United Nations Department of Economic and Social Affairs
Division for Sustainable Development

Food and Agriculture:
the future of sustainability

Key Points for policy-makers

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download full doc: http://www.un.org/esa/dsd/dsd_sd21st/21_pdf/agriculture_and_food_the_future_of_sustainability_web.pdf

CHALLENGES

Widespread consensus: farmers must produce more food per unit of land, water, and agrochemicals. BUT, they must do this while facing:

A. More challenging **physical conditions**. Not only is climate change a growing factor but also the increasing scarcity and cost of the physical factors of production such as arable land, water, inputs and energy. These, and the diminution of biodiversity, make agriculture ever more precarious.

B. Astonishing levels of **waste** as 30-40 percent of all food, and at every step of the food cycle, is lost. Every year, high percentages of the food produced in developing countries never makes it to market and consumers in rich countries waste as much food as the entire net food production of sub-Saharan Africa

C. Current trends in **livestock** and **biofuels** that are likely to lead to more crises in the near future as they very inefficiently use food-related resources.

D. Pressures on food **prices** that are exacerbated by volatile market dynamics and inadequate global coordination that multiply the effects of population growth, land degradation, and water scarcity.

E. Concentration = risk. Despite a rich biodiversity of more than 50,000 edible plants in the world, well over half of our food now comes from only three plants (rice, corn, wheat). Fewer firms channeling global commodities between producers and consumers may also elevate risks as failures could be greater in scale and scope and thus more consequential.

F. Food is becoming disconnected from nutrition; calories are not enough for health and wellbeing. The increase of empty calories in developing countries reflects the meteoric rise of the clinically obese in many industrial economies where epidemiological data already points to considerable societal and economic costs. There are now as many clinically overweight people in the world as undernourished.

Given these current realities, investing to fill the global "pipelines" with more food would be a pointless strategy. This work illustrates how **leading thinkers** from major world views envision our future food and agriculture world.[1] Rather than simply "more" production, we must also consider what would be "**better" production** and **better food systems**.

Recent decades have seen such re-imagining result in radical and world-changing innovations in every field from **politics** (social network media) to **healthcare** (nanotech-based diagnostics and drugs) and **communication** (mobiles). Besides its production function, agriculture needs to works with ecology, rather than against it. Having agriculture integrate other vital functions of ecosystem management is a necessary working strategy, not an option.

Agriculture is at the threshold of a necessary paradigm shift

[1] Four views: Policy and Trade; Business Specialists; Rural Livelihoods and Poverty; Environmental Sustainability

SOLUTIONS FRAMED

Where will solutions come from? First, we must recognize that we are often aiming at the **wrong goal.** Agriculture **policy concentrates mostly on production** and trade and it is divorced from the more fundamental imperative of good nutrition. Our objectives should be:

a) better **access** since there are more than 4000 kcal per person/day available in the global food system already

b) more **nutrition** or healthy food

c) fostering **efficient agroecological landscapes** that reduce risks

To evolve our efforts, we must **evolve new learning pathways** for producers, firms, and policymakers. Better data and analysis needs to be integrated into decision-making since agriculture, despite its global importance, lags behind in this field.

International agencies and governments have retreated from agricultural investment and are just beginning to actively invest in the concepts of agroecology and nutrition. While some forward-looking food companies and NGOs are taking the lead in developing these areas, they are still a minority. **Governance is shifting** as corporate power has grown to rival the influence and effect of the state, affecting the dynamics of local and global food systems. Consequently, we will not advance effectively unless we address how public policy and private sector investment choices integrate toward a mutual and common good. The public sector must lead with a more thoughtful and principled guidance that reflect the new challenges and that take into account longer-term public needs. It is equally important to develop ways for the private sector to be a vital part of the solutions to our new agri-food challenges.

ACTIONS

Nine key areas of consensus have emerged as the key paths of action:

1. Organized small and medium farmers, fully including women farmers, should be a primary focus of investment – recognizing that private enterprise will play a significant role in many solutions
2. Define the goal in terms of human **nutrition** rather than simply “more production”
3. Pursue **high yields within a healthy ecology** – they are not mutually exclusive and policy and research must reflect that
4. Impel innovation and the availability of **diverse technologies** high and low - suitable in different socioeconomic and ecological contexts
5. Significantly reduce **waste** along the entire food chain
6. Avoid diverting food crops and productive land for **biofuel**s, but explore decentralized biofuel systems to promote energy and livelihood security that also diversify and restore rural landscapes
7. Insist on **intelligent and transparent measurement** of results - we cannot manage what we cannot measure
8. Develop and adapt **public and private institutions** that can effectively respond to these new goals
9. Motivate and reward **investments and business systems** that result in measurable impacts to the “**public good”**