CONFERENCE

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POVERTY ALLEVIATION: A ROLE FOR TECHNOLOGY AND INFRASTRUCTURE?

Foundation for Worldwide Cooperation, Italian 'Accademia dei Lincei', the Pontifical Academy, the Association of the Mediterranean Academies, and the Chinese Academy of Social Sciences

Session on Health and Food (March 11, 2015)

"Thought for Food"

Introductory remarks by

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Let me use my prerogative as moderator of this session to make a few introductory remarks on challenges to food security and nutrition. These challenges are also crucial for the health of the world population, the other main topic of this session. They are also crucial for poverty alleviation, the main theme of this conference.

Lots of progress has been made in reducing poverty and hunger around the world, not in the least thanks to improvements in technologies and infrastructure. Over the past twenty-five years, the world has managed to reach the MDG target of halving the incidence of poverty and malnutrition.

Yet, plenty of challenges remain.

Let me list **seven** major challenges. In doing so, I will also hint at roles for technology and infrastructure. However, as time is limited, I will only state the issues and leave it to the distinguished panelists to give us the answers.

First, 75 percent of the world's poor live in rural areas and most depend on agriculture. These poor also comprise the more than 800 million people that are chronically undernourished. Hence, if we are to eradicate poverty and hunger by 2030, as the first and the second of the new sustainable development goals command, then the development of agriculture and improvement of rural livelihoods must be central to the solutions.

Second, we produce enough food in the world to feed everyone. Yet, we suffer a triple burden of malnutrition: that is, of food insecurity, micronutrient deficiencies, and obesity. **One of every**

eight persons has insecure access to food. Even more, especially young children and mothers, also suffer severe deficiencies in the intake of micronutrients with life-lasting effects on health and learning abilities. At the same time, **one quarter** of the world population is considered overweight and obese, largely due to over-nourishment. The combination of global food sufficiency and the triple burden of malnutrition means that our food systems are highly **inefficient** and highly **unequal**.

On top of that, and this is the **third** challenge, we waste about **one third** of the food produced around the world. In developing countries, food losses are high at the beginning of the food chain during production and processing, due to lack of infrastructure, storage, and processing capacity and inadequate access to markets. In developed countries, much food gets wasted at the end of the food chain and gets thrown away while still suitable for human consumption.

Fourth, to feed a growing … and increasingly urban … world population, food production will have to increase by **60 percent** between now and 2030. The urbanization and increasing income will shift dietary patterns towards more **meat and other high protein** consumption. This will increase the demand for water and land for crop and livestock production. But … irrigation water is scarce and getting scarcer because of climate change. In most parts of the world, we have reached the land frontier. So, increasing food production will have to come from **more intensified use of land**.

Fifth, climate change is making this challenge of intensifying land use a lot bigger. Intensified droughts and floods and less virtuous rainfall are already affecting many crops. Average crop yields will decline with higher temperatures. With climate change, the concentrations of iron, zinc, and protein in crops such as wheat, rice, and soybeans are projected to decline by 5-10 percent. This, in turn, will put people at greater health risks due to malnutrition. While affected by climate change, agriculture and related land use are a major part of the causes. They are the source of 25 percent of global GHG emissions: more than any other single sector. So, we **cannot** intensify production if we continue to use the same agricultural practices and technologies. We have the new technologies, such as our “save and grow” and other climate smart agricultural practices. But, these will need to be scaled up massively and made accessible to all farmers around the world.

That is easier said than done, because of the **sixth** challenge. That challenge is that much of the increase in more sustainable food production will need to come from the 475 million smallholder family farmers in developing countries. Together, they produce most of the world's food. But, can we expect these farmers to adopt the new technologies? To begin with, they find it difficult to access these technologies, because they are not directly suited to their conditions, because they have inadequate access to infrastructure, because their education is low or because they lack of access to credits to invest in new practices. Mostly, it is all of the above. Moreover, many of them live and work in vulnerable ecosystems that are becoming even more fragile because of climate change. We will need to support these farmers overcoming these hurdles.

For this, we will also need to address the **seventh** challenge. It is a demographic challenge often overlooked in policy debates. That is, who will be the farmers of the present and future adopting the new technologies? Farmer populations are ageing rapidly. Worldwide, the average age of farmers is about 60, including in developing countries. Many amongst them are women and poorly educated. Older farmers are less likely to introduce new, transformative production techniques. One could expect their children to do so, especially in developing countries where 60% of the population is under 25 years of age and most living in rural areas. The problem is, however, that few rural youth see a future for themselves in agriculture. You may not have made the link, but this is also a major cause of distress migration. As a result, we are seeing many risk their lives as they try to cross the Mediterranean in search of a better future.

Hence, access to technology or finance could improve and infrastructure developed. **But none of these efforts** will ensure food security if we do not entice more young people to enter into farming.

So, as you can see, all of these challenges are interconnected and our solutions will have to look at them simultaneously. We need bold and transformative solutions if we want to change our food and health systems such that they will become **sustainable** and **efficient**, and that they will be accessible to all, **leaving no one behind**.

This is what we are aiming for at FAO. How? Well, that will have to come on a next occasion, as I promised to be brief. Now, we will listen to how the panelists think we can best address these challenges and, in particular, what kind of technological change and infrastructure improvements are needed to induce the required transformative changes.