What's needed for a sustainable, equitable and healthy food system?

February 7 2019, by Pushpam Kumar

A recent report integrates the environmental, health, and social impacts of agriculture into one framework that can help planners, farmers, and individuals make informed decisions about food. Credit: Dana/Flickr CC

Today, we are trapped in a situation where one billion people are underfed and facing stunted growth, while more than two billion are overfed and suffering from obesity and related diseases. It is true that life expectancy has increased globally; however, health is on decline due to our food choices. Nutrition-related chronic diseases such as obesity, diabetes, cardiovascular disease, and some forms of cancer are major contributors to the global burden of disease. Globally, in 2017, life expectancy was 73 years but healthy life expectancy was only 63 years.

This means on average 10 years of life were spent in poor health in 2017.

Meanwhile, unsustainable farming practices are depleting groundwater, degrading soil, and causing the loss of agricultural biodiversity. Food production generates up to 30 percent of global greenhouse gas emissions, accounts for substantial proportions of land-use change, and contributes to land degradation and global water consumption. Plus, the very base of production is either shrinking or will shrink soon. Global and national modeling studies suggest that yields of major cereals will decline under scenarios of increased temperature, especially in tropical countries. Water scarcity threatens the ability of large parts of the world to continue their present agricultural growth. Biodiversity loss, including critical crop pollinators, and loss of soil quality will both have substantial impacts on global fruit and vegetable supplies and thereby on human health. The distribution of food, its processing and storage, and marketing (including pricing) are contributing to social inequalities.

A healthy food system can avoid 11 million deaths every year. So, what do we need to do to achieve a sustainable, equitable and healthy food system? How can economics help achieve this?

Currently, no macroeconomic indicator captures farming's environmental costs, and consumption impacts such as endocrinological disorders remain largely unnoticed, despite costing more than 800 billion USD annually. (The tragedy is, health care is treated as an expense, which propels gross domestic product (GDP) and wrongly serves as a mark of societal progress!) Devising a food system which captures all of these 'externalities' and reflects them in the costs and pricing structure of food is the first step in the direction of achieving the Sustainable Development Goals and Paris Agreement. Accounting and assessing the natural capital in an inclusive wealth framework as demonstrated by the UN Environment would be a big help here.

In concrete terms, as the EAT Lancet study shows, changing diets, farming, and food systems must be seen in a holistic and systemic framework. The approach to understand the causes, impacts, and implications of society's current relationship with food systems, and how this relationship may be transformed, must embrace the long run, be economy-wide, include all stakeholders, and account for planetary boundaries. It is indeed a tough call to action.

The magnitude of the challenge to nourish a growing population requires a systems approach, which has thus far been lacking. A recent study from the UN Environment-led initiative called The Economics of Ecosystems and Biodiversity for Agriculture & Food (TEEBAgriFood) employs a systems approach and provides a potential solution to how economics can help in understanding the relationships between human health and planetary health. An interdisciplinary group of scientists—of which I was a part—addressed the whole 'eco-agri-food systems' complex, which links human systems with natural systems. TEEBAgriFood provides a comprehensive framework to analyze and assess all positive and negative externalities of the current eco-agri-food systems and provides advice on addressing complex challenges associated with food production, processing, distribution, and consumption within the contexts of human health and well-being, ecosystem services, and biodiversity.

The TEEBAgriFood Scientific and Economic Foundations report organizes the complexities of the three main blocks of food systems: production, distribution and consumption. For the first time, this report provides a new evaluation framework to capture both the malign and benign impacts of food production, distribution, and consumption as a means of identifying how to transition to a food system that is sustainable, equitable, and healthy. It thus provides guidance for the global agriculture sector, which happens to be the biggest employer: 1.3 billion people!

Today, the scientific and policy worlds are struggling with the question of how to design a sustainable food production system that is equitable and healthy for the people and planet in general. National planners, while striving to achieve food security and environmental sustainability, can use the framework and evaluation criteria in the TEEBAgriFood report to identify trade-offs between policies and inform decision-making. Local farmers can find useful guidelines on how to enhance productivity without decreasing crop diversity and or creating inimical impacts on soil and water. Each individual and concerned citizen should be able to evaluate different food choices with respect to what is good for their own health, their family's health, and, for those who produce food, their farms. I am certain that this new approach and authoritative and scientifically credible report will provide some realistic pathways forward that recognize the link between the prosperity of the people and planet.

The Food and Agriculture Organization of the United Nations (FAO) has recognized our initiative with a Vision Award, stating:

"TEEBAgriFood has developed a comprehensive evaluation framework for food systems that helps decision-makers to compare different policies and the market to value food more accurately."

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