

D. Links to Policy

Role of Science Academies

- ❖ Science academies are merit-based independent national, regional or global associations of the most accomplished scientists.
- ❖ Traditional role of academies as purely honorific (honoring age and experience) is slowly changing, thanks to IAP



IAP, the global network of science academies

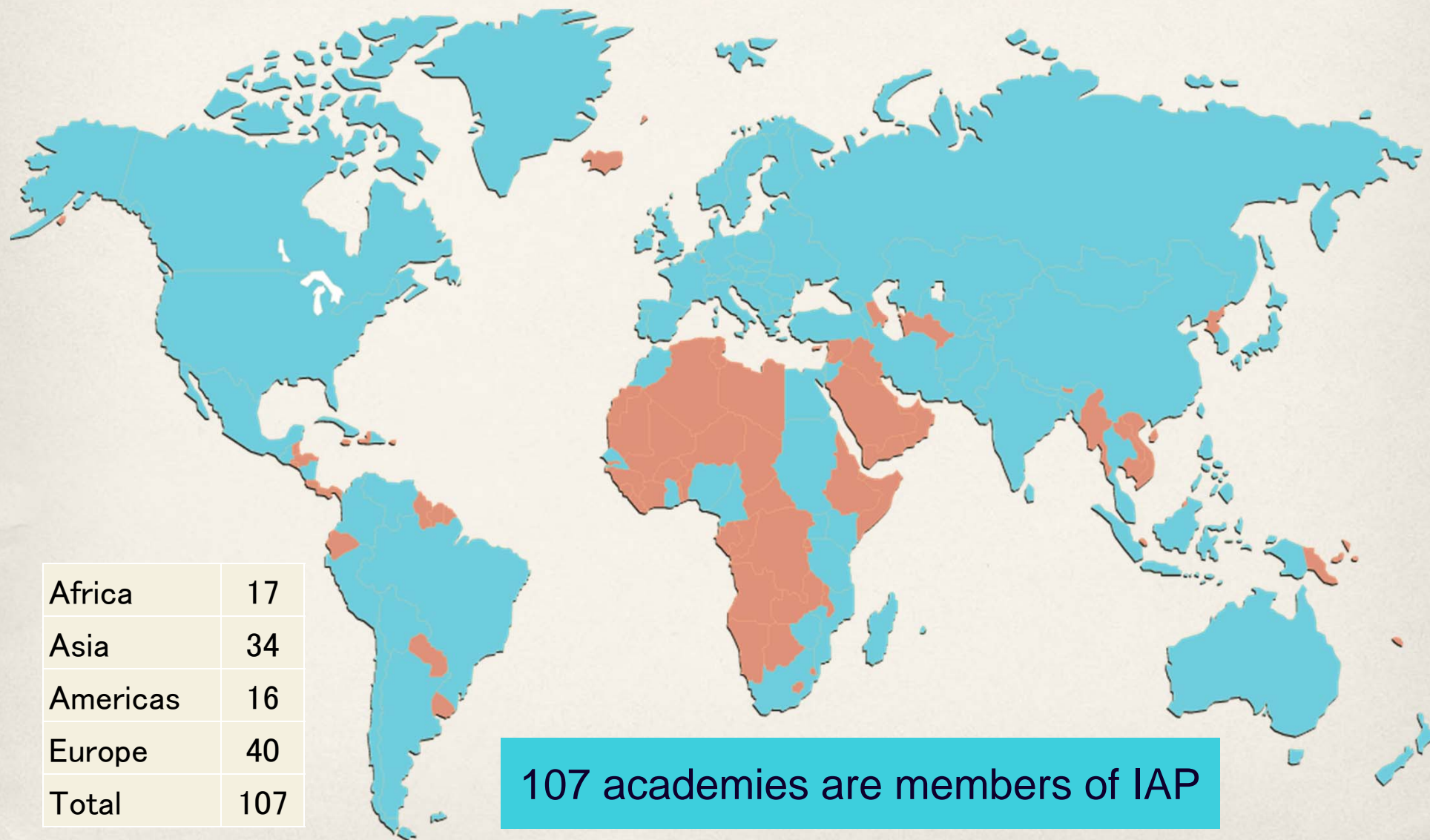
- ❖ Launched in 1993, IAP is a global network of more than 100 science academies in 90 countries
- ❖ Located at ICTP
- ❖ Managed by TWAS



IAP, the global network of science academies

- ❖ Aim: IAP brings together merit-based academies globally and regionally
 - to discuss scientific issues of global and regional concern, and
 - to influence policy by producing and disseminating joint statements and reports on such issues




IAP, the global network of science academies



Networks of Science Academies



Global Networks of Science Academies

		
Global network of merit-based science academies committed to making the voice of science heard on issues of crucial importance to the future of humankind.	Global network of the world's medical academies and medical sections of academies of science and engineering: committed to improving health world-wide	Consultative body created by the world's science academies to provide high-quality scientific advice to international bodies.

IAP and IAC

Global Science Advice

the global network of science academies

IAP

SCIENCE FOR A BETTER FUTURE



IAC

Short policy statements on global issues

- ❖ 2003: Human Reproductive Cloning
- ❖ 2005: Biosecurity
- ❖ 2006: Teaching of evolution
- ❖ 2009: Ocean acidification
- ❖ 2010: Tropical Forests

Comprehensive reports on global issues

- ❖ 2004: Inventing a Better Future
- ❖ 2004: African Agriculture
- ❖ 2006: Women for Science
- ❖ 2007: Sustainable Energy
- ❖ **2010: IPCC**

2012: Research Integrity (IAP/IAC)

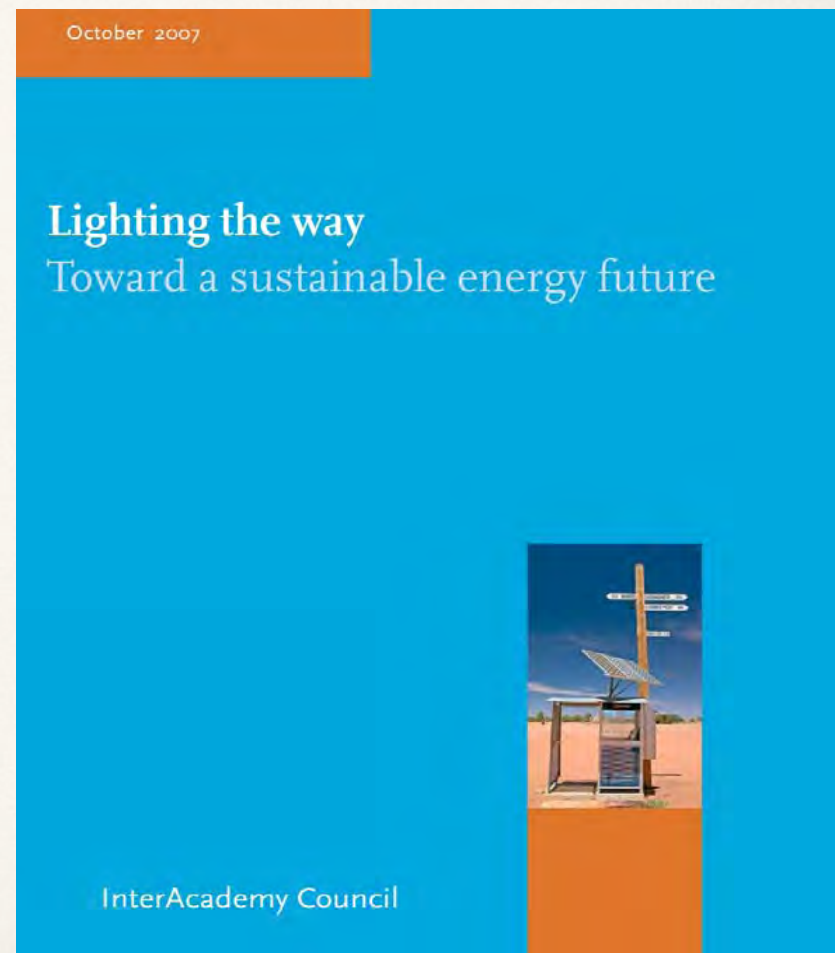
IAP STATEMENT ON OCEAN ACIDIFICATION

Headline messages

- Oceans play a critical role in the global carbon cycle by absorbing about a quarter of the CO₂ emitted to the atmosphere from human activities;
- The rapid increase in CO₂ emissions since the industrial revolution has increased the acidity of the world's oceans with potentially profound consequences for marine plants and animals especially those that require calcium carbonate to grow and survive, and other species that rely on these for food;
- At current emission rates models suggest that all coral reefs and polar ecosystems will be severely affected by 2050 or potentially even earlier;

IAC Report on Energy

As a low-carbon resource, nuclear power can continue to make a significant contribution to the world's energy portfolio in the future, but only if major concerns related to capital cost, safety and weapons proliferation are addressed.





IAC Report on: Climate Change Assessments, Review of the Processes & Procedures of the IPCC



- Intergovernmental Science Policy Platform on Biodiversity (IPBES)
- OCEANS ??



IAP/IAC Report on: Responsible Conduct in the Global Research Enterprise

Action by G8+5 and NASAC Academies

Short Policy Statements on topics of global significance

- ❖ **G8+5 academies:** Climate change, energy security, global health, infectious diseases, innovation, ...
(G8 Summits in UK, Russia, Germany, Japan, 2005–2012)
- ❖ **NASAC + G8:** Science and technology for African development
(G8 Summit, UK, June 2005)
- ❖ **NASAC:** Sustainability, energy efficiency and climate change *(G8 Summit, Germany, June 2007)*
- ❖ **NASAC + IANAS + SCA:** Role of science, technology and innovation in promoting global development
(G8 Summit, Japan, June 2008)

Joint Science Academies' Statement: Climate Change Adaptation and the Transition to a Low Carbon Society

June, 2008

- Call on G8+5 governments to agree, by 2009, a timetable, funding, and a coordinated plan for the construction of a significant number of carbon capture and sequestration (CCS) demonstration plants.



- Prepare for the challenges and risks posed by climate change by improving predictive and adaptive capacities at global, national and local level and supporting the developing world in carrying out vulnerability analyses

Kanazawa
Fukuda

Joint G8+5 science academies'
statement on
Health of Women and Children +
statement on **innovation for
development**

June 2010



Kanazawa
Hatayama

Joint G8+5 science academies' statement
on
**Education for a Science-Based Global
Development** +
statement on **water and health**

May 2011



Kanazawa
Kan

Joint Statements of G-Science Academies

Ahead of the G8 Camp David Summit to be held in the United States during 18th and 19th May 2012, the science academies of the G8-Science member countries finalized the Joint Statements on “Building Resilience to Disasters of Natural and Technological Origin”, “Energy and Water Linkage: Challenge to a Sustainable Future” and “Improving Knowledge of Emissions and Sinks of Greenhouse Gases” to deliver toward the leaders of the G8 Summit countries. Professor Takashi Onishi, President of the Science Council of Japan (SCJ) handed the joint-statements in person to Mr. Yoshihiko Noda, Prime Minister of Japan, on 10th May this year



Onishi
Noda

In summary



- ❖ The **G20**- *the most influential group of Countries* must take the lead in advancing **green S&T** for **green jobs** and **green economic growth**, and in finding S&T-based solutions to global sustainability challenges
- ❖ This will require international cooperation and global partnerships: North-South & South-South
- To improve quality education and research, especially in the **G80** S&T-Lagging Countries
- To link frontier science to sustainability challenges through problem-solving education and research
- To link science to policy through science academies

Solving Global Challenges.....



- ❖ The **G80** need a helping hand from the **G20** to build and sustain their STI capacities
- ❖ It is the only way to ensure full and effective participation of **all countries** in finding solutions to global sustainability challenges
- ❖ It is the only way to end poverty and secure peace, prosperity and happiness for all.

Thank You

Mohamed H. A. Hassan

hassan@ictp.it