EXECUTIVE SUMMARY

Agriculture must be valued in a broader dimension, that is as the producer of marketable products and, at the same time, as a producer of services that are not marketable (externalities).

Agriculture has been regarded as only the producer of tangible products such as food, fiber, and timber that are marketable. Various other products (multifunctionality) such as environmental services (flood mitigation, erosion control, greenhouse gas sequestration, preservation of biodiversity, recycling of organic wastes), maintenance of food security, buffering the economy during the time of crisis, as the greatest provider of employment in Indonesia, and maintenance of rural, social, and cultural values, have not been known, or otherwise been ignored. Existing market system regards the multifunctionality as externality; that is the element in the production system that has not been accounted for in terms of costs and benefits. Government policies at the national and regional levels have not fully incorporated the multifunctionality, because the former are more biased on the short term economic return.

The market and policy systems that perceive agricultural services as externalities cause lower incentives in farming. This may subsequently threaten the national food security.

Farming is one of the most risky system because of unpredictable weather, pest and diseases infestation, unavailability of supplies, difficulties in marketing, and fluctuation of price of agricultural products. These lead to low and uncertain benefits in farming relative to other sectors, where as, the level of difficulty is high in farming. Agricultural land use conversion, including the highly productive ones, can be attributed to relatively low incentives in farming. There is a clear indication that the increasing intensity of erosion and floods in the last few decades was related with land use conversion. In many cases, land use conversion has resulted in irreversible disappearance of part of water preservation, flood mitigation, and erosion control functions.

Providing incentives for farming is justifiable since the externalities provided by agriculture is significant.

Currently, the non-marketable products or services from agriculture have been given for free by farmers. For example, for paddy fields in Citarum river basin, the value of environmental services is around 51% of revenue from rice produced in the watershed. This value was based on a few (flood mitigation, erosion control, organic waste recycling, water preservation, and rural amenity) services evaluated, but has not been taking into account other socio and politically important functions such as food security, job opportunity, and economic buffer. Hence, it is very justifiable to increase incentives in farming through, for example, enforcement of rice floor price at farm gate level, improvement of distribution
system of farm inputs, and control of fertilizer and pesticides quality. Furthermore, it is very important to increase disincentives of agricultural land use conversion, for example, through increased tax for converted land and charging on those parties converting land for replacing the infrastructure of farming in the replacement area.

Advocacy for permanent, highly productive (prime) paddy field area should receive attention and follow-up actions.

As an anthropogenic, rather than natural process, paddy field conversion could be controlled through policy reformulation and law enforcement. The Center for Soil and Agroclimate Research and Development (CSARD) has formulated advocacy on the control of prime paddy field areas; i.e. paddy field areas with a high productivity and good infrastructures. This advocacy effort deserves attention and follow-up actions considering that the productivity of paddy fields in the rice bin areas could be 2-4 times higher than paddy field productivity in the outer islands of Java. Development of new paddy field areas per se is not the solution for maintenance of food security. Besides maintenance of the national food security, controlling land use conversion in Java is vital for maintaining environmental quality, considering that paddy fields are very important in mitigating flood and controlling erosion.

Environmental quality can be improved or at least be maintained by properly allocating land use and improvement of land management systems.

Land use changes causing the decrease of forest and agricultural areas have resulted in the changes in hydrology of watersheds in Java as indicated by increasing frequency and intensity of extreme water flow (especially flood or peak flow). Technology options are now available for both increasing production and maintaining environmental quality. To enable farmers to implement and provide opportunity for the community to participate, facilitation and assistance from the government and the community are needed. Being resource poor, it is almost impossible for farmers to implement various natural resource interventions without material and institutional supports.

The main goal of inclusion of multifunctionality concept in the national policy consideration is sustainable agriculture that can support livelihood for farmers and provide benign environmental quality for the community at large. For Indonesia, as an agriculturally based country, incorporating multifunctionality is not an option, rather, it is a must. Development policy without a biased on agriculture will affect the stability of food security, worsen the environmental quality, and in turn can affect economic, social and political stability.