

INDONESIA

Removal of pesticide subsidies

As a low income country with a large and fast-growing population, Indonesia has traditionally put high priority on achieving growth in agricultural output and rice self-sufficiency. To this end, agricultural policy promoted the use of high-yielding varieties and pesticides via direct subsidies on pesticide sales, government spraying and favourable credit packages.

The heavy use of pesticides caused considerable harm to the environment, to human health and ultimately to rice production itself. By the mid-eighties, a drop in rice production had been observed resulting from the overuse of pesticides which had wiped out the natural enemies of many pests, including the brown rice planthopper. US\$1.5 billion worth of damage to the rice sector resulted directly from pest infestations.

Further triggered by the oil shock in 1986 and the subsequent strain on the public budget, Indonesia has significantly reduced support to agriculture including:

- the removal of pesticide subsidies in 1986, combined with a ban on the import of broad spectrum pesticides in 1986; and
- the removal of fertilizer subsidies in 1998.

Following pesticide subsidy removal in 1986, pesticide applications halved while rice production grew by three million tons over four years. A well-funded and widely disseminated national programme of Integrated Pest Management (IPM) was a critical factor in the maintenance of rice production and farm incomes. An additional benefit was the US\$100 million fiscal saving resulting from subsidy elimination.

Impact on biodiversity

The reduced use of pesticides is thought to have reduced the flow of toxins to the environment and their negative impact on biodiversity and human health.

Replicability

This experience suggests that subsidy removal is feasible even when there is strong opposition from some stakeholders. Subsidy removal was undertaken at the same time as a national programme of integrated pest management (IPM) was implemented. In parallel, agricultural research and extension was decentralized from national to province level. The financial stress associated with declining oil prices after 1984 provided further justification for cuts to government budgets.

Lessons learned

Fiscal crises often present opportunities and strong arguments for subsidy removal that facilitate reform at a political level.

Subsidy removal may generate fiscal as well as environmental benefits. In this case, the treasury saved over US\$100 million per year from subsidy removal while the IPM programme cost roughly US\$5 million per year.

Subsidy reform coupled with supporting institutional changes is more likely to succeed. Pesticide subsidy removal occurred at the same time as adoption of IPM as a national policy and the decentralization of many government functions, including agricultural extension.

The adoption of integrated pest management as a national policy provided farmers with information and tools to maintain (and increase) rice production thereby minimizing the potential costs of subsidy removal to certain stakeholders while maintaining national food security.

Sources : Moor and Calamai (1997); Pasandaran et al. (2003); World Bank (1997, 2005).