Complex, Interrelated Global Problems Require Broader "Connect-the-Dots" Science Approach: UNESCO

UNESCO, partners convene world experts to advance new approach to solving growing, interconnected problems

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PUTRAJAYA, KUALA LUMPUR, MALAYSIA, December 13, 2016 /EINPresswire.com/ -- The "business as usual" approach to scientific problem-solving -- characterized too often by narrow, disconnected, uni-dimensional research -- simply isn't up to the vital task of addressing the world's increasingly complex, inter-connected problems.

That's the quandary inspiring a high-level international experts meeting in Malaysia Dec. 19-21 to be conducted under the auspices of the UN Educational, Scientific and Cultural Organization (UNESCO).

The meeting's mandate: Recommend how to stimulate worldwide the large-perspective, trans-disciplinary scientific approach needed to slow and reverse increasingly complex threats to human well-being on track to worsen in the near future.

For example, energy, water and food security are recognized as a highly-interrelated trio of fundamental issues confronting policy-makers, who must weigh and balance choices related to one part of the nexus against impacts on the other two.

Urban planning, infrastructure design and climate science is another combination of natural, industrial and social sciences that need to be bridged and dots connected, informed by a wealth of relevant indigenous and local knowledge. The combination of human health and livestock production sciences is among a myriad of other examples.

UNESCO's two-year "Sustainability Science Approach" project aims to foster more collaborative, multi-disciplinary research and education worldwide.

It was initiated in October 2015 by two UNESCO sectors - Natural Sciences, and Social and Human Sciences - together with the Japanese Ministry of Education, Culture, Sports, Science and Technology (Japan/MEXT), which hosted the first symposium last April.

Logos of the event co-hosts

This second symposium in Kuala Lumpur (program: http://bit.ly/2hiALcw), hosted by the Malaysian Industry-Government Group for High Technology (MIGHT), the Office of the Science Advisor to the Prime Minister, and UNESCO, will air regional experiences and help formulate concrete new international "Sustainability Science Policy Guidelines," being readied for UNESCO member states' consideration at the third and final symposium, in Paris next fall.

> Sustainability Science is an innovative form of 'use-inspired basic research.' And interest in this approach is growing within the policy-making community.
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> *Zakri Abdul Hamid, co-Chair, MIGHT*

Among reforms suggested to date:

* Co-design of research, well-funded
* Better institutional co-ordination and direction-setting for research
* Mainstreaming knowledge on sustainability issues
* Shaping the education system to develop a generation of trans-disciplinary scholars and practitioners

Comments

"Sustainability Science is essential to achieving the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals. It is problem- and solution-oriented - an innovative form of "use-inspired basic research. And interest in this approach is growing within the policy-making community."
- Tan Sri Zakri Abdul Hamid, Science Advisor to the Prime Minister of Malaysia and Co-Chair of MIGHT

"Sustainability science is needed now more than ever, with humanity facing unprecedented challenges that require researchers and policymakers to work together to develop integrated, transformative solutions. This symposium will play an important role in charting the future path for sustainability science and advancing such solutions, including efforts to achieve the global goals."
- Kazuhiko Takeuchi, Senior Visiting Professor, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)

"With the adoption of the 2030 Agenda on Sustainable Development, governments are posing many questions: What kind of knowledge is needed to inform the 2030 Development Agenda? How can natural and social sciences engage in a dialogue with each other as well as with relevant indigenous and local knowledge? Can the knowledge of other stakeholders than the academic community be mobilized to address societal challenges related to sustainability? What are the institutional measures that may be required to pursue inter- and trans-disciplinary research and education? Through expert work in the area of sustainability science facilitated by UNESCO and generously funded by Japan, we are starting to have the right answers to such important questions, and the meeting in Kuala Lumpur is a fundamental step to this end."
- Salvatore Arico, Chief of Section, Capacity Building in Science and Engineering, Natural Sciences Sector, UNESCO

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