



## Objective

**This project aims to improve smallholder livelihoods and economic development in mainland Southeast Asia through the increased resilience of cassava production systems and value chains, by addressing the rapidly evolving disease constraints.**

The objectives are to:

- Assess opportunities, challenges and risks for the development of sustainable regional solutions for cassava disease management in mainland Southeast Asia, including coordinated policy development, sustainable business and public / private funding models.
- Improve the capacity and collaboration between breeding programs in mainland Southeast Asia to develop new product profiles for commercially viable cassava varieties, by identifying and incorporating known and novel sources of resistance to Cassava Mosaic Disease and Cassava Witches Broom Disease into national breeding programs.
- Develop, test and deploy diagnostic protocols, tools, and information platforms fit for purpose in monitoring, surveillance, and certification applications.
- Develop and evaluate technically feasible and economically sustainable cassava seed system models for the rapid dissemination of new varieties and clean planting material to smallholder farmers in different production systems and value chains.

## Expected scientific results

- Improved breeding methods to introduce disease resistance into cassava breeding lines.
- Improved protocol for screening a large volume of cassava clones for host resistance to Cassava Witches Broom Disease, and screening of Latin America x African cassava hybrids to identify those with superior resistance to Cassava Mosaic Disease.
- Development of a regional expert network for the early detection of emerging pests and diseases in Southeast Asia.
- Improved field diagnostics and real-time reporting of Cassava Mosaic Disease and Cassava Witches Broom Disease cases in Southeast Asia.

- Effective, efficient and sustainable cassava rapid multiplication protocol developed for Southeast Asia.
- Development of best agronomic practices for farmers to achieve rapid field multiplication of cassava stems, including optimal density, irrigation and varieties.

## Expected impact/outcomes

- Improved awareness of cassava disease and management options among farmers and industry stakeholders.
- Production and procurement of high quality planting materials by farmers, to minimise yield losses.
- Adoption of new disease resistant cassava varieties.
- Improved coordination of national agencies in disease surveillance, quarantine and management.
- Implementation of sustainable business models for upstream research and development and downstream farmer entrepreneurs working in the seed system.
- Cassava farmers, traders and processors will avoid significant losses in production and income, processors will remain efficient and competitive and export revenue will be maintained for national governments.
- Entrepreneurs will engage in the development of new seed system markets, with the multiplication and distribution of disease free planting material providing alternative streams of income for cassava farmers and traders.

