



**Global Young Academy**

The voice of young scientists around the world

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8 December 2014

*Re: The Role of Science in Achieving Goals Identified in “A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development - The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda”*

Dear United Nations Secretary-General Ban Ki-moon

On behalf of the Global Young Academy, we appreciate the opportunity to share with you our suggestions for incorporating science into the Post-2015 Development Agenda proposed by the Secretary-General’s High-Level Panel of Eminent Persons.

We commend the Panel for their vision and embrace the goals laid out in the report. In particular, we support the recommendation to integrate economic, social and environmental dimensions into poverty-ending sustainable development, especially in the face of climate change. Further, we support the goal of developing a singular strategy to ensure the achievement of true sustainability across these dimensions at both local and global scales. The plan laid out by the Panel has the potential to be truly transformative over the next fifteen years.

Achieving the goals of sustainability and poverty reduction will require a concerted effort by all sectors of society. Science has a crucial role in this effort. We share the assertion laid out by the UN Secretary-General’s Scientific Advisory Board (UNSG SAB) that science must be recognized and utilized in a central role to achieve all post-2015 sustainable development goals (SDG). Here we present five recommendations that support and strengthen the UN’s efforts to achieve sustainability and poverty reduction, and reinforce the vital role that science plays in this endeavor.

### **Recommendation 1: A bolder, cogent definition of ‘sustainability’**

The Panel’s report consistently calls for the accounting of social and environmental impacts as an integral part of sustainability. This is a good start, but we note that, in the name of sustainability, all kinds of economic developments have ensued that (i) could not be sustained over reasonable time scales, (ii) degraded ecosystems and the benefits they provide humanity, (iii) extinguished or threatened species and other components of biodiversity, (iv) undermined local cultures and languages, and (v) bred pernicious social inequities.

To avoid this trap, we suggest that the UN adopt a bolder definition of sustainability that explicitly and prominently states that sustainable livelihoods, sustainable energy, and sustainable consumption requires the mitigation of all impacts borne elsewhere and in the future. Such impacts are many and diverse. Greenhouse gas pollution is a tremendous externality that deserves explicit naming, but externalities also take very different forms: the salinification of groundwater which degrades water security, the loss of topsoil which undermines future food production and reinforces poverty and inequality, the dust storms which cause property damage and endanger lives, the loss of forests and wetlands which enhances flooding downstream and eliminate important habitats, and the list goes on.

Until such a bold and unequivocal definition of sustainability is asserted, the door remains open for governments and corporations to trumpet loudly about their sustainable approaches, while continuing to degrade the ecosystem services upon which we all depend—the world’s poor most of all.

### **Recommendation 2: An Explicit Role for Science**

The Post-2015 Development Agenda must articulate the central role of science, technology, and innovation (STI) in delivering the goals described in the report. We fully support the UNSG SAB’s leading recommendation that STI must be comprehensively integrated throughout the post-2015 development agenda, including integration into all five of the transformative shifts outlined by the Panel. We do not share the desire to see science as a stand-alone SDG. Rather, we see science as both central and essential to achieving all the SDGs. As such, science must be effectively embedded in any proposed solution for ending poverty and achieving sustainability. Science can and should work across disciplines and sectors to achieve the goals of all identified SDGs.

### **Recommendation 3: Embed science in multi-stakeholder discussions and ensure flexibility**

Science functions by an iterative process. STI produces knowledge, which provides one part of a decision support tool that may be applied towards achieving goals, including multiple goals, such as sustainability in conjunction with poverty reduction. Adoption of a solution is contingent upon factors beyond science itself such as economic, social, and political considerations. In order to maximize the ability of science to generate innovative solutions, provide the highest standards of evidence for decision-making, and develop and evaluate appropriate metrics by which to measure progress towards achievement of the SDGs, science must be actively integrated directly into multi-stakeholder discussions. Because science is an iterative process the development of metrics and assessment of ongoing and proposed efforts may lead to identification of alternative solutions. Therefore, the Post-2015 framework must remain flexible and adaptable in its capacity to develop solutions based on an ever-improving knowledge base and science must have a direct role in informing and guiding these discussions.

### **Recommendation 4: Recognize the unique role of science in diplomacy and security**

We concur with the UNSG SAB that there is enormous opportunity in the application of science as a tool to foster cultural diplomacy. As they state, “Science is universal. It does not

only bring about progress on the way towards a more sustainable world; it is also in itself a way of crossing national, cultural, and mental borders, and thus helps lay the foundation for a sustainable world.” We assert that embracing the role of science as diplomacy will function to increase the diversity of perspectives in science, leading to more robust problem solving.

Not only can science contribute to poverty reduction by generating innovative solutions, it necessarily has relevance to national security interests. Poverty and its mitigation have implications on political, health, environmental, economic, and social spheres, the interaction of which must be carefully considered at all levels of governance in order to secure city, state, and federal commitment to any proposed solution. Drawing attention to the connections between the benefits of eradicating poverty and improving national security can generate interest in achieving these goals in sectors of society that might otherwise not immediately understand the relevance of poverty and sustainability to their own lives and interests.

We believe that emphasizing the value of STI to governments through the lens of diplomacy and security may generate enthusiasm for applying STI towards the goal of sustainably eradicating poverty. If employed in the proper way, science can play a major role in bridging the gap between South and North.

#### **Recommendation 5: Develop input and output goals for scientific investment**

We are concerned that setting minimum target goals for inputs into scientific research in lieu of goals for outputs runs the risk of generating hollow investments. It may instead be desirable to develop input and output goals, including means of disseminating scientific work and developing international collaborations focused on specific axes of investigation. Further, it should be emphasized that periodic assessments are necessary to determine if goals are being met, the science knowledge base is growing, and outputs are being effectively utilized. Additionally, as mentioned before, science is iterative. Solving one problem often leads to illumination of other problems. Periodic assessments of progress must allow science and solutions the flexibility to develop new lines of inquiry towards achieving sustainable eradication of poverty around the world.

This statement was coordinated by Sameh Soror (Egypt) and prepared together with Eva Alisic (Australia), Kai Chan (Canada), Mari-Vaughn Johnson (USA), and Rees Kassen (Canada)

and approved by the GYA EC on 8 December 2014.

#### ***About the Global Young Academy (GYA)***

The GYA, founded in 2010, is the voice of young scientists around the world. Membership in the GYA, capped at 200 individuals, is highly competitive. Members are chosen by their peers based on demonstrated excellence in scientific achievement and commitment to service. Our membership currently represents 58 countries, all major world regions, and a breadth of scientific disciplines, including the natural sciences, social sciences, and humanities. See: [www.globalyoungacademy.net](http://www.globalyoungacademy.net)