
Photo: DoA, Sri Lanka


Photo: BISA


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The Atlas is co-developed and co-owned by the Natural Resources Management Centre (NRMC), Department of Agriculture, Sri Lanka, and the Borlaug Institute for South Asia (BISA). NRMC served as the focal point for the project in Sri Lanka, leading the organization of workshops and data collection in collaboration with various government and non-government organizations. To know more about the platform, visit ACASA-Sri Lanka: https://acasa-bisa.org/#/

ACASA-Sri Lanka Management

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Department of Agriculture, Sri Lanka
The Department of Agriculture (DoA) leads the country's efforts to enhance agricultural productivity, ensure food security, and promote sustainable farming practices. Know more about DoA.

Natural Resources Management Centre (NRMC)
As a specialized sub-unit of the DoA, the NRMC is mandated to ensure the scientific and sustainable use of land and water resources to strengthen national agricultural productivity. In the face of rapid land-use change, population pressure, and climate impacts, the Centre develops and promotes technologies for efficient resource use and conservation. Its work spans soil and water conservation, watershed management, agro-meteorology, land use planning, and geo-informatics, alongside implementing the Soil Conservation Act and maintaining Sri Lanka's agro-meteorological network. Know more about NRMC.

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About BISA
BISA is an international research institute established through a joint initiative between CIMMYT and ICAR, New Delhi, India, to implement the vision of the Nobel laureate Norman E. Borlaug. It aims to harness the latest genetic, digital, and resource management technologies and use research for development approaches to invigorate the region's agriculture and food systems to meet future demands. Know more about BISA.

Our partners

ACASA
Atlas of Climate Adaptation in South Asian Agriculture


Photo: DoA, Sri Lanka

Atlas of Climate Adaptation in South Asian Agriculture (ACASA)

Interconnections between climate risks, practices, technologies and policies: Sri Lanka Edition

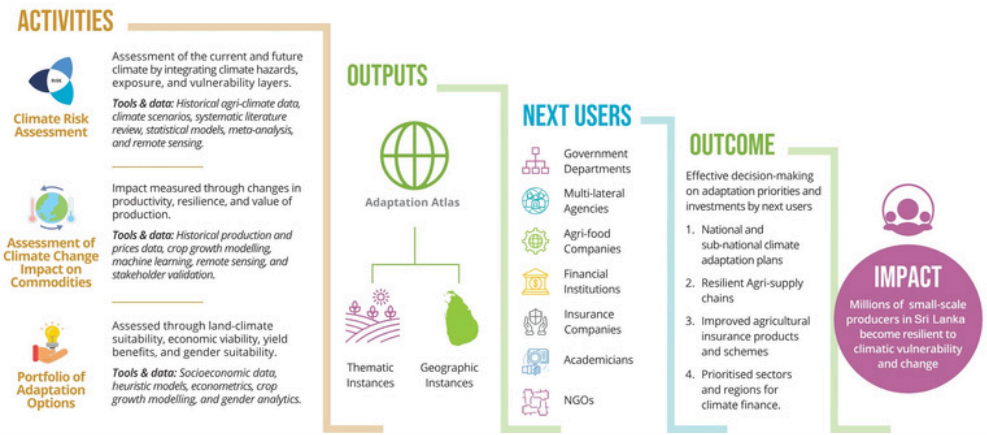
There is an urgent need to identify strategies to manage increasing climate risks in agriculture. The Atlas of Climate Adaptation in South Asian Agriculture (ACASA) is a digital platform that comprehensively consolidates spatially explicit data on climate hazards, assessing their impact on smallholder populations, farms, crops, and livestock systems for South Asian region. By evaluating the vulnerability of these populations, impact on region's critical commodities, and the evidence around the effectiveness of gender informed adaptation options, ACASA-Sri Lanka empowers decision-makers with valuable insights through a comprehensive adaptation portfolio to guide strategic investments and policy formulations.

Climate Risks, Reimagined for Adaptation Action

- **Commodity-specific** risk and adaptation analysis for **6 crops** & **5 livestock** species
- **High-resolution** risk profiles at approx. 25 sq. km (~group of 4-5 villages)
- Location & context-specific, **expert-validated** adaptation options
- **Open access** with downloadable data, codes, and scripts
- **Interactive, user-friendly** platform, co-developed with NARS of the region
- **Use-case guidance** for government, agri-food, insurance, banking, civil society, and donors

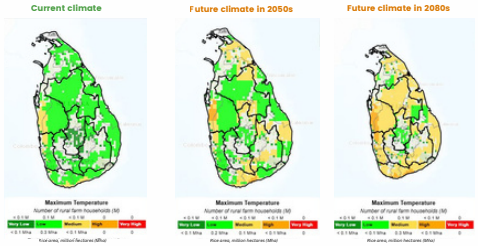
To know more about the platform, visit ACASA-Sri Lanka: https://acasa-bisa.org/#/

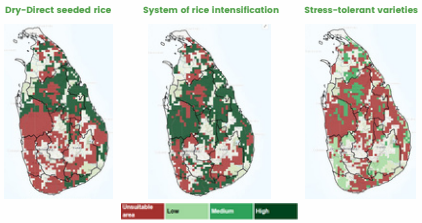
Inside the Platform



Climatic risk and adaptation illustrations in ACASA - Sri Lanka

By the 2050s/2080s, climate change will push a large share of Sri Lanka's rice-farming households out of a safe temperature range (≤32°C) into a more stressful range (32–35°C). While extreme heat (≥35°C) does not yet dominate, the exposure to moderate heat stress will increase by several hundred thousand households, particularly in northern and coastal regions.

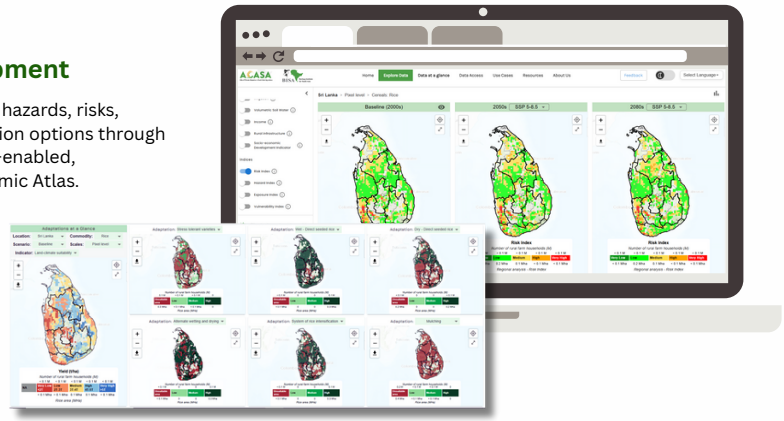




The illustrated maps depict the biophysical suitability of three adaptation interventions for rice in Sri Lanka: dry direct-seeded rice, the system of rice intensification, and stress-tolerant varieties. Areas shown in red indicate zones unsuitable for the intervention, while shades of green—from light to dark—represent increasing levels of suitability (low, medium, and high, respectively).

UI/UX Development

Visualize key climatic hazards, risks, impacts, and adaptation options through an open-source, web-enabled, interactive, and dynamic Atlas.



To know more about the platform, visit ACASA-Sri Lanka: https://acasa-bisa.org/#/

From Data to Decisions: Potential Use Cases of ACASA - Sri Lanka

ACASA offers a unique opportunity for diverse stakeholders to address their specific needs in the broader domains of climate risk management and agricultural adaptation. As an open-access platform, the Atlas encourages wide knowledge sharing and unrestricted use across research, policy, and practice. Based on extensive consultations with potential users, the following key use cases have been identified for Sri Lanka:

User	Use cases in discussion
Governments (provincial and sub-provincial)	Build smallholder population's capacity on climate risk management. For e.g. sensitization of maize growers around the country by DoA, Sri Lanka.
Banking industry	Better risk proofing of investments and portfolios.
Civil society and NGOs	Climate-proofing and natural resources management in development projects
Agribusiness agencies	Planning for resilient supply chains, targeting stable markets
Insurance industry	Transparent, targeted insurance for Sri Lankan farmers. For e.g. Agricultural and Agrarian Insurance Board

Commodities assessed by ACASA - Sri Lanka

6 Crops

Cereals - Rice, maize, millets
Oilseeds - Soybean, groundnut
Others - Potato

5 Livestock Species

Cattle, buffalo, pig, goat, and chicken

Moving forward, the platform will expand to include other important commodities in Sri Lanka such as fruits, vegetables, other industrial crops, and fisheries.

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