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## Opening for Environmental Research Network (ERN) Flash Talks

by Vice rector Jean-Robert Tyran

*Let me start with a provocative statement.*

Never before in the entire history of mankind have so many people had such a good life as today.

Never before have people on average been living as long as they do live today.

Never before have so many people lived in peace and material prosperity.

For example, 200 years ago, global life expectancy was 31 years, it is at 72 years today. 200 years ago, 85% of the world population lived in extreme poverty, today 15% do.<sup>1</sup>

These incredibly improved conditions under which so many people on this planet enjoy to live today are the result of a great accumulation and massive acceleration. They are the result of fantastic and unprecedented human progress which in turn resulted from progress in **science**, technology, economics and society, and this progress has radically accelerated over the last few decades. For example, the share of the global population living in extreme poverty has been halved in the last 20 years.

**But** this great acceleration has not only brought enormous benefits to the many, it has also come at a terrible cost. Today, we are living in the age of the

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<sup>1</sup> Rosling, H. (2018): Factfulness. London: Sceptre, p. 38f.

*anthropocene* in which mankind is shaping the natural environment in radical and dangerously unsustainable ways. The great acceleration has brought us population growth and economic growth which threatens biodiversity and induces potentially catastrophic climate change. In a sense, the great acceleration of growth is threatening planetary health. Dealing with these threats and dangers constitute momentous **challenges**.

What is the role of science in general, and of the University of Vienna in particular in addressing these enormous challenges we are facing today? What can our University contribute?

First, I think we need to recognize that it is indeed our obligation and duty to contribute to deal with and eventually master these momentous challenges. Second, we need to reckon that science is a key element in addressing these challenges, and third, we need to provide smart solutions to the challenges.

Science and technology have been at the root of the great acceleration that has lifted billions out of poverty and misery, and it is now time to use science and technology to preserve wildlife, to create sustainable growth, and to keep the planet safe and healthy. This is a momentous challenge for science. But I think there is reason for optimism. I think it **can** be done.

But it can be done in smarter or dumber ways. And I hope that we will collectively succeed in doing it in ways that keep the cost in terms of leading long and comfortable lives low. And in a democracy, solutions scientists propose must be presented and explained in ways that compel ordinary people, i.e. in ways that politicians and voters find reasonable and acceptable to be successful. In short, solutions need to be smart to be successful.

***But how can we contribute to providing such smart solutions?***

First, smart solutions are based on “good”, i.e. solid, and **reliable science**.

Solutions need to be fact-based, they need to be accurate, grounded in state-of-the-art scientific methods, and our findings need to be communicated in an open and transparent fashion to earn the trust of ordinary people, voters and politicians alike.

Second, the great environmental challenges we face today need to be addressed by **interdisciplinary** science. The analysis needs to be grounded in solid foundations of life and natural sciences, but it also needs to take the people’s perceptions, values and principles into account, it needs to pay due care to the socioeconomic drivers of behavior, as well as the legal framework and political constraints.

The University of Vienna can achieve just that. As a large and comprehensive university, we are ideally positioned to provide such an interdisciplinary perspective, our researchers have the intellectual breath to contribute to deep societal reflection, and by joining forces, we can provide a holistic and encompassing view to contribute to find smart solutions that effectively work.

***What will we at U Vie do in the future to address the environmental challenges?***

The University is a large organization with almost 10’000 employees, and is spread over 70 locations in Vienna. As an employer, we have an obligation to act “go green” in the ways we organize work, travel and collaboration, and an

important goal of the sustainability strategy that we will soon present is to become climate neutral as soon as possible.

Many employers in Austria can and will contribute in this way to a sustainable future. But what makes us as the University of Vienna unique is our ability to do **research** that can contribute to provide smart solutions to the environmental challenge. At the rectorate of University of Vienna, we believe that doing such research is our obligation and an important part of our mission.

***What are specific research initiatives at UniVIE to address the great environmental challenges we are facing today?***

There are many great initiatives and developments that are already under way at our university that we want to strengthen, concentrate, and coordinate.

Why is coordination important? We need to bring the best and brightest minds together to exchange views, engage in critical and open dialogue, and to crowdsource. Many brilliant initiatives are already under way, but people do not know of each other and what they do.

I will just mention a few **recent initiatives**. For example, the

- **Anthropocene** network reflects on historic, ethical and social aspects of the relation of humanity and the planet earth.
- Vienna Network for Atmospheric Research (**VINAR**) is recent collaboration with the ZAMG (the central office of meteorology and geodynamics of Austria) to promote among others climate research.

- We have 5 interdisciplinary **research platforms** addressing environmental issues, of which PLENTY (Plastics in the environment and society) has just been extended a few days ago.
- At least 6 proposals for research clusters in the Austrian **excellence initiative** that have been submitted to our national science foundation (FWF) a few weeks ago deal with environmental issues<sup>2</sup>:
  - Microbes drive planetary health (with öaw, ista, TU Wien)
  - Transition for climate (with U Graz, BOKU, IIASA etc)
  - Future Alps: mountain ecosystems (with U Ibk, BOKU)
  - Mountain geohazards and risk dynamics in a changing world (with BOKU)
  - Materials for Energy conversion and storage
  - Circular Bioengineering (BOKU)
- The performance agreement (LV) negotiation with our ministry earlier this week stipulates that we create an “**Entwicklungsfeld**” (i.e. a priority area for development and investment) “Climate and Environment”, and several of the clusters I just mentioned will nicely contribute to this priority area.
- An important part of the clusters of excellence is to secure training for the next generation of researchers. Also in this domain, UniVie is very well positioned through the recent development of several **doctoral schools**, including the two most eminent ones in
  - Ecology and Evolution
  - Microbiology and Environmental Science

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<sup>2</sup> UniVie is the lead institution in 6 proposals, and participates in 26 proposals. In total, 37 proposals have been submitted in all of Austria.

The **Environmental Research Network (ERN)** is perhaps the most important cross-cutting structure to concentrate, coordinate the activities in environmental research at UniVie.

This is all the more important in times of covid that is unfortunately still looming. ERN helps to bring together our researchers from all fields, from all levels of seniority, and it brings together our well-established existing faculty with the many new hires. And it is crucial that we manage to integrate the many new colleagues who have joined us in the recent strongly expansionary phase. For example, alone in 2020, **90 new colleagues** have joined us.<sup>3</sup>

**ERN** is doing a great job in this and in many other respects. I would like to thank Professor Thilo Hofmann and his entire leadership team for the fantastic service they provide to the University of Vienna.

And I would like to thank **all of you** for your contribution to address the great environmental challenges of our times through your research.

Thank you.

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<sup>3</sup> Stellenantritte 2020: 51 Profs nach Para 98, 39 tenure track professorships)