

South Asia region program

South Asia is an immensely diverse and densely populated region. It is home to about 2 billion people – one-quarter of the world's population. The region has the highest concentration of poor people in the world, with more than 500 million people living in extreme poverty.

Despite the population pressure, the region has shown impressive annual economic growth at an average of 6%. The COVID-19 pandemic pushed millions of households into poverty and substantially increased income and wealth inequality in India, Bangladesh, Nepal, Sri Lanka and Pakistan. This situation poses a serious near-term challenge for policymakers, especially since rising food and commodity prices compound economic insecurities. Many more people, particularly women, live marginally above the poverty line but do not have the opportunity to participate in the process of economic growth.

Compared with other regions in the world, South Asia has the highest regional Global Hunger Index and a very low Human Development Index. Half of the population depends on agriculture for their livelihood. Although the share of agriculture in rural employment remains high, growth of the rural non-farm sector is accelerating and now provides a sizeable share of rural income and employment, primarily in services.

Malnutrition is prevalent in South Asia. The region has among the highest burdens of child undernutrition in the world. Thirty-six per cent of children under the age of 5 years are stunted, or too short for their age, which is an indicator of chronic undernutrition. Sixteen per cent are wasted, or too thin for their height, which is an indicator of acute malnutrition. South Asia also has a high prevalence of micronutrient deficiencies, overconsumption and diet-related non-communicable disease.

While the countries of South Asia face common challenges and opportunities in agriculture, there are also fundamental differences between and within these countries in terms of the broad characteristics that influence the nature and success of agriculture. India has 15 distinct agroecological zones. Nepal has 3 distinct topographical zones. The northern hilly region of Bangladesh is geographically distinct from the southern coastal areas, which are mostly alluvial, with fertile floodplains associated with 3 major rivers.

Pakistan's Indus plains are in sharp contrast to the arid regions of Sindh and the hilly and semi-arid areas of the north-west. Sri Lanka's landscape is clearly defined by its dry and wet zones. These regional variations throughout South Asia must be considered when designing a meaningful program for research collaboration, to accommodate regional distinctions and varying degrees of vulnerability of the local population.

The impacts of climate change on South Asia's agrifood systems include decreases in yields, degradation of natural resources, and associated income losses. Globally, total factor productivity (a measure of technological innovation and efficiency in production) in agriculture has fallen by about 21% since 1961 due to climate change, and warmer areas like South Asia have seen the largest declines (IFPRI 2022).

Globally, almost two-thirds of the people who fell into or remained in extreme poverty due to the pandemic live in South Asia. School closures have intensified learning poverty for students across the region and the average years of schooling in South Asia is expected to fall by between 0.3 and 0.5 years. This translates into an economic loss of up to \$1.9 trillion in lost earnings.

2023–24 program

Partner countries

Bangladesh

India

Nepal

Pakistan

Sri Lanka

27
projects

22
research
projects

5
small research
activities

A\$9.98 million

**Investment in
agricultural research
for development**



3

Agribusiness projects



1

Climate Change project



5

Crops projects



1

Fisheries project



3

Forestry projects



1

Horticulture project



1

Livestock Systems project



0

Social Systems projects



3

Soil & Land Management
projects



9

Water projects

Note: This data was current at the time of publication. Additional projects may be commissioned during 2023–24.

Drivers of regional collaboration

Countries in South Asia share many opportunities and threats that drive the need for regional cooperation, especially in the Eastern Gangetic Plains. Rice and wheat are the region's major staple crops, accounting for about two-thirds of total dietary energy. However, food consumption patterns have changed in the region over the past few decades, and the changes are most apparent in rural areas. Consumption of cereals is declining while consumption of animal-sourced foods, fruits, vegetables and processed foods is increasing.

Pressure to expand food production to meet growing demand is putting stress on natural resources. The resulting expansion and intensification of agriculture is leading to land degradation, deterioration of soil quality and loss of biodiversity, potentially jeopardising the region's capacity to meet future food demand.

Agricultural growth also poses risks for water resources. Facing the world's lowest per capita renewable freshwater resources, millions of rural people in South Asia have benefited from the growing use of groundwater. But aquifers are being depleted and, across the region, watertables are falling, particularly in India. Water quality is also deteriorating throughout the region due to nutrient overloads and industrial pollution, raising concerns about food safety and drinking water quality.

Large areas in several countries of South Asia are prone to natural disasters. Bangladesh and coastal parts of India are threatened frequently by cyclones and floods. Recurring droughts are a common feature in the arid and semi-arid parts of India and Pakistan. The impact of natural calamities is most severe on food-insecure households.

Climate variability, competing and increasing demands from agriculture and industry (including energy production), and population growth are creating severe demands on water resources. Regional cooperation is increasingly essential to manage these shared resources and address shared issues. There are also significant opportunities in regional cooperation to improve the productivity and diversification of agricultural crops, especially beyond cereals, and to improve the sustainability of farming systems through technical, institutional, value-chain and policy research and development.

Regional ACIAR program

Australian agricultural and resource management expertise is highly regarded in the South Asia region. ACIAR has a long history of research collaboration in improving crop productivity, forestry, water use efficiency and policy reforms. The South Asia regional program of the Australian Government seeks to underpin Australia's economic engagement in the region by addressing some of the key regionwide barriers to sustainable economic growth and connectivity. Gender equality is a focus in all the investments under the regional program.

The ACIAR strategy in South Asia focuses on communities, production systems and resource management in the 3 main ecosystems of the region – highlands, plains and coastal areas – that are common to Pakistan, India, Bangladesh, Nepal and Sri Lanka.








Research in these areas looks to identify appropriate policy reform, increase adoption of technology (including post-harvest management), improve productivity and livelihoods in marginalised communities, and sustainably improve the productivity and resilience of crop, livestock, forestry and fisheries systems.

The major pathways of development in the region are modernisation of agrifood systems, technology support, strengthening service providers, developing rural non-farm sector, and local governance at district and state level. Overproduction in some areas and unequal distribution networks due to poorly developed supply-chain management are the major issues in India. Addressing these could play a major role in achieving food and nutrition security and stability in the region.

The medium to long-term strategy in the region focuses on creating regional collaborations that:

- » sustainably intensify and diversify cropping systems using conservation agriculture, farm mechanisation, saline land management and adaptation to climate change
- » eradicate extreme poverty through improved productivity of food-grain crops (especially wheat and pulses), livestock (in Pakistan), agroforestry (in Nepal) and fisheries (in Sri Lanka)
- » better manage agricultural water, including rainfed areas in the Eastern Gangetic Plains and coastal zone
- » influence policy related to agricultural livelihoods and climate change
- » increase the emphasis on meaningful gender inclusion and empowerment.

Current and proposed projects in the South Asia region, 2023–24

Program	Project title & code	Country
	Agribusiness	
	Developing competitive and inclusive value chains of pulses in Pakistan ADP/2017/004	Pakistan
	Understanding the drivers of successful and inclusive rural regional transformation: sharing experiences and policy advice in Bangladesh, China, Indonesia and Pakistan ADP/2017/024	Bangladesh, China, Indonesia, Pakistan
	Developing food loss reduction pathways through smart business practices in mango and tomato value chains in Pakistan and Sri Lanka CS/2020/193	Pakistan, Sri Lanka
	Climate Change	
	Paribartan: participatory action research on locally led iterative learning and inclusive business models for adaptive transformation in Bangladesh polders CLIM/2021/137	Bangladesh
	Crops	
	International Mungbean Improvement Network 2 CROP/2019/144	Bangladesh, India, Indonesia, Kenya
	Managing wheat blast in Bangladesh: Identification and introgression of wheat blast resistance for rapid varietal development and dissemination CROP/2020/165	Bangladesh
	Accelerating genetic gain in wheat through hybrid breeding in Bangladesh, Ethiopia and Pakistan CROP/2020/167	Bangladesh, Ethiopia, Pakistan
	Resilient and profitable pulses production in Pakistan CROP/2021/132	Pakistan
	Additive intercropping in wide row crops for resilient crop production in Bangladesh, Bhutan and India CROP/2022/111	Bangladesh, India
	Fisheries	
	Improved productivity, efficiency and sustainability of the culture-based fishery for finfish and giant freshwater prawn in Sri Lankan reservoirs FIS/2018/157	Sri Lanka
	Forestry	
	Enhancing livelihoods through improved forest management in Nepal FST/2017/037	Nepal
	Sundarban ecosystem management FST/2022/123	Bangladesh
	Resource dependency in the Sundarban ECA FST/2023/177	Bangladesh
	Horticulture	
	Improving smallholder wellbeing through participation in modern value chains: sustaining future growth in the Pakistan citrus industry HORT/2020/129	Pakistan
	Livestock Systems	
	Operationalising a global animal health governance network for policy impact LS/2022/143	Bangladesh, Kenya, Philippines, Vietnam

Program	Project title & code	Country
	Soil & Land Management	
	Nutrient management for diversified cropping in Bangladesh LWR/2016/136	Bangladesh
	Developing and translating soil health information in Bangladesh with farmers and for farmers to build resilient agricultural systems SLAM/2021/107	Bangladesh
	Assessment of the adoption and adaptation of conservation agriculture and direct seeded rice in South and South-East Asia SLAM/2022/172	Bangladesh, Cambodia, India, Laos, Philippines, Vietnam
	Water	
	Cropping system intensification in the salt-affected coastal zones of Bangladesh and West Bengal, India LWR/2014/073	Bangladesh, India
	Adapting to salinity in the southern Indus Basin LWR/2017/027	Pakistan
	Transforming smallholder food systems in the Eastern Gangetic Plain WAC/2020/148	Bangladesh, India, Nepal
	Virtual Irrigation Academy business models in Pakistan WAC/2020/180	Pakistan
	Transformation through adaption of trees and shrubs for salinity management in the Southern Indus Basin, Pakistan WAC/2021/136	Pakistan
	Current and projected hydrological trends in the Sundarban mangrove forest and their impacts on ecology and ecosystem services: a scoping study WAC/2022/129	Bangladesh
	Spring water management, agriculture and resilient livelihoods in the midhills of Nepal WAC/2022/151	Nepal
	Climate resilient and adaptive water allocation in Pakistan WAC/2022/152	Pakistan
	Transitioning to climate resilient water allocation planning in Pakistan WAC/2023/182	Pakistan



More information about our projects is available on the ACIAR website. Search for the project title or project code.

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