



Co-funded by the
Erasmus+ Programme
of the European Union



New curricula in Precision Agriculture using GIS technologies and sensing data (CUPAGIS)

Erasmus+ 597962-EPP-1-2018-1-EE-EPPKA2-CBHE-JP

Online webinar "CUPAGIS Project: Women in agricultural science and technology"

April 07, 2021

From the introductory words and presentation of the project CUPAGIS by Prof Tarmo Soomere, coordinator of the project, President of the Estonian Academy of Sciences and Professor of Coastal Engineering in Tallinn University of Technology (the presentation is available on the project website):

It has become a cliché to speak about science as the driver of society or even about science-led economy. As these words are almost losing their meaning and becoming buzzwords in the post-truth age, it is instructive to recognise how driving the society actually works.

Peter Drucker (1909–2005) was one of the greatest thinkers of the 20th century. He mostly explored how humans are organised across the business, government and non-profit sectors of society. Perhaps the most well-known contribution from him that changed the world is category “knowledge worker”. This term denotes the workers whose main capital is knowledge. Many people have this quality today, from engineers, experts and scientists to public accountants, lawyers etc. This quality is intrinsic to everybody whose line of work requires one to “think for a living”.

Peter Drucker told golden words about the power of knowledge by saying that knowledge is the source of wealth. He also added how it should be handled or used, with respect to two aspects. If knowledge is applied to tasks we already know, it becomes productivity. Alternatively, if knowledge is applied to tasks that are new it becomes innovation.

The principles are thus clear and it remains to figure out how to proceed. This is, however, a much more complicated task. The golden words of giants on whose shoulders we stand remind us that science and society should neither be separated from each other nor interacting with each other via a thick mechanistic interface. Our world will only become a better place to live if science, science education (or university teaching) and society form a unified system. If they do not develop together, none of them will show any substantial development.

It is thus intuitively clear how – at least qualitatively – we should proceed if we wish to really speed up the development of a country, region, nation or society in general. In terms of another widely used buzzwords: efforts of different players should be focused and concentrated; in the European Union’s jargon: coherent and concerted.

Both simple mechanics and common sense tell us that the joint outcome of two forces is maximised when they are applied to the same point and direction. Similarly, the joint effect of

the economy and science is maximised if they are focused and concerted. The same principle applies to investments into science, education and training for the benefit of society.

We do have a problem here. This problem is often highlighted as a clear, transparent but extremely persistent glass ceiling for several groups of society. For example, young scientists working in emerging fields of science have small chances of winning a research grant.

A similar but much more disappointing glass ceiling prevents many brilliant female scientists from achieving the results and positions they deserve. This impediment is reflected in the most contrast manner in the proportion of male and female researchers on different steps of their scientific career. Female scientists are in majority on its first steps. There are equal numbers of males and females on the level of, for example, assistant professor in many countries. Further on things become unfair. Ladies are severely underrepresented on higher steps of academic career. Not many of them reach professor's level and just a handful has been elected into Academies of Sciences.

This is one of the largest problems we have in science, with clear reflections in and ramifications for society. Even though the principle "every person counts" is true for the entire world, it is much more important for small communities such as research communities that virtually drive the world. Every expert counts here by an order – or even two orders – of magnitude more. We cannot afford losing any of talents. It is our common imperative to build conditions that favour advancement of every single talented scientist. In this sense one of concealed targets of the CUPAGIS project is to offer equal opportunities to everybody who wishes to specialise on precision agriculture.

See detailed information about this EU-funded ERASMUS+ project at www.cupagis.eu