

## A YPARD contribution to the policy debate on land management

A group of young professionals from the FAO Regional Office for Asia and the Pacific has shared their thoughts on the topic of “*future land use in Asia: food, feed, fish, fuel or fun?*” Their joint contribution to the policy debate on future land management is summed up below.

### Competition for land use

1. Human activities are leading to conflicting uses for available land: arable land is used to grow food crops or feed for animals. Coastal arable land is being turned into ponds for aquaculture for both local and export demand. Land area under crops used to fuel fire stoves or to produce biofuel through processing is increasing. Finally, urbanization has led to a new demand on land areas to provide “fun” for city dwellers (e.g., amusement parks, beach resorts, picnic areas in forests and natural parks, golf courses).
2. Achieving food security at local levels is not solving the problem of deforestation as world demand for food is still growing and forested areas are still being cut to produce food for faraway places. For example: western Cambodia has been deforested to supply agricultural produce to Thailand and other markets; forests in Kalimantan (Indonesian Borneo) have been eroded by large-scale palm oil plantations; Chinese demand for rubber has encouraged rubber production in the Lao People’s Democratic Republic at the expense of natural forests.

### Prospective thinking on future land use trends

3. **Positive scenario:** Asia will undergo an environmental Kuznets effect whereby forests and natural areas will experience regeneration as the region’s population migrates to urban centres. The enormous potential for cellulosic ethanol production from grass, trees and other biomass feedstocks growing naturally on degraded lands will be tapped thanks to more effective processing technologies, thus decreasing the need for land dedicated to the production of crops for oil- and sugar-based biofuels. There are increasing signs of a more environmentally sustainable path of development in the region. Environmental issues will be put higher on the agenda of leading countries in the region like Malaysia, Thailand and the People’s Republic of China as they have experienced economic challenges due to environmental degradation.
4. **Negative scenario:** Natural areas and forests will undergo further pressure and degradation for food and fish production, grazing, biofuel production and recreational activities. This scenario is rather likely given the current low respect for the environment in many Asian countries. Furthermore, nutrient overload is a probable risk for Southeast Asia given the large percentage of land under high density of livestock. The specialization of agriculture into either crop or livestock production will create further imbalances to nutrient inputs into soil resources.
5. **Moderating factor:** A stronger customer and consumer focus on quality will help slow degradation of land resources. Environmental concerns will be dealt appropriately through increased labelling and certification of better management practices in food, fish, fuel and “fun” land uses.

### Policies and investment programmes for sustainable land management

6. Policy decisions are needed for an adequate balance between a) sustainable rural and urban land management, b) ensuring national food sufficiency, c) increasing rural incomes and d) lowering fuel imports. For example in the forestry sector, government development programmes and efforts to stop slash-and-burn and opium production have contributed to forest regeneration in the hills of northern Thailand; managed and semi-wild forested areas for recreation will allow areas of true biodiversity to be protected from excessive human encroachment.

### Tools needed to guide policy making

7. Spatial planning tools and geographical information systems help assess the evolution of the situation on the ground.
8. New production techniques and better management practices adapted to various crops, livestock and aquaculture products, and to the different regional agro-ecological conditions are still needed. Environmental impact assessments of these new production techniques are also required.
9. New biofuel production models and processing techniques are needed for more effective use of all the biomass products and by-products from agricultural activities. Such production and processing models should be adapted to household, small community or plantation specifications, depending on the local context.
10. Market analyses of agricultural products and by-products are necessary to assess supply potential and existing markets before any policy recommendation or investment into new land use is implemented.

Researchers, policy makers and other young professionals involved in agricultural research and development are encouraged to invest into research to develop these tools for more efficient policy-decision taking on future land management in the region.

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