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I want to thank the organisers for inviting me to this very exciting policy conference. Kemal, allow me to bring the issue back to water a little bit, because this is part of the main topic of this session. I remind you that in addition to the SDG 2 on hunger, there is SDG 6, which says we must ensure availability and sustainable management of water and sanitation for all. Water has been a big issue in the global governance of food security and nutrition. An important report was prepared by the High Level Panel of Experts on Food Security and Nutrition and its policy recommendations were discussed by the members of the Committee on World Food Security in October. This was on water and food security. I encourage people to look at it, because it contains quite a bit of information on how water affects food security.

While the linkages between water and food security are not only through agriculture and irrigation it should be kept in mind that irrigation constitutes about 70% of withdrawals of renewable water in the world overall. The figure is 90% for the developing countries and as low as 43% for the developed countries. However, the safety of drinking water is a big issue in food security, because today, close to 800 million people lack access to safe water. Even if you have food, drinking unsafe water will make you sick. It is compromising nutrition and food security. Water is important for ecosystems, which preserve the resources we use to do agriculture. Water is important for energy, industry and manufacturing, which constitutes sources of employment and food security.

What is the issue of water today and its links to food security? First of all, at global level, you can look at the global situation and water problems. Let me make this a little more explicit. As I said, agriculture is the major user of water. Therefore, we cannot talk about water availability or the water wars that people were talking about a few years ago without talking about irrigation. As I said before, irrigation is a major extractor of renewable water and there are water stresses at the regional level. We all know that in the Near East and North Africa, the problem of water is already acute. With the extraction of water, the level of more than 40% of the available renewable water resources is considered by hydrologists to be a critical standpoint.

By 2050 we expect, as was very correctly pointed out, to have to increase food production by about 60% for the world. This is the result of a combination of population growth, increase in incomes and the accompanying dietary changes. As the world becomes more populous and richer it consumes more calories, but also it consumes different types of food. This means more processed foods, more livestock and other protein rich foods all of which require more water to be produced. Urbanisation will mean that some of the stresses on water resources will come from competition between agricultural water and water for other uses, including municipal water.

In our view and based on our projections, by 2050, the food that we will produce will mostly be based on yield increases and productivity, with limited need for additional land resources. To give you a number, today we use about 1.6 billion hectares of land, of medium or high potential for agriculture. We are going to use another 80 million by 2050, which is not a big addition in relative terms. However, I will agree with the first speaker that this land, about 85%, is based on the developing countries of Africa and Latin America. I fully agree with the fact that Africa is a potential breadbasket with proper investment.

What about water? The additional land to be brought into production will be of high or medium potential. This land has a potential because it is either irrigated or there is rain. In a sense, the question is, in terms of water pressure, how much more irrigation will we need? There are some monkey wrenches in this scenario, which I will mention very quickly. We are going to expand irrigated areas by about 6.6%, which is not a very big number, and will still leave some potential for further increases in irrigated areas, in some regions, such as Sub-Saharan Africa. With today's potentially irrigated land, that is land that has potential for irrigation, we will reach about 60% by then.

The question then, when we look at 2050, is the increasing competition for water resources. Climate change is very difficult to include accurately in the projections we make. Others have done scenarios ranging from Armageddon to



more modest negative effects not particularly serious, especially by 2050, when the full effects of climate change will come in. There is an uncertainty about this which we cannot fully take into consideration. Regarding rainfall, aquifers and everything else to do with water, the question will be about stress caused by the competition between water for agriculture and water for other uses.

The question then is at the country level because that is where the food security issues are. Globally, we know we have 795 million undernourished people and we hope to eliminate malnutrition by 2030. I am not sure how feasible that is and it depends on what we are going to do, but to find ways to battle malnutrition and hunger, we have to go to country level. Who will get access to the more limited quantities of water, especially in regions where water stresses are already high, which include the Near East, North Africa and some parts of Southern Africa and Central Asia? The solution to the allocation of water will determine food security outcomes.