Interview

Q&A with **Alena Rybkina**, Vice-President of the Committee on Data of the International Science Council (CODATA) and Deputy Director for Development of the Geophysical Center at the Russian Academy of Sciences.

Building the foundation for a world of open data and open science

Q What are open data and open science, and why are they important?

A There is growing recognition that data is key to addressing global challenges. Imagine what the world could be like if we shared our data. I am a researcher and a geologist. During my PhD research, I collected a large volume of data, but there was no advice on how I should manage it. If I had had access to all the data sets in my particular field, it would have had a significant impact on what I could accomplish scientifically. If researchers around the world could avoid overlapping efforts collecting data, we would have the beginnings of a new generation of science. Improved data access would dramatically improve researchers' efficiency and productivity. However, moving to a fully open data system is of course a very complex undertaking, both because cultural change is required and because available data cannot always be freely available for a variety of reasons.

Q How did the initiative between IIASA and CODATA originate?

A The CODATA task group on systems analysis was created one year ago for a two-year period. The principle goal is to build connections between CODATA and IIASA. We also hope to jointly publish our collaborative efforts by the end of the year.

The group was successful in bringing together the right people from CODATA and IIASA to lay the foundation for a new data world.

To quote Alexei Gvishiani, the Chief Scientist and Chair of the Scientific Council of the Geophysical Center at the Russian Academy of Sciences and former IIASA National Member Organization Council Member for Russia: "Systems analysis is the mathematics of big data." This is why CODATA and IIASA need one another.

Q Can you share the impacts you hope open science and open data will achieve?

A Access to open data and open science will allow researchers to evaluate data faster, act faster, and provide solutions faster. We are currently establishing data principles and best practices, in order to establish a new approach. It is important to mention that moving forward will also require a mindset change in how researchers look at data. The aim is to start discussing this with young scientists. If they start considering how to improve the management of their data, keeping in mind the goals of an open data world, this would change science. This is why we are promoting open data. We have a new generation of scientists, and in the future, we will have many new data sets, but we also have a wealth of existing data sets that we must manage properly, because science is based on the history of observations.

By Monika Bauer

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