# ACIAR

# POSITION PROFILE

**Position Number:** 99911

**Classification:** EL 2 (RPM 2/3), 5 year non-ongoing specified task

**Salary:** $149,346 - $187,131 per annum plus 15.4% super

**Title:** Research Program Manager

**Program:** Water

**Supervisor:** Chief Scientist

**Security Classification:** Negative Vetting 1

**Location:** Canberra, Australia

## About ACIAR

The Australian Centre for International Agricultural Research (ACIAR) is an independent agency within the Australian Government Foreign Affairs and Trade portfolio. Our mission is to catalyse more productive, sustainable and resilient food and farming systems for the benefit of developing countries and Australia. We do this through brokering, funding and managing research partnerships between Australian scientists and developing countries.

Operating under the *Australian Centre for International Agricultural Research Act 1982*, we are a specialist element of Australia’s overseas development assistance program, fostering international agricultural research and development partnerships for more sustainable agricultural, forestry and fisheries systems, improved livelihoods for smallholders and more resilient food systems in partner countries.

Our headquarters are in Bruce (Canberra). Further information on our current projects, programs and priorities can be found at <https://www.aciar.gov.au>

**About the position**

The Water program is one of our ten research programs and addresses the challenge of efficient, sustainable water use to support agricultural production in a context of increasingly uncertain climate, competition from other sectors and declining water quality. The program works to improve agricultural water management through innovative technical and policy approaches under three main themes:

* improving access to, and outcomes from, irrigation
* sustainable use of groundwater in agriculture
* risks and opportunities for safe productive use of low-quality water.

The Water Research Program Manager position will be responsible for commissioning and managing a coherent portfolio of research-for-development projects, closely aligned with the priorities of Australia’s official development assistance program and contributing to ACIAR’s strategy and thematic priorities.

Projects typically involve partnerships that link the innovation systems in Australia and ACIAR’s partner countries in the Indo-Pacific region, bringing together partners in universities, public research and development agencies, and the private sector.

We are seeking an experienced senior research leader who can further develop a an existing research program, while also contributing to ACIAR’s broader research portfolio management including peer review of ACIAR projects in other programs, contribution to scientific submissions and reviews, and membership of internal committees.

The position of Research Program Manager (RPM) is pivotal in ACIAR’s distinctive partnership brokering model of research investment in developing countries. Individual RPMs deliver scientific leadership within their own research program and disciplinary strength, and they also work collectively across programs and across the portfolio as a whole to ensure technical excellence, procedural rigour and to capture opportunities for cross-program synergies. The Water RPM, as with other RPMs, will be expected to mentor graduates and early career research officers and contribute to ACIAR’s research outreach and capacity building activities. The appointee will work in a small team supported by a Program Support Officer (PSO). All RPMs are accountable to ACIAR's Executive through the Chief Scientist.

**Duties:**

Lead the ACIAR Water Program and contribute to ACIAR corporate activities through the following duties:

1. Identify and assess research and innovation needs on i**mproving agricultural water management through innovative technical and policy approaches.** Identify research priorities in consultation with the Chief Scientist and General Manager Country Partnerships, consistent with the ACIAR Corporate Plan and relevant Country Strategies.

2. Develop, implement, monitor, review and evaluate a program of activities addressing research priorities on water in agriculture in the Indo-Pacific:

* identifying and conceiving original and innovative projects that involve research, development and capacity building in priority areas;
* assisting in brokering research partnerships and in preparing and assessing research and development proposals;
* developing the scientific and technical basis of contracts for approved projects;
* coordinating and monitoring progress of implementation of the projects by collaborating agencies; and
* analysing and evaluating the results of research in programs and projects and identifying extension and outreach initiatives.

3. Maximise the potential contribution of project findings to the solution of identified technical problems by facilitating the appropriate communication of the results of ACIAR projects, in consultation and collaboration with the ACIAR Outreach team. As appropriate, represent ACIAR at international seminars and workshops to promote research findings.

4. Advise the ACIAR executive and other agencies on production and policy matters relating to water resources, agriculture and land use in the Indo-Pacific, maintain effective liaison and communication with ACIAR research partners and stakeholders, within Australia and in partner countries, and represent ACIAR as required.

5. Manage the Water Program procurement processes, budgeting, financial management and reporting in accordance with ACIAR policies, procedures and systems.

6. Contribute to activities in the ACIAR research portfolio, including peer review of ACIAR projects, technical input that informs ACIAR’s contribution to multilateral initiatives, especially in the CGIAR, contribution to submissions and reviews, and contribution to internal committees.

7. Supervise and mentor program support staff, graduates and early career research officers in accordance with ACIAR’s Certified Agreement, Government policy and overarching legislation.

8. Contribute to the corporate development of ACIAR by assisting in the induction, training and mentoring of staff and participation in broader corporate activities.

**SELECTION CRITERIA**

**Executive Level 2** - **Research Program Manager Water**

1. Postgraduate qualifications and professional research and/or research management experience in a field relevant to water resources in agriculture R&D.
2. High level of achievement and experience in research program management. This will include evidence of the ability to:
* develop and maintain productive working relationships with research and development providers;
* understand the complexities and dynamics of international and national water science and policy contexts, from the perspective of developing countries in our region;
* develop research project proposals considering a range of issues, including those outside your scientific discipline;
* oversee, monitor, evaluate and report on progress of approved projects;
* effectively manage financial resources within ACIAR procurement systems;
* and provide logical, unambiguous and sensitive feedback to project proponents.
1. Ability to develop and promote a strategic vision for the Water program in accordance with ACIAR’s research priorities, the needs of partner countries and the Government’s aid program.
2. Demonstrated capacity to represent ACIAR and to communicate with national and international stakeholders at highest management levels in government and scientific agencies, with sensitivity to cross-cultural issues. This will include evidence of well-developed oral and written communication skills, and contribution to effective outreach and capacity-building programs.
3. Ability to develop and maintain productive working relationships with ACIAR colleagues (especially fellow RPMs and research management staff) by participating in broader organisational activities and maximising benefits of collegiate collaboration on cross-program projects and issues. Excellent interpersonal skills, including good networking and influencing skills.
4. Proven capacity to work in a small inter-disciplinary team, and to effectively supervise staff.
5. A client orientation, and proven commitment to the transfer and adoption of the results of research.

**Highly Desirable**

1. Developing country experience, especially in South and/or Southeast Asia.
2. Experience in developing and executing private–public sector research partnerships and in fostering the involvement of commercial organisations in agricultural research and development.

October 2021

**Overview of the current ACIAR WATER PROGRAM**

The Water Program addresses the challenge of efficient, sustainable water use to support agricultural production in a context of increasingly uncertain climate, competition from other sectors and declining water quality. The program works to improve agricultural water management through innovative technical and policy approaches under 3 main themes:

* improving access to, and outcomes from, irrigation for smallholders
* sustainable use of groundwater in agriculture
* risks and opportunities for safe productive use of low-quality water, including adapting to and managing the impacts of salinity.

Projects brokered by the Water Program, across all themes, share the broad aim of supporting sustainable diversification and intensification of food production, working towards equitable access to and equitable returns from water within and between communities and regions, and working with decision-makers to inform policy development at local, regional and national levels.

**WATER RESEARCH PARTNERSHIPS**

**SOUTH ASIA PROJECTS**

|  |  |  |
| --- | --- | --- |
| Nutrient management for diversified cropping in Bangladesh | LWR/2016/136 | Bangladesh |
| Adapting to salinity in the southern Indus Basin | LWR/2017/027 | Pakistan |
| Water management for small-holder farmers outscaling ACIAR research in Andhra Pradesh Drought Mitigation Program | WAC/2018/164 | India |
| Mitigating risk and scaling-out profitable cropping system intensification practices in the salt-affected coastal zones of the Ganges Delta | WAC/2019/134 | Bangladesh, India |
| Transforming smallholder food systems in the Eastern Gangetic Plain | WAC/2020/148 | Bangladesh, India, Nepal |
| Regional foresight for food systems in the Eastern Gangetic Plains | WAC/2020/158 | Bangladesh, India, Nepal |
| Opportunities for brackish and saline aquaculture in Pakistan | WAC/2020/179 | Pakistan |
| Virtual Irrigation Academy business model in Pakistan | WAC/2020/180 | Pakistan |
| Supporting inter-provincial water allocation decision making in Pakistan | WAC/2021/103 | Pakistan |

**Water in Bangladesh**

Improved nutrient management to increase the profitability and sustainability of intensive and emerging cropping systems is the focus of a project in the coastal zone of Bangladesh, led by Professor Richard Bell of Murdoch University. The first phase of the project (2017 to 2021) established that the adoption of fertiliser recommendation tools can decrease production costs and increase income and yield for smallholder farmers. The project has been extended until the end of 2022 to scale out the use of tools developed by the project and advance practice change. The final phase of the project will test a collective action approach for nutrient management and expand the scope for monitoring and evaluation of the innovations.

In the salt-affected coastal zones of the Ganges Delta, which lies in both Bangladesh and India this project has clearly demonstrated that improved crop, water and salt management can lift agricultural productivity and rural welfare when projects engage with farmers to understand their needs and priorities. A second phase of this work, led by Dr Mohammed Mainuddin of CSIRO, will use predictive modelling techniques, field trials and targeted demonstration to identify and implement packages of technologies, such as new cropping systems and improved water management that are tailored to the characteristics of different parts of the Ganges Delta region. Key to the process will be identification of risks to adoption due to variable climate and variable environments. The outputs of this project will provide information to support implementation of the Bangladesh Delta Plan 2100.

 The Eastern Gangetic Plains straddles Bangladesh, India and Nepal. The region is home to 450 million people and has the world’s highest concentration of rural poverty. People in this region have a high dependence on agriculture for food and livelihood security. A new project, starting in 2021, aims to understand the processes and practices of transforming food systems through diversification to improve farm livelihoods while reducing inequity, production risk and unsustainable resource use. Dr Tamara Jackson of the University of Adelaide leads this project that begins with understanding the existing context for diversification in the region, covering a range of different technologies, scaling interventions, and policies and programs. The project will consider these elements individually and demonstrate the interactions between them using case studies to highlight where and how diversification has occurred in the past. In subsequent phases, the project will identify priority opportunities with communities and determine their fit with projected climate change and water availability, and the impact of high-level policies.

 The Sustainable Development Investment Portfolio (SDIP) drew on Australian expertise and technologies to improve integrated management of water, energy and food production in the basins of the Indus, Ganges and Brahmaputra rivers. ACIAR supported 10 projects over 8 years within this program in Bangladesh, India and Nepal. A small project will prepare delegates to build on the outcomes of SDIP at international and regional dialogues in the second half of 2021. Led by Dr Avinash Kishore of the International Food Policy Research Institute, a core team of local partners will undertake participatory ‘foresight for food’ exercises in their respective domains and then communicate their aspirations and concerns to policymakers and other stakeholders in the regional food systems.

**WATER in India**

Australian experts are providing technical support to 5 large land and water management programs in the Indian states of Andhra Pradesh and Odisha. These programs draw on previous ACIAR-supported projects on climate risk management, participatory groundwater management and social learning for irrigation management and governance. Dr Uday Nidumolu of CSIRO Agriculture and Food leads the project, which will work with Indian counterparts to integrate the research, support out-scaling and then co-learn about out-scaling. COVID-19 outbreaks in South Asia mean that training will be delivered online and field activities have been postponed. There is growing interest in the training, and other partners may join during 2021–22.

 In the salt-affected coastal zones of the Ganges Delta, which lies in both Bangladesh and India, this project has clearly demonstrated that improved crop, water and salt management can lift agricultural productivity and rural welfare when projects engage with farmers to understand their needs and priorities. A second phase of this work, led by Dr Mohammed Mainuddin of CSIRO, will use predictive modelling techniques, field trials and targeted demonstration to identify and implement packages of technologies, such as new cropping systems and improved water management that are tailored to the characteristics of different parts of the Ganges Delta region. Key to the process will be identification of risks to adoption due to variable climate and variable environments. The outputs of this project will provide information to support implementation of the Bangladesh Delta Plan 2100.

 The Eastern Gangetic Plains straddles Bangladesh, India and Nepal. The region is home to 450 million people and has the world’s highest concentration of rural poverty. People in this region have a high dependence on agriculture for food and livelihood security. A new project, starting in 2021, aims to understand the processes and practices of transforming food systems through diversification to improve farm livelihoods while reducing inequity, production risk and unsustainable resource use. Dr Tamara Jackson of the University of Adelaide leads this project that begins with understanding the existing context for diversification in the region, covering a range of different technologies, scaling interventions, and policies and programs. The project will consider these elements individually and demonstrate the interactions between them using case studies to highlight where and how diversification has occurred in the past. In subsequent phases, the project will identify priority opportunities with communities and determine their fit with projected climate change and water availability, and the impact of high-level policies.

The Sustainable Development Investment Portfolio drew on Australian expertise and technologies to improve integrated management of water, energy and food production in the basins of the Indus, Ganges and Brahmaputra rivers. ACIAR supported 10 projects over 8 years within this program in Bangladesh, India and Nepal. A small project will prepare delegates to build on the outcomes of the Sustainable Development Investment Portfolio at international and regional dialogues in the second half of 2021. Led by Dr Avinash Kishore of the International Food Policy Research Institute, a core team of local partners will undertake participatory ‘foresight for food’ exercises in their respective domains and then communicate their aspirations and concerns to policymakers and other stakeholders in the regional food systems.

**WATER in Nepal**

The Eastern Gangetic Plains straddles Bangladesh, India and Nepal. The region is home to 450 million people and has the world’s highest concentration of rural poverty. People in this region have a high dependence on agriculture for food and livelihood security. A new project, starting in 2021, aims to understand the processes and practices of transforming food systems through diversification to improve farm livelihoods while reducing inequity, production risk and unsustainable resource use. Dr Tamara Jackson of the University of Adelaide leads this project that begins with understanding the existing context for diversification in the region, covering a range of different technologies, scaling interventions, and policies and programs. The project will consider these elements individually and demonstrate the interactions between them using case studies to highlight where and how diversification has occurred in the past. In subsequent phases, the project will identify priority opportunities with communities and determine their fit with projected climate change and water availability, and the impact of high-level policies.

 The Sustainable Development Investment Portfolio drew on Australian expertise and technologies to improve integrated management of water, energy and food production in the basins of the Indus, Ganges and Brahmaputra rivers. ACIAR supported 10 projects over 8 years within this program in Bangladesh, India and Nepal. A small project will prepare delegates to build on the outcomes of the Sustainable Development Investment Portfolio at international and regional dialogues in the second half of 2021. Led by Dr Avinash Kishore of the International Food Policy Research Institute, a core team of local partners will undertake participatory ‘foresight for food’ exercises in their respective domains and then communicate their aspirations and concerns to policymakers and other stakeholders in the regional food systems.

**WATER in Pakistan**

Salinity currently affects 4.5 million hectares of land across Pakistan and 54% of the southern Indus Basin. In this region, salinisation and sodification of surface soils and waterlogging threaten agricultural production and livelihoods, resulting in high rates of poverty for communities living in affected areas. A project led by Dr Michael Mitchell of Charles Sturt University aims to build the adaptive capacity of farming and coastal communities in salinity-affected areas to maintain and improve their livelihoods. During 2021–22, the project will conduct activities in Pakistan and Australia to understand biophysical and institutional trends in relation to agricultural production systems, develop an accessible database of salinity adaptation options for farmers, and investigate and develop monitoring tools and decision-support applications for use by farmers.

 In Asian mega-deltas such as the Mekong and Ganges, one response to salinisation from seawater intrusion has been a shift from cropping to brackish and saline water aquaculture. In Pakistan, aquaculture production is relatively limited. During 2021–22, scientists from the International Water Management Institute and the WorldFish Centre, led by Dr Mohsin Hafeez, will review the options and potential for brackish and marine aquaculture in Pakistan, and the extent to which aquaculture could provide a transformative adaptation strategy for areas affected by salinisation in the southern Indus Basin.

 Irrigated cropping is critical to Pakistan’s economy and food security, and effective management of the country’s irrigation is an urgent priority. While basin-level water management is efficient, distribution of water at the community level is inefficient and unfair, and yields and water productivity are low. A small project led by Dr Richard Stirzaker of CSIRO, in partnership with Pakistan Council for Research on Water Resources, will demonstrate use of the Virtual Irrigation Academy (including Chameleon and Full-Stop soil moisture monitoring) to understand its potential to improve irrigation water management in Pakistan. The Virtual Irrigation Academy provides a digital platform to monitor soil water, underpinned by a process of social learning to improve irrigation management at the farm and scheme level. The program was developed through ACIAR-supported projects in southern Africa.

 The Indus Basin Irrigation System is the world’s largest continuous irrigation system and it provides water, energy and food security for Pakistan. Responsibility for the system’s surface water resources is shared between the Indus River System Authority, the Water and Power Development Authority and provincial irrigation departments. Allocation of the water resource is a complex process that is only a few people understand. CSIRO, through a DFAT-funded project in close collaboration with partners in Pakistan, developed the Water Apportionment Accord Tool to enable a more transparent and consistent allocation process. A small project will consolidate and expand the use of the tool during 2021–22. Dr Mobin-ud Din Ahmad of CSIRO will support and train in-country partners for the next 2 rounds of seasonal planning, and further develop and refine the software and training material associated with the tool.

 **EASTERN AND SOUTHERN AFRICA PROJECTS**

|  |  |  |
| --- | --- | --- |
| Transforming smallholder irrigation into profitable and self-sustaining systems in southern Africa | LWR/2016/137 | Malawi, Mozambique, South Africa, Tanzania, Zimbabwe |
| Virtual Irrigation Academy Phase 2 from water monitoring to learning to governance | WAC/2018/162 | Malawi, Mozambique, South Africa, Zimbabwe |

**WATER in Eastern and Southern Africa**

Irrigation has significant potential to contribute to food security in Sub-Saharan Africa, but many irrigation schemes are under-performing and returns on investment in irrigation infrastructure are low. This project, led by Professor Jamie Pittock of the Australian National University, has involved irrigation schemes supporting more than 15,000 farmers in Mozambique, Zimbabwe and Tanzania. Due to be completed in 2022, the project has introduced soil and water management technologies that have increased the productivity and incomes of farmers and made irrigation schemes more self-sustaining. In its final year, the project will report on the best methods for dissemination of technologies and identify the factors leading to inequity among farmers in water supply and financial benefit from irrigation schemes.

 Smallholder farmers in southern Africa require new irrigation management skills to realise the benefits and potential of available irrigation infrastructure. Phase 1 of the Virtual Irrigation Academy project in Malawi, South Africa and Tanzania developed a system of continual social and institutional learning to improve the profitability and sustainability of irrigated farming. Phase 2 of the project, led by Dr Richard Stirzaker of CSIRO, will develop the Virtual Irrigation Academy system into a water learning and governance platform to support smallholder farmers and address the information deficits at scheme to national levels. The project also supports activities with irrigation schemes in Mozambique and Zimbabwe, in collaboration with the project described above.