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A Person we are deeply missing Prof. Giampiero Maracchi. An imaginary interview

Giampiero Maracchi passed away in Firenze, Italy, on March 11, 2018.

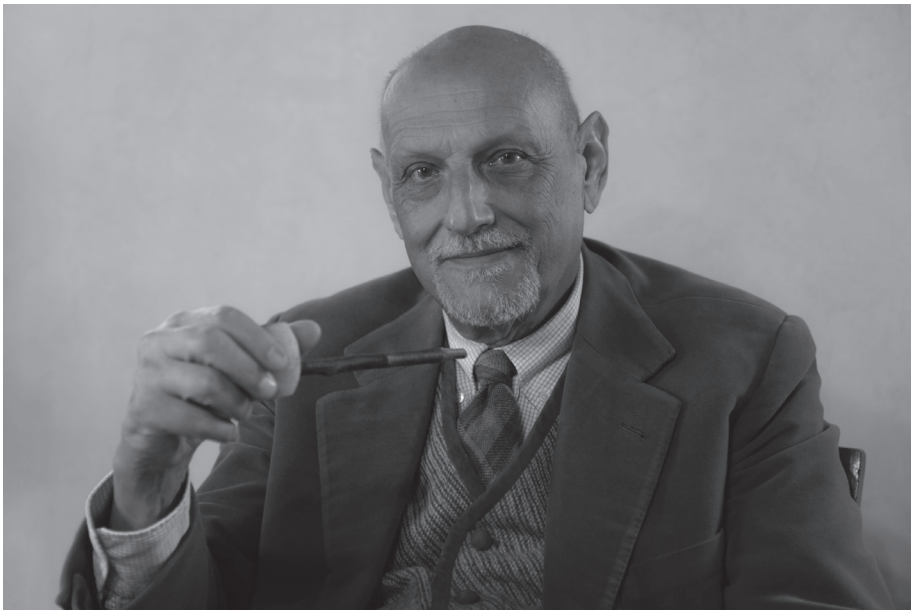
WHO WAS GIAMPIERO?

Professor Emeritus of Climatology at Firenze University, Italy. President of Accademia dei Georgofili 2014-2018.

Founder and President of the National Observatory Artistic Handicrafts OMA. Founder and President of the Laboratory of Monitoring and Environmental Modelling for Sustainable Development – LaMMA, a Consortium specialized in meteorology, climatology, GIS applications, pollutant dispersion and control, and vegetation monitoring. Founder and President of the Foundation for Climate and Sustainability, FCS. President of the Ente Cassa di Risparmio in Firenze up to May 2014. Founder and former Director of the "Istituto di Biometeorologia" of the Italian Research Council, President of the Study Center for the Applications of Informatics in Agriculture, founder and Responsible of the Master in Meteorology and Applied Climatology at Firenze University, founder and former Director of the Regional Meteorological Training Centre WMO based in Italy. Chairman of the EU COST Action 79 "Applications in Agroclimatology", and of the COST Action 718 "Applications of Meteorology to Agriculture". Italian delegate for the EU Directorates for Environment, and Science and Technology in Brussels, member of the "Accademia delle Scienze".

Member of many scientific international Committees, coordinator of

* *All fellows and former students*



(Foto di Marco Benvenuti)

many projects in meteorological applications, mostly for agriculture and soil use and protection. Between many recognitions, he was awarded for "Exceptional Service to the Commission for Agricultural Meteorology" by the World Meteorological Organization.

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You had a brilliant career, may interests and innovative ideas. And you mentored many students and youngest researchers. What you mostly wanted to communicate them and make them growing in life and science?

I would encourage my students and fellows to keep opening their minds to any possible evolution of agriculture, from management technologies to environmental protection, sustainable land use and climate applications: new generation should try to bring out ideas to trust in- from the literature and their brain- and pioneer them with courage, commitment and constancy.

There are so many things to do! The true and enormous value of agriculture is not appropriately perceived nowadays, and many social, ethical and economic principles are not appreciated and sometime not even recognized.

We are facing new threats, and many of the traditional paradigms are not anymore consistent. Agricultural surfaces and cultivated fields are not only food producers; they are reservoirs of ecosystem services. Agriculture is now a pillar of bioeconomy and sustainability.

One of my message to new generations is to try to embrace all those aspects together: food production, climate, weather, rural development, social aspects are part of an "unicum" that is our life, and we should all work to make this "unicum" better for now and the future.

Of course, science is a complex thing. It must bring together the need of increasing knowledge and the need of solving problems. Knowledge advancement is "per se" a very good thing, but knowledge advancement coupled to the solution of urgent and critical societal/environmental issues is even more important.

I tell again to my fellows: dedicate your working life to support such problem-solving. You can make the difference adding your piece to the puzzle.

I consider time as the most precious resource: my suggestion is be generous with it but do not waste it. Respect your time and that of other's, and respect others independently on their role. Everybody has a value that may be is hidden to your eyes.

Work in team, this is my suggestion. I believe that any scientist should work on his own ideas with convincing strategies, but without being too individualist. My strong believe is that prestigious results can be obtained only through the synergy of dedicated persons within a dedicated group.

What do you think are the priorities of agriculture to interface with climate now?

Agriculture requires innovation to tackle an increasing number of criticalities that are driven by market and environmental effects.

The so-called Climate Smart Agriculture introduces new paradigms to defend farmers' revenues while increasing the resilience of farm-scale agriculture. Agricultural innovation does not negate that some traditional practices were already climate smart so that a better knowledge of old traditions is likely to unveil innovation.

It is necessary to innovate respecting tradition. The local dimension is fundamental, in consumption and in production of energy. However, we need to follow a global approach, through technology and innovation, to develop an agriculture which limits the CO2 emissions.

Agriculture is renewable, and our knowledge is so advanced that agriculture can become again a primary activity. All this can be achieved not only

in the food sector, but also in the field of basic materials such as natural fibers, bioenergy, wood production. For instance, consider that in Italy there are 5 million farm buildings. These buildings can become energy sources by covering them with solar cells, and, with the complementary contribution of biomasses (including pruning), mini-eolic generators they can add up to 30-40% of the energy needs.

We should also consider the new interest of people to access to nutrient, healthy and sustainable food: the EU Protected Designation of Origin and the Protected Geographical Indication have a specific link to the region where the product comes from: any region has its own specific features, geography and climate that make a particular agricultural product unique. Climate is an opportunity and should be regarded in this way, as a resource, not just as a threat.

Of course fighting climate change, and adapting crop management to reduce vulnerability is still a priority.

You are one of first to believe in long-term, seasonal forecast. Tell us more about this potentially powerful tool for agricultural planning?

We know 60-70 percent of popular proverbs about weather and climate have a true content, so popular knowledge is important in our lives, especially in a sector like agriculture. However, today we have much more sophisticated tools that we can use! Weather forecast very reliable up to 5 days, and largely improved seasonal forecast systems which can be used as a powerful tool for improving agricultural production, and helping decision makers in their agricultural operations.

Seasonal forecast is very important to support farmers in planning their agronomic activities and reduce vulnerability to adverse conditions. Long-term forecast is potentially powerful in order to develop new techniques for agriculture to adapt to global climate change, and to counteract the effects due to some extreme climatic phenomena such as drought.

Certainly, agriculture is one of main sectors that can benefit of the knowledge of the evolution of the meteo-climate variables on a monthly and seasonal scale, and we are working in order to improve seasonal forecasts, making them easily readable to the user.

Enhanced seasonal forecasting for Developing Countries, like in the sub-Sahel belt, and deeper knowledge about climate teleconnections and their effects in those regions of the World highly vulnerable to the impacts of climate change, permit to better predict, and better manage possible food crises, and

avoid difficult situations that especially rural populations could face.

All this, of course, can be achieved only with further research, and networking, as well as training activities for technical personnel of the NMHS, and for farmers' associations with experts from international institutions.

Rural development and local traditions were constantly at the center of your attention. How to you feel these are important in these modern days?

The primary sector requires particular attention because it is characterized by small companies, by typical products, by the use of local varieties or races. We must therefore address our efforts to allow farmers to innovate, without however upsetting what has been culturally acquired throughout history.

I like to recall that nowadays 80% of the people lives in towns, while only 20% of the people lives in the countryside (the reverse was true in the first part of last century).

Rural areas have some opportunity to gain a new life. Internet and ICT are helping to overcome potential isolation and traditional rural activities can insure new jobs, a sustainable economy, and renewable energy sources.

We should remember that more people stays to work and live in rural areas, lower is the load on the cities, and on the environment.

In addition, solicitation for land use change can be reduced, and a better and more sustainable land use can be promoted. Economic productivity at the farms can join landscape valorization, soil preservation, and agritourism to create new values.

Which of your main interest and activity you wish to stay alive after you?

The search for solutions for the progress and improvement of society. History is a good master of life, not all old things are wrong! My suggestion is an application of modern tools to the good old fashion ideas. Concluding, it is important the knowledge of new technics, but their usage is even more important respecting traditions and local communities: progress does not mean to deny the past. I would like to see the Institute of Biometeorology I have founded to grow up while maintaining the same spirit of internal support and collaboration I have always looked for. I also wish Accademia dei Georgofili, of which I have been the President up to my passing away, to maintain its function and ideals as they were three centuries ago, when it was founded.

HOBBIES ARE PART OF LIFE.

Giampiero believed strongly on traditional professions, and dedicated time and energy to promote handicraft as a way to help new small enterprises and support local development. He brought new attention to the production and valorization of traditional fiber crops, as hemp, flax, broom, stingling nettle, and to support textile female entrepreneurship in rural areas. He was good in shoemaking, used self-made shoes and even wrote some book and that manual art.

Accademia dei Georgofili

Giampiero was the President of **Accademia dei Georgofili**, founded in Firenze in 1753 with the aim "to produce continuous and well-regulated experiences, and observations to best manage the Ars of cultivating in Tuscania region". Soon the Academia become a public institution and was recognized as National in 1897. Accademia dei Georgofili is the most ancient Academia dealing with agriculture, environment, and social growth.

Giampiero was not only a well-recognized Professor at Firenze University mentor and tutor for several students and young researchers, but he was also **a great communicator**. He knew how to reach the public and was therefore very appreciated by media: countless are his interventions in newspapers, TV and radio, even outside the strictly scientific sphere of weather, climate and climate change, and often spreading to aspects related to the economic development, or of ethical-moral nature, or on the young generations: how to cultivate and support their enthusiasm for a continuous progress, without denying the past.

Giampiero has been member of several **WMO** commissions, with special focus on **CAgM,** and coordinated several activities and projects on agrometeorology with a particular attention to the improvement of the agriculture sector in African Countries in the general framework of climate change.

Since late '70s, agrometeorology has been considered by Giampiero a special instrument for a sustainable agriculture. Then, training of staff from National Agro-Meteorological Services, International Centers operating in African Countries as well of farmers' associations become a milestone of his activities in the Sub-Sahel region. With this objective in his mind, he created and supported a **WMO Regional Training Centre** in Florence-Italy, managed by the Institute of Biometeorology in cooperation with the National Permanent Representative at WMO.

The WMO-RTC-Italy has been finally recognized by the WMO-Executive Council in 1997, during its 49th Session as "an additional component of the WMO RMTC in Italy for the training of Class I meteorological personnel in the area of agriculture meteorology".

Since then, short-term courses, workshops, roving seminars, meteo-atelier, training-on-demand have been coordinated directly by Maracchi and his collaborators, both in Italy and in Sahelian Countries. The RTC is still active with training projects for Countries in WMO Regional Associations I and VI and Long Term Training Stages (tutoring, mentoring) in Florence for post-doc.