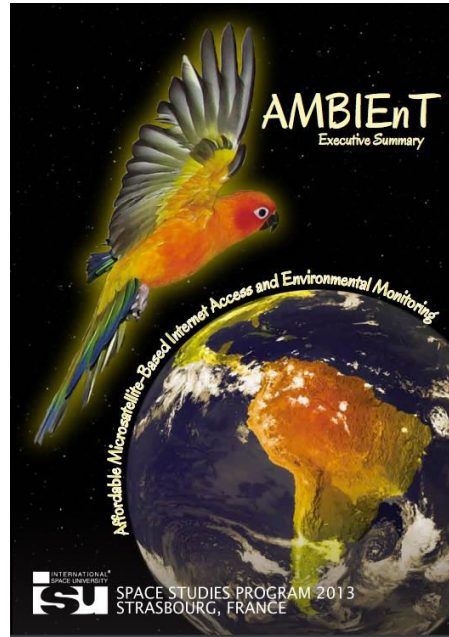
An integrated  
Arctic  
Network



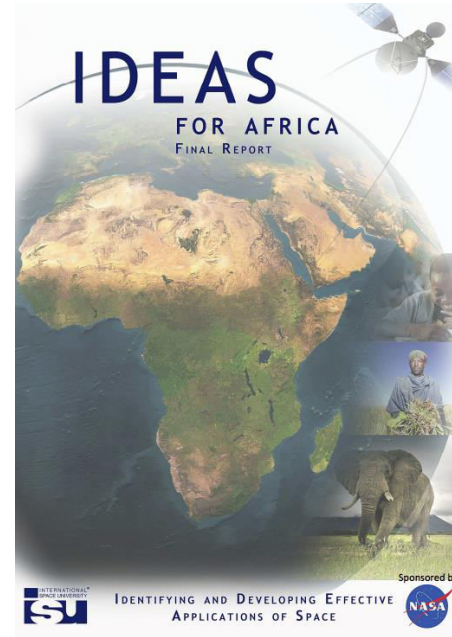
Space debris



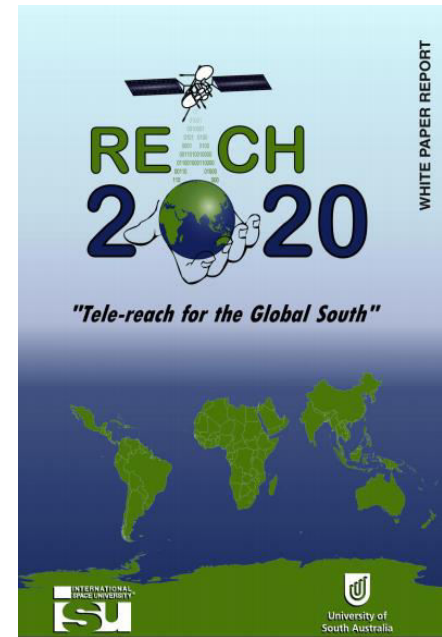
Space  
weather  
survival guide



Microsatellite-  
based internet  
access and  
environmental  
monitoring



Space  
applications  
for Africa



Tele-reach  
for the  
Global South

## 7. ISU and Holistic Capacity Building

- From an ISU-centric view point, more scholarships to help under-represented nationalities/groups attend ISU programs would be beneficial – role for UNOOSA/network.
- At the same time, partnering in/extending the 3Is approach to other areas of the world would allow more local needs to be met – a 3IS global network related to UN regional centres?
- Contribute to the creation/definition of a 'space discipline taxonomy' to allow more accurate characterisation of capacity building organisations/opportunities for the compendium.
- Identify both discipline-specific and interdisciplinary/holistic opportunities.

**If you have any questions,  
please get in touch.**

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