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HIGH-LEVEL CONFERENCE ON WORLD FOOD SECURITY: THE CHALLENGES OF CLIMATE CHANGE AND BIOENERGY

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FOOD SECURITY AND BIOENERGY: TOWARDS AN INTERNATIONAL FRAMEWORK

ABSTRACT

1. There is increasing international recognition that growth in bioenergy offers new opportunities for sustainable development but also carries significant risks. With current technologies the growth in liquid biofuels, in particular, contributes to the rise of commodity prices and may hamper food security and the environment. While governments, private sector and civil society can take important measures to promote sustainable production of bioenergy, many challenges are global in nature and cannot be tackled without a concerted international response. An international approach should address the full spectrum of bioenergy applications, but most urgently address liquid biofuels for transport.
2. Bioenergy accounts for approximately 10 percent of total primary energy and nearly 80 percent of all renewable energy. A significant portion of all bioenergy, almost 97 percent, is used for heating and cooking, but its use for electricity, heat and transport is growing. International interest has recently focused on liquid biofuels for transport - this represents less than 2 percent of current transport consumption but rapid growth is expected to double this share by 2030.
3. Among bioenergy sources, liquid biofuels have the most direct and significant effect on agricultural markets, food security and the environment. The main drivers of biofuel growth are high oil prices and domestic policy measures adopted to promote energy security, climate change mitigation and rural development. Developing countries in tropical climate zones have a comparative advantage in growing feedstocks for biofuels, however, current demand growth is strongest in developed countries. Therefore, considerable trade flows are to be expected, but are still hampered by barriers to trade. These not only drive up the cost of bioenergy but also limit potential opportunities for rural development in developing countries.

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4. The link between bioenergy growth and food security is complex. Bioenergy growth affects food security through impacts on incomes and prices and through competition for resources. Bioenergy crops compete for land and water resources that might otherwise be dedicated to food crop production or other activities. Increasing demand for liquid biofuels is one of several factors that have driven the recent price rises in food staples. These price rises pose a significant risk to food security in the short term as the poorest among the rural poor as well as urban poor are net buyers of staples. High prices have also reduced the availability of food aid at a time when it is most needed. Bioenergy demand, however, also stimulates agricultural growth and may, under the right policy conditions, lead to increased rural employment, new market opportunities for smallholders, increased incomes and better access to affordable energy in rural communities.
5. Bioenergy can contribute to the mitigation of climate change, provided appropriate policies and technologies are adopted. The choice of feedstock, location and production methods have significant implications for the greenhouse gas balance compared to fossil fuels. Land use change and new land conversion for increased biofuel feedstock cultivation, or for other crops displaced by biofuel feedstocks, are critical factors in greenhouse gas balances and have wider environmental implications. Bioenergy production may threaten wild and agricultural biodiversity, increase competition for scarce land and water resources, and affect water and soil quality. Policies to limit land conversion, good agricultural practices, integrated food-energy production systems and landscape approaches can mitigate these environmental risks.
6. Concerns and emerging evidence related to negative impacts of biofuel growth suggest the need to review policies which are driving an artificially rapid expansion process, and to put in place measures to safeguard food security and the environment. The recognition of close links between agricultural and energy markets calls for greater integration and coherence in policy making in these two sectors. A gradual elimination of trade barriers would foster more efficient international patterns of biofuel production and enable developing countries to build upon a comparative advantage in feedstock production.
7. Some of the challenges posed by biofuel development are not new and mirror those related to agriculture and natural resource management in general. Rather, the emergence of significant bioenergy production amplifies the urgency to act. Responses should therefore strengthen existing technical and policy measures, build resilience, including safety nets, strengthen good practices and foster enabling environments for pro-poor rural development, and ensure participation of smallholders and rural communities in decisions making. The extent of uncertainty and the rapid market developments call for comprehensive monitoring and assessment of impacts at the local, national and international levels that take into account economic, environmental and social factors.
8. The cross-border nature of biofuel production as well as impacts on food security and the environment call for an international response to bioenergy development. Such a response will require consensus building on both scientific and policy matters. FAO, in close collaboration with other UN agencies and partners, is prepared to provide the appropriate forum to develop such an international consensus.