Academies of Sciences' Take on Sustainable Development: A View from the IAS

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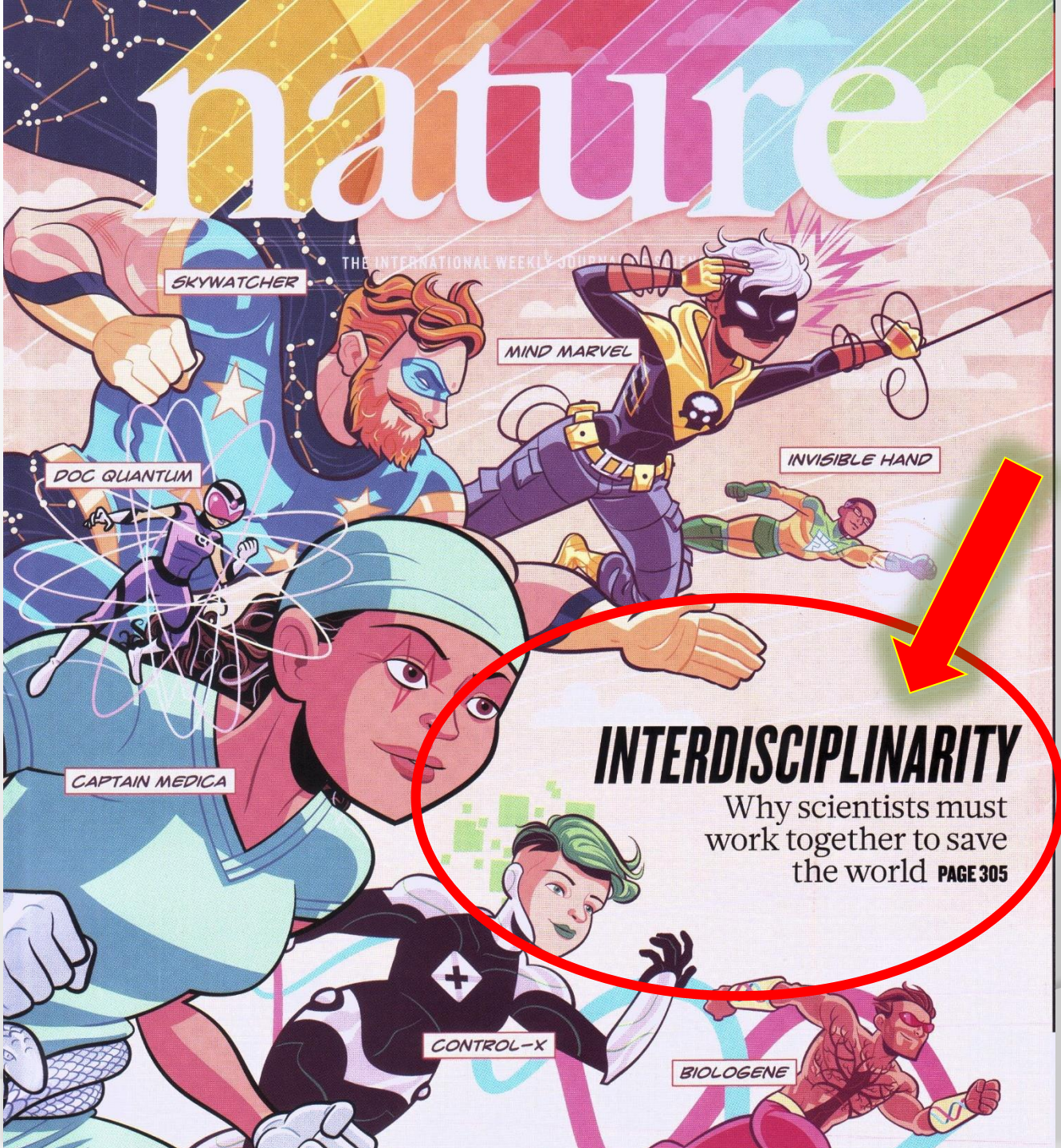
AASSA-NAST PHL Workshop on the Role of Science Academies in Sustainable Development in conjunction with the 2016 Climate Conference on Addressing Climate Risk for Sustainable Development,
Taal Vista Hotel, Tagaytay City, Philippines,
28-29 September 2016.



When talking about science!

Some argue that the international community of scientists has the responsibility to save the world!

But the major decisions affecting our global environment are taken by politicians.

Nature got it wrong!

Academies and *Realpolitik*

- The statement below was issued by the IAP at the conclusion of a workshop it organized in Trieste during February 2009 on 'Best Practices in Advisory Roles and Fellowship Appointments…'

  Academies need to be politically astute, use a variety of means to engage decision makers and take advantage of all opportunities including 'quiet diplomacy' to ensure that the voice of science is included at the decision-making tables (IAP 2009).

- Science academies are responsible for analysing and presenting complex science-related transnational issues to decision-makers. Such issues include shared water resources, global warming, climate change, food security, etc. A prerequisite for such interaction between science academies and governments is the existence of a good rapport between the two. This would persuade governments to base their long-term decisions on the science-based advice offered by academies of sciences. Historically, such a rapport has not always been there.

Not forgetting
Brandt's North-South Divide

Science Advocacy/ Diplomacy

as qualitative tools at the disposal of science academies

Science advocacy and science diplomacy mean different things to different people. Science advocacy is part of the science-politics dynamics in the North. In the South however, science advocacy is a tool to cultivate the interest of the decision-making community in real quandaries that face the countries of the South (Champions are good advocates); whilst

Science diplomacy is the use of scientific collaborations among nations to address common problems and to build constructive international partnerships (Wikipedia). Science Diplomacy has become a North-South and a South-South enterprise.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Let us look at Sustainable Development: What are the goals of development and are they same for all?

In the beginning…. *the* MDGs

- In September 2000 world leaders adopted the UN Millennium Declaration setting out a number of targets, with a deadline of 2015; that have become known as the MDGs.

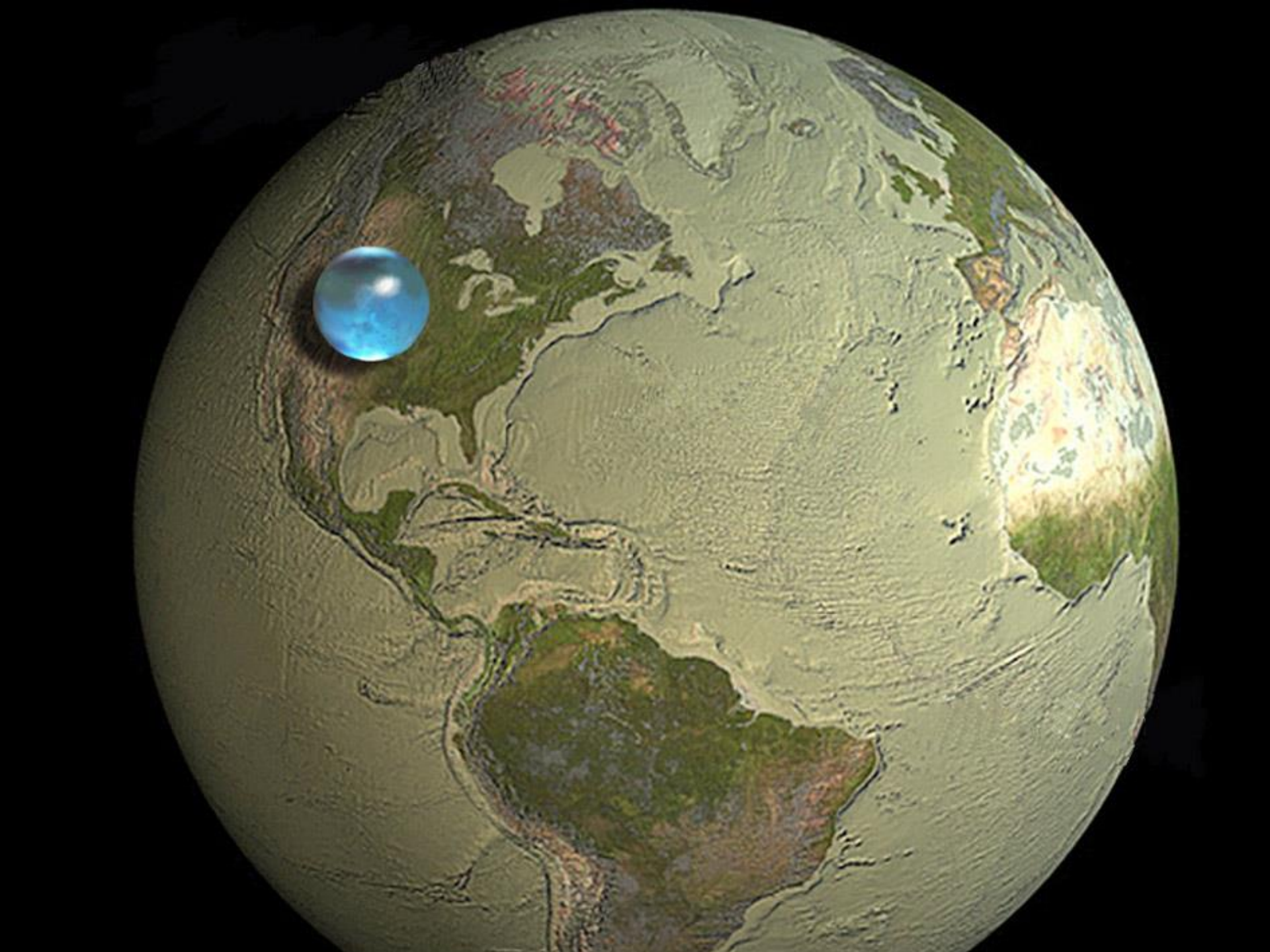
- The MDGs were time-bound and quantified targets for addressing extreme poverty; poverty, hunger, disease, lack of adequate shelter, and exclusion-while promoting gender equality, education, and environmental sustainability.

From MDGS → WEHAB

WEHAB …. S (2002-2015)

From WEHAB to SDGs

- Water
- Energy
- Health
- Agriculture
- Biodiversity
- Climate Change
- Wealth Creation
- Contribution to Human Civilization
- Culture of Peace

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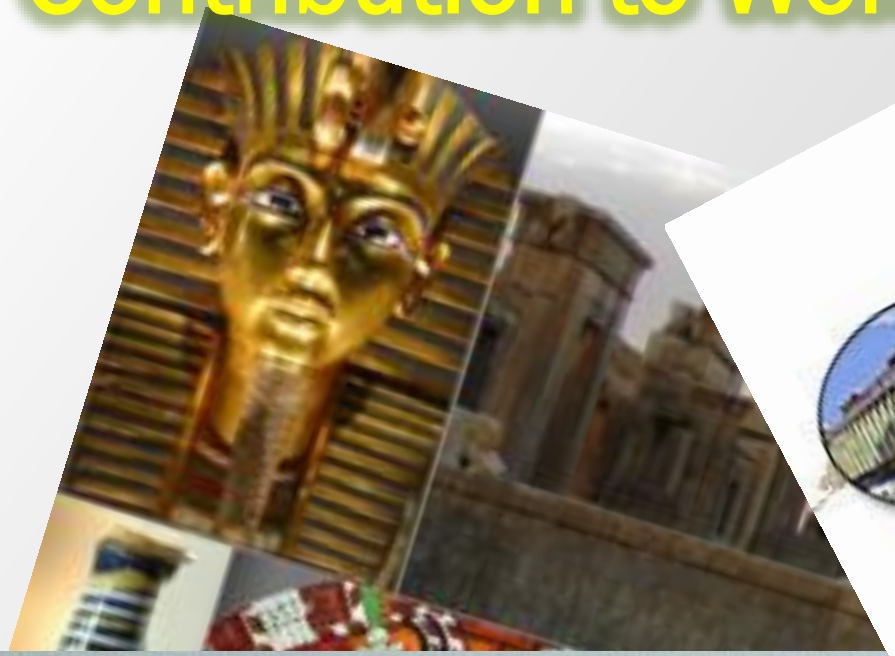
FORTUNE

Contribution to World Civilization



With the MDGs and WEHAB science academies went out of their way to develop programs to contribute to achieving the goals however they were not very successful.

But, WEHAB is still relevant.

The SDGs

At the United Nations Sustainable Development Summit on 25 September 2015, world leaders adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030.


1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
THE GLOBAL GOALS
For Sustainable Development
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE AND JUSTICE STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

SDG INDEX & DASHBOARDS

A GLOBAL REPORT

JULY 2016

BertelsmannStiftung

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

AART DE GEUS
Chairman and CEO,
Bertelsmann Stiftung

JEFFREY D. SACHS
Director, Sustainable
Development
Solutions Network

Ranking of Some Asian (AASSA) countries on the SDG dashboard

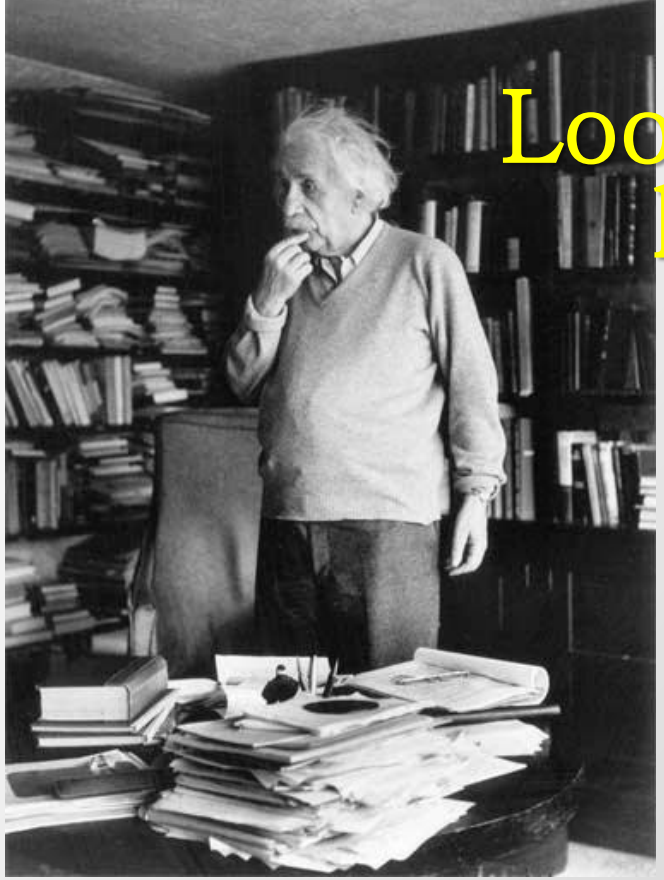
- 47 Russian Federation 66.4
- 48 Turkey 66.1
- 50 Armenia 65.4
- 54 Kazakhstan 63.9
- 55 United Arab Emirates 63.6
- 57 Georgia 63.3
- 59 Jordan 62.7
- 61 Thailand 62.2
- 63 Malaysia 61.7
- 65 Azerbaijan 61.3
- 67 Kyrgyz Republic 60.9
- 72 Tajikistan 60.2
- 74 Oman 59.9
- 76 China 59.1
- 79 Iran, Islamic Rep. 58.5
- 84 Mongolia 58.1
- 85 Saudi Arabia 58.0
- 86 Lebanon 58.0
- 88 Vietnam 57.6
- 95 Philippines 55.5
- 97 Sri Lanka 54.8
- 98 Indonesia 54.4
- 100 Kuwait 52.5
- 103 Nepal 51.5
- 105 Iraq 50.9
- 107 Lao PDR 49.9
- 110 India 48.4
- 115 Pakistan 45.7
- 117 Myanmar 44.5
- 118 Bangladesh 44.4

Jeffrey Sachs, Guido Schmidt-Traub, Christian Kroll, David Durand-Delacre, and Katerina Teksoz. The report should be cited as Sachs, J., Schmidt-Traub, G., Kroll, C., Durand-Delacre, D. and Teksoz, K. (2016): **SDG Index and Dashboards - Global Report**. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).

The First Bottom Line: It is our problem.

Where do we stand?

The dashboards for East and South Asia outperform many other developing regions on the SDGs, but several challenges remain. While progress has been made on reducing extreme income poverty (SDG 1), the dashboards show that the region faces major SDG challenges in health (SDG 3, in particular relating to health systems and some infectious diseases) and education (SDG 4). SDG 2 (improved nutrition and sustainable agriculture) comes up as red across the region since countries either face high levels of malnutrition and unsustainable agricultural practices.



Looking for the SDGs and looking for Science within …

With the SDGs, people like Prof. Hassan tell us that science is a cross-cutting tool, and is at the centre of countries' endeavors to achieve the SDGs. Is it?

Science and science academies and the SDGS: The Linkage?

The 2030 Agenda and its centerpiece, the Sustainable Development Goals (SDGs), call for a transformation in how societies interact with the planet and each other. This transformation will need new technologies, new knowledge and new ways of structuring societies and economies.

Science is required!

SCIENCE MATTERS

The UNSG SAB calls on the UN Secretary-General and the international community as a whole to integrate science into the post-2015 development agenda by acknowledging its significant role for poverty eradication and for sustainable development, reflecting its comprehensive role for the SDGs beyond being a 'means of implementation', a statement on the crucial role of science should be anchored prominently in a preamble to the SDGs. Ideally, a stand-alone science SDG should be formulated, or, at least, science related targets should be defined under each agreed SDG.

But!

Science is too important to be left to scientists alone or to politicians alone!

What I call the Cold War Syndrome!

Indeed

SCIENCE IS THE ENGINE OF PROSPERITY...

Famed Physicist/Futurist Michio Kaku Provides Glimpse into How Science Will Pave Pathways to a New Civilization by Dale Long

Championing the cause!

Image credit: United Nations/Bo Li

Speed read

- Science and research 'got a second chance' after a ministerial breakfast
- For example, R&D commitments were reinstated in the final draft
- It now has a commitment to help poorer nations boost their science capacities

STI is cross-cutting… across the SDGs! Is it? For example … the data question!

STI Stakeholders!

Demystifying the SDGs

Academies of sciences need to interpret the SDGs agenda. The SDGs may be numerous, but they are also ambiguous. This requires countries to interpret them, work out where to focus their energies and decide what targets to set. This applies to governments as well as to the various stakeholders working to realize sustainable development including science academies.

This interpretation is essentially a political process, but science has a key role to play, for example to demonstrate how different targets interact.
This is one role policymakers don't normally consider.

Academies of Sciences' Take on the SDGs I

- Scientific research can help to identify what the sustainability challenges are in different contexts, what are the causes of such challenges and how they are linked to other challenges.
- STI can propose technologies, strategies and business models for implementing the SDGs. We simply do not yet have all the solutions we need to make this agenda a reality.

Academies of Sciences' Take on the SDGs II

Scientists will also need to step out of their comfort zones and embrace new ways of working and thinking.

Måns Nilsson

Stockholm Environment Institute

- **The achievement of the SDGs must rest on solid scientific foundations does not only mean that politicians, businesses and civil society should listen to what science has to say.**

Speaking of Data: Quantitative Programmes

- Developing STI monitors;
- Developing Innovation dashboards.

Speaking of Institutional Stakeholders

- AASSA
- NASAC
- NASIC
- IANAS
- IAP
- IAP for Health
- IAC
- IAC (of former heads of state).

Two Groups of Stakeholders: Politicians and Decision-makers!

Scientists vs. Politicians

A question of perception!

A problem that we need to overcome!
Déjà vu: WSF 2007

There is a problem when it comes to the relationship between science and politicians. Too few politicians understand the possibilities of science. They do not understand the limitations of science, or the long time scales it can take to develop an idea into something that will benefit the community. Nor do scientists understand the work of politicians or members of Parliament. Many do not have a clear idea of political processes. They do not appreciate the pressures or time scales politicians face. There is no natural dialogue between the two sides because they come from different worlds.

Based on: ***T. Gascoigne (2007), Council for the Humanities, Arts and Social Sciences, Australia***

The Bottom Line II: Interdisciplinarity

The need to break down barriers between different branches of science is greater than ever. Behavioural sciences, in particular, will be an essential complement to technological innovation, helping to ensure that new solutions are widely available, and used.

Islamic World Academy of Sciences (IAS)

- **Vision:**

  IAS is designed to function as the *Islamic Brain Trust* meeting periodically to help guide the Islamic world, particularly in the area of science and technology.

- **Mission:**

  IAS's mission is to provide a dynamic institutional set up that can assist in the *utilisation* of Science and Technology for the general development of Islamic countries and humanity at large.


اقرأ
Islamic World Academy of Sciences
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In terms of independent policy advise

- Over 1200 science policy papers presented to top decision-makers and science leaders;
- Full text released to the public and the science community;
- Direct contact with (engaging) heads of state to promote S&T policy development, implementation and upgrading;
- A voice for the sciences in government, private sector, and the international arena.

IAS Activities at a glance I

- **Conferences:**
  inform, educate, inspire, network, develop policies, build capacity:

Food Security
New Technologies
S&T Human Resources

Health and Nutrition
Science Education
Biotechnology
Energy
Knowledge Society

S&T Policy
Technology Transfer
Environment and Development
Water Resources
Information Technology
Nanotechnology
Natural Resources

Current concerns

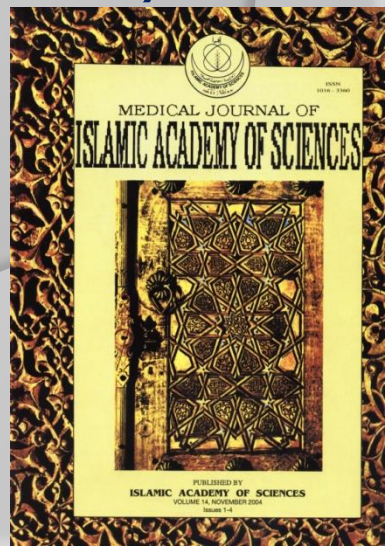
- STI policies and strategies
- The conventional narrative on the rise and decline of Islamic science;
- The Politics-Policies rapprochement for STI;
- Science Education.


17TH ISLAMIC WORLD ACADEMY OF SCIENCES (IAS) CONFERENCE
14 - 17 DECEMBER 2009


17TH ISLAMIC WORLD ACADEMY OF SCIENCES (IAS) CONFERENCE
14 - 17 DECEMBER 2009

IAS Activities at a glance II: Publications

- Conference Proceedings;
- Medical Journal (printed and web format); (www.medicaljournal-ias.org)
- Policy papers;
- Specialized Reports and Policy Studies;
- Newsletter;
- The Internet (www.iasworld.org);
- Culture of Science Initiative.



Title 1–20	Cited by	Year
Water in the Islamic World: An Imminent Crisis: Proceedings of the Conference on Water in the Islamic World, an Imminent Crisis, Held in Khartoum, Sudan, 5-9 December, 1994 HD Althibilik, M Ergin, MR Zou'bi Islamic Academy of Sciences	146 *	1995

IAS Activities at a glance III

- **Specialized Training;**
- **Awards and prizes;**
- **Lectureships;**
- **International Co-operation:**
  COMSTECH, IDB, UNESCO, World Bank
  Activities with more than 20 national and international academies of sciences;
- ***International Outreach:***
  IAP, IAMP, IUA….

Recognition

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