

## Effective communication of agrometeorological services

In 2016 the Tromp Foundation with partners WMO and FAO organized a three day workshop "Agrometeorologists for farmers in hotter, drier, wetter future". The workshop in Ljubljana focused on Mediterranean region and Europe. The aim was to bring together agrometeorologist to exchange information on present agrometeorological services provided by national meteorological services, research institutions and private companies. One of the goals was to enhance networking and to identify the best ways how to tailor information for the end-users. One of the outcomes was that there is a variety of information that can be used on day-to-day basis, more difficult is to provide useful information on future climate.

Already in 2016, it was decided that we should organize a similar event after a couple of years. Originally, the second workshop was planned for 2020 in Bratislava as side event at the European meteorological Society Annual conference. Unfortunately, the conference was cancelled due to Covid-19 pandemics. In 2021, the EMS Annual meeting was virtual and we decided to postpone the workshop. Finally, in 2022 the workshop is organized in Bonn as a hybrid event.

This time a focus is on communication, as it is evident also from the workshop title "Effective communication of agrometeorological services". As climate science becomes increasingly sophisticated and exponentially important, how do meteorologists align their communications to optimize value delivery to the primary sector? It is not enough to provide a service, it is also outmost important to communicate it in such a way that the users are empowered to take advantage of the information provided. We are supposedly living through a communications revolution, and the means for disseminating information have certainly increased and multiplied. But are we communicating more effectively? How do we work towards practicing it more effectively?

Our health and well-being are inextricably linked to our natural environment. So much, in fact, that the World Health Organization has called climate change "the single biggest health threat facing humanity." Unhealthy air, plastic waste everywhere, extreme weather events, lack of drinking water, and most and for all, food availability.

An essential aspect is food availability. The change in climate could have considerable consequences for agriculture, not only due to the direct changes in conditions for crops (milder winters, more drought, increase in CO<sub>2</sub>-concentration and the like) but also because of indirect effects such as new diseases, pests and plagues, a demand for different crops (e.g. bio-fuels) and the risks of business management (yield consistency). It is important that the sector and the authorities anticipate the risks and opportunities (of adaptation).

Agrometeorological theory and practice are closely related to some of the greatest challenges of the 21st century: food security, adaptation to climate change, vector-borne diseases, and climate-smart urban living through greener cities and enhanced urban agriculture.

Among the seventeen sustainable development goals, there are: the second goal Zero hunger and the third Good health and well-being and the thirteen Climate Change and fifteenth life on Land. The workshop is addressing above mentioned SDGs. With effectively providing agrometeorological services we contribute to hunger mitigation, contribute to

better nutrition and thus better health, a last we address how to help farmers to adapt to climate change.

Agricultural meteorology is the branch of applied meteorology which deals with the response of crops and animals to the physical environment. It is the science investigating the meteorological, climatological and hydrological conditions which are significant for agriculture owing to their interaction with the objects and process of agricultural production. The sector of agriculture is under stress more than ever, on one hand there is a demand for more and more food, and on the other hand the sector is under pressure to reduce use of fertilizers and to reduce GHG emissions.

The Solco W Tromp Foundation is pleased to be able to support the workshop Effective communication of agrometeorological services. Let's hope that this workshop, which is an extension of the workshop held in 2016 will contribute to adapting strategies enabling sufficient food in the next future.

Effective science education and communication of agrometeorological knowledge and skill is crucial in facing these challenges. It is the time for the paradigm change. Our long-term strategy and short-term measures toward this goal are based on the democratization of science and the application of new technologies while reaching the general public, from high school to senior citizens.

For example: Slovenian agrometeorological service is bringing a wide range of information to the customers in the agricultural sector on a national level. In parallel, it supports drought watch on the regional level of SEE in the frame of Drought Management Center. At a time when new sources of data and modern communications are available Drought Watch, Droughtmeter, and Agrometeorological forecast were introduced.