Increasing incomes of smallholder farmers in eastern Indonesia

Applied Research and Innovation Systems in Agriculture (ARISA)

ARISA is supporting collaborations between research institutions and private sector partners that scale up existing or near-commercially ready innovations in areas relevant to smallholder farmer needs in eastern Indonesia. These innovation projects will be supported by capacity building and technical assistance tailored to the individual collaborations.

The Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Department of Foreign Affairs and Trade (DFAT) and the Government of Indonesia are working together to increase farm incomes of smallholder farmers in eastern Indonesia in a new project, Applied Research and Innovation Systems in Agriculture (ARISA). Strengthening linkages between research institutions and the private sector will unlock the potential of domestic research capacity to commercially apply agricultural innovations that provide direct benefits to Indonesian farmers. ARISA is being implemented by CSIRO (Australia's national science agency) with the Badan Pengkajian dan Penerapan Teknologi/Agency for Assessment and Application of Technology (BPPT) and Ministry of State for Research and Techologoy (RISTEK) in Indonesia.

About the project

The ARISA project has identified that the main challenge in an innovation-led increase in farm productivity and farmers' incomes is not due to a lack of good ideas but rather with adoption of good ideas.

Danumurthi Mahendra – A woman trader sells crates of tomato at a local wholesale market in Malang district, East Java.
Photo: AIP-PRISMA

This is due largely to an absence of incentives for commercialising research, the lack of match-making capability between research and industry, and relatively few examples, models or mechanisms for effective public-private collaboration.

ARISA's principal delivery strategy is to resource up to 10 interventions to facilitate research institution and private sector collaborations that scale up existing or near-commercially ready innovations in areas relevant to smallholder farmer needs in eastern Indonesia.

These interventions will be supported by capacity building and technical assistance tailored to the individual collaborations. Through this series of "hands-on" collaborations, ARISA will identify and analyse the barriers to successful uptake and scale up of innovations. Shared findings from this analysis will inform and aims to strengthen the capacity of Indonesia's agricultural innovation system as a whole.

The project forms part of the Australia Indonesia Partnership for Decentralisation – Rural Economic Development (AIP-Rural), which aims to achieve a 30% increase in the agricultural incomes for 300,000 smallholder farmers in five provinces of eastern Indonesia: East Nusa Tenggara (NTT), West Nusa Tenggara (NTB), East Java, Papua and West Papua. The underpinning design principle of AIP-Rural is to promote economic development, reduce poverty and increase food security in Indonesia through stimulating productivity and increasing farmer's access to markets. Partnerships with the private sector to scale up "competitiveness enhancing" innovations in agriculture are a critical focus of the project.

With an estimated 63% of Indonesia's poor living in rural areas, the rationale for this support is compelling: agriculture employs nearly 40% of Indonesia's labour force and remains critical to the poor's pathway out of poverty; secondly, a more profitable agriculture sector will significantly assist in poverty reduction since a 1% growth of rural agriculture GDP can reduce rural poverty by 3% and urban poverty 1%.

Growing shallots
Photo: AIP-PRISMA/Danumurthi Mahendra

Agricultural Innovation Systems

Innovation is a process that combines knowledge generation, through experience and research, with other processes and actors that put knowledge into economically and socially productive use. For ARISA, innovation is the process by which new ideas, knowledge, technology, products, or services are tested, rolled out, and used within the innovation system to benefit smallholder farmers in eastern Indonesia.

Knowledge can be generated informally through trial-and-error by farmers, or more formally through research and development by research institutions and companies. The commercialisation of innovation occurs when this knowledge is transformed into a good or service that is valuable.

Examples of agricultural innovation include:

1. Input innovation - e.g. improved seeds, fertiliser, machinery and irrigation.
2. Information innovation - e.g. dissemination of improved husbandry or management practices.
3. Coordination innovation - e.g. through new networks or communications technologies.
4. Transformation innovation - e.g. mini palm oil mills that can be economically located closer to smallholder growers.
5. Supply-chain innovation - e.g. improved infrastructure such as storage and drying facilities.

Australian Aid

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