

# President's Column



by Natalia Tarasova

"I have yet to see any problem, however complicated, which, when looked at in the right way, did not become still more complicated."

—Poul Anderson, quoted in Arthur Koestler, *The Ghost in the Machine* (New York: Macmillan, 1968), 59

**I** am grateful for this opportunity to wish members of IUPAC bodies, fellows, affiliate members, and our company associates a fruitful and healthy year in 2016. I am also grateful to the IUPAC family for its commitment to the chemical sciences. As I have mentioned in my Vice President Critical Assessment in Busan, chemistry is the music of nature, which, while playing with a limited number of elements, creates the infinite beauty of the Universe. To help society appreciate chemistry is one of the key goals of IUPAC. The momentum gained during the International Year of Chemistry (<http://iyc2011.iupac.org/>) should be used by IUPAC to communicate to society and help it to hear the music of chemistry in everyday life. The potential of young chemists could be effectively used for this purpose, in combination with the life experience of the elder generations of chemists.

As chemists, we believe that chemistry is the core science; we are particularly open to expanding its borders to embrace exciting new areas in Earth and Life sciences and we pride ourselves on understanding the challenges of related disciplines. The new IUPAC Strategic Plan,<sup>†</sup> approved by the Council in August 2015, will guide our actions in the coming years. As stated in the Strategic Plan, IUPAC, with its global reach, can effectively mobilize the chemistry community through its members and volunteers to address global needs through contributions from the chemical sciences.

## What are the global needs?

The answer to this question was given on September 25<sup>th</sup>, 2015, when the UN General Assembly, by consensus, adopted Sustainable Development Goals (SDGs) (*C/* Jan-Feb 2015, pp. 4-7). Human happiness and well-being are at the heart of this document. Having been involved in the discussions on SDGs, I would like to share some thoughts with my colleagues in chemistry about the complexity of these issues.

Scholarly research and thinking on well-being and its connection to the environment, sustainability,

growth, and sustainable development can be summarized as follows. Moving towards social as well as environmental sustainability will require a focus on well-being and meeting human needs. To do this, we will need more research to better understand the key drivers of wellbeing: what do humans really need in order to live well, both physically and emotionally, and to feel satisfied with their lives? What kind of societal drivers are shaping and influencing them?

The world is experiencing urgent, interconnected problems on many social and environmental fronts. Resource shortages, demographic realities, and planetary boundaries prevent us from growing our way out of these problems. A redirection towards sustainability and well-being may be the most viable option for further development. Sustainability should be defined so as to include human physical, emotional, and social needs. Equity considerations are primary in order to have the resources to reduce poverty and increase well-being in developing countries. Well-being is multidimensional and context-specific, and must be approached in a way that preserves cultural diversity and societal autonomy, while also meeting universal human needs covering aspects of life ranging from civic engagement to housing, from household income to work-life balance, and from skills to health status. It is vital to go beyond monetary GDP, measuring the various objective and subjective components of well-being to monitor global progress. No one disagrees that improving human well-being is a worthy objective. The dilemma arises when we have to define what we mean by well-being.

Well-being is an elusive term with many definitions and close synonyms, like quality of life. A thorough assessment of whether life is getting better requires a wide range of metrics, captured on a human scale, and able to reflect the diverse experiences of people. I would like to refer here to several examples. At the global level, there is the OECD's work on the Better Life Index ([www.oecdbetterlifeindex.org](http://www.oecdbetterlifeindex.org)). The UN Secretary General's recent Data Revolution Group produced a very interesting report that also fits the pattern [www.undatarevolution.org/report](http://www.undatarevolution.org/report).

Among the many notable examples at the sub-global level, one could mention the Canadian Index of Well-being ([www.uwaterloo.ca/canadian-index-wellbeing](http://www.uwaterloo.ca/canadian-index-wellbeing)), a result of a large, multi-year, multi-institutional effort to develop and institutionally establish a high-level metric of well-being for Canada. A similar initiative is the Australian National Development Index ([www.andi.org.au](http://www.andi.org.au))—it is in an earlier stage, but similar in ambition.

From the academic perspective, one of the more recent definitive volumes on the subject is the Encyclopedia of Quality of Life Studies, edited by Alex Michalos, ([www.springer.com/fr/book/9789400707528](http://www.springer.com/fr/book/9789400707528)).

The question arises, "How will these great initiatives fit into the new post-2015 agenda, with the 17 SDGs and their 169 specific targets that are now becoming the road map for governments and the international development community (chemists being an integral part) for the next 15 years?" Many of the better-known well-being initiatives are taking place in countries with generally higher levels of material well-being. Perhaps a new global narrative, including the interplay between material and non-material aspects of well-being might take humanity further than the contraction and convergence of decoupling discourse.

A better understanding of people's well-being is central to developing better policies for better lives. I see here a kind of similarity with the goals of the new IUPAC Task Force established to determine a new method for calculation of National Subscriptions<sup>†</sup>. What is the chemistry endeavor? How to measure it in an equitable way? What is the chemistry endeavor, and how can it be measured in an equitable way across nations?

I appeal to IUPAC members to support the new Strategic Plan and to provide timely feedback on the Union activities. I am grateful for the privilege of serving as the IUPAC president over the coming two years, and hope that together we will help the world to achieve its Sustainable Development Goals. 🌍

### Acknowledgements

I would like to acknowledge Professor Laszlo Pinter (Department of Environmental Sciences and Policy, Central European University in Budapest, Hungary) for the discussion on the well-being.

**Natalia Tarasova** <[tarasnp@muctr.ru](mailto:tarasnp@muctr.ru)> is President of IUPAC since January 2016. She has been a member of the IUPAC Bureau since 2008 and the Executive Committee since 2010. She is a professor at the D. I. Mendeleev University of Chemical Technology of Russia, a Member of the Russian Academy of Sciences, Director of the Institute of Chemistry and Problems of Sustainable Development, a Chairholder of the UNESCO Chair of Green Chemistry for Sustainable Development.

<sup>†</sup>The new IUPAC Strategic Plan and background on the National Subscriptions are presented in the following pages.

## 2016-2017 IUPAC Bureau Membership

### Officers

- Prof. Natalia Tarasova**, Russia  
President
- Prof. Qi-Feng Zhou**, China/Beijing  
Vice President
- Prof. Richard Hartshorn**, New Zealand  
Secretary General
- Mr. Colin Humphris**, United Kingdom  
Treasurer
- Dr. Mark C. Cesa**, USA  
Past President

### Elected Members

- Prof. Russell J. Boyd, Canada
- Prof. Christopher Brett**, Portugal
- Prof. Tavarekere K. Chandrashekar, India
- Prof. Mei-Hung Chiu**, China/Taipei
- Prof. Hemda Garelick, United Kingdom
- Prof. Ehud Keinan, Israel
- Prof. Kew-Ho Lee, Korea
- Prof. Christopher K. Ober, USA
- Prof. Pietro Tundo, Italy
- Prof. Kaoru Yamanouchi**, Japan

### Division Presidents

- Prof. Angela Wilson, USA  
Physical and Biophysical Chemistry Division
- Prof. Jan Reedijk, The Netherlands  
Inorganic Chemistry Division
- Prof. Margaret A. Brimble, New Zealand  
Organic and Biomolecular Chemistry Division
- Prof. Gregory Russell, New Zealand  
Polymer Division
- Prof. Jan Labuda, Slovakia  
Analytical Chemistry Division
- Dr. Petr Fedotov, Russia  
Chemistry and the Environment Division
- Dr. Thomas J. Perun, USA  
Chemistry and Human Health Division
- Dr. Karl-Heinz Hellwich, Germany  
Chemical Nomenclature and Structure Representation

### Other Standing Committee Chairs

- Prof. Carlos Tollinche, Puerto Rico  
CHEMRAWN Committee
- Prof. Mustafa Sözbilir, Turkey  
Committee on Chemistry Education
- Dr. Bernard West, Canada  
Committee on Chemistry and Industry
- Prof. Ron Weir, Canada  
Interdivisional Committee on Terminology, Nomenclature and Symbols
- Ms. Bonnie Lawlor, USA  
Committee on Publications and Cheminformatics  
Data Standards

(Executive Committee members are denoted in **bold**).