

Program Update

Edition #7| February 2020

Please view in browser for links to work

Welcome to this update from all the ACIAR projects in Pakistan, with links to more information.

A common theme is the **complexity** of the issues that Aik Saath projects are dealing with. Scientists are trained to eliminate variables that confuse analysis. However, most agricultural "Research for Development" (R4D) projects must engage with the "real world" variables of people, culture, markets and institutions.

Several of these project snapshots refer to strategies to adapt to this reality, including staying focused on the ultimate **impact** of the work. Taken together, these project impacts are contributing towards the **Aik Saath goal**:

That rural poor, particularly women, living in the Punjab and Sindh significantly and equitably benefit from improvements in strategic value chains.

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Australia and Pakistan refresh research partnership

Australia has announced <u>new agricultural research projects</u> in Pakistan during a visit by Professor Andrew Campbell, Chief Executive Officer of the Australian Centre for International Agriculture Research (ACIAR).

The new projects continue ACIAR's 35-year history of research and development activity to improve the livelihoods of rural communities in

Pakistan. One project will analyse rural transformation in China, Indonesia, Myanmar and Pakistan, in partnership with the Federal Ministry of Science and Technology. Professor Campbell said "We look forward to developing our long-term partnership with Pakistan for research and development that will improve the productivity and resilience of agriculture in Pakistan."

Australia's High Commissioner to Pakistan, Dr Geoffrey Shaw, said



"As a leading agriculture exporter, with world-class expertise in agricultural

research, we see great scope to cooperate in building Pakistan's agricultural capacity".

<u>Sharing insights is good policy</u>





Agricultural Research for Development (R4D) conjures up images of technical specialists helping smallholders raise healthy and productive livestock and crops. This crucial work can create pathways out of poverty, especially when integrated with the social and market contexts. Less well-known is the research ACIAR has sponsored into Policy. Yet such research can uncover structural issues that are blocking the road to wellbeing for these farmers and their families.

The rigorous, independent nature of ACIAR's policy research is well regarded by governments in Pakistan and elsewhere. Importantly, it can also be used to guide the work of other projects that are working with farmers affected by this policy environment.

This was illustrated at a recent meeting in Brisbane between some Australian members of: this "Horticulture Markets Policy" project; the "Horticulture Value Chain Project"; the "Pulse Value Chain project; and the concluded "Credit Policy" project.

The policy projects entail extensive economic analysis as well as detailed research on the attitudes and behaviours of farming families. This provides insights on key drivers of/barriers to change, especially "Information, Institutions, Incentives and Infrastructure".



Other significant policy work in Pakistan includes the water policy study (below) and the past work on "Enabling agricultural policies for benefitting smallholders in dairy, citrus and mango industries in Pakistan". This was mentioned in previous newsletter and the monograph is now published.

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Women and water management

- challenging assumptions

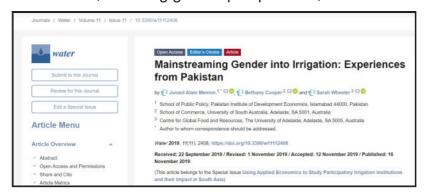




A special edition of the journal "Water" is now well underway, covering multiple perspectives from this concluding project, including gender. Entitled "Using Applied Economics to Study Participatory Irrigation Institutions and their Impact in South Asia", the publication helps explain why PIM might work in some settings and not in others.

Many of the findings are highly relevant to other projects in Pakistan.

As often noted in this newsletter, "participation" is seen to be essential for success in development interventions. PIM is regularly mandated by donors sponsoring irrigation upgrades in poor countries. However, the research team suggest that more care is needed to fully engage and understand the communities, including gender perspectives, before intervening.



One paper notes that many past attempts to involve women into water management have been tokenistic. The extensive surveys undertaken in Sindh and Punjab reveal that neither men nor women support the view that PIM has had a positive impact on women.

The study concludes that "effective involvement requires a complete understanding of the perspectives of women in their historical context rather than assumptions about their preferences for the type and extent of their involvement".

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Pulses project scales up

The partnership with National Rural Support Network (NRSP) is paying dividends, with one hundred farmers involved in seven different interventions. These included seed of improved varieties, inoculums, pre-emergence and post emergence herbicides, insecticide, application of seed treatment and foliar fungicides, mechanized harvesting and zero tillage.

Each of these sites in turn is a demonstration site for surrounding farmers to observe the benefits of improved seed and other treatments.



Ten NRSP farmers have been engaged for chickpea and lentil seed production as part of efforts to establish village-based pulses seed banks on these sites this year.

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Value Chain approach develops new skills and delivers reward\$





Establishing a value chain is very challenging but can transform farmers into active market participants instead of being "price victims". As flagged last quarter, the onion value chain study in Sindh has now completed, with farmers earning at least 50 rupees/40 Kg more than the market rate of best quality.

The first step to success was understanding market requirements by consulting with retailers. Secondly, the farmers managed their production and marketing to meet quality requirements while generating a profit.

Production practices included withholding irrigation, curing in the field and carefully sorting and grading. Marketing practices included direct supply to retail, packaging changes and relationships that enhanced negotiation. Other skills required included managing labour to clean and grade the crop to requirements and communicating with fellow farmers.

The farmers were excited on earning good income and establishing a good market link. They are willing to do business with the very retailer in multiple vegetable crops in future. This "win-win" outcome is the glue that strengthens value chain relationships and plants the seeds of future opportunities.



Importantly, these approaches provide valuable guidance for the project team and participating farmers as similar studies roll out with potatoes, tomatoes and fresh chillies. Return to Contents

Growing productivity and marketing skills together

The Dairy_Beef farm advisors training session #5 involved a diverse array of 18 organisations. Their frontline staff were trained and mentored in the Whole Family Extension Approach (WFEA). Important data was also collected to understand the strengths and limitations of this partnering model for scaling and sustaining productivity gains.



These gains must be linked to better marketing if farm families are to reap financial benefits. The project focuses on improving market information such as existing and potential beef market channels.

To address beef marketing gaps, the team arranged a "Walk the Chain" activity and mentored farmers to interact with the various beef chain actors.

"we learned about increased demand for beef animals at retailer, processor, supplier and feedlot farm chains. This rise in demand is an opportunity for us.

We can get benefit/profit from this opportunity if we fulfill the animal specifications (quality and quantity) and work as a group to sell our animals".

WFEA means engaging with the whole family.

Adults and children together compete in community calf rearing competitions - looking after the calves from birth to 3 months, keeping records for their calves feeding, health and growth rates. Linking these skills to better marketing spells a positive future for tomorrow's farmers.



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Health the key to unlocking markets

Mutton is the preferred red meat in Pakistan and export markets, but preliminary studies noted markets are under-supplied, limited by poor smallholder productivity and trading connections.

These market opportunities are powerful motivators to help smallholders improve productivity and overcome poverty.

Current focus is on measuring production and improving animal health at





critical times, using a 6-month, multipronged syndromic health study to identify hidden disease problems affecting growth and sales. This will inform farmers and government agencies of the most effective areas for support and intervention to meet market demand.

Sixty farm families have agreed to be involved while intensive training of team members enhanced capacity in sampling, testing and survey methods.

"whenever our goats die we become worried instead of thinking to know the cause. This study has guided us to think about the diagnosis for the cause of diseases through lab examination".

University partners have geared up their diagnostic laboratories to support the field work, which is linked to existing Livestock Department activities. This will ensure the work helps create healthy, productive flocks through a combination of farmer awareness and technical support. Return to Contents

Tackling Technical and Social Complexity

A recent <u>article</u> in <u>Partners magazine</u> describes how this project is building bridges between the "big picture" of groundwater management and the everyday challenges of smallholder farmers. The team uses a blend of technology tools and socio-economic tools to build these bridges, with a constant focus on the situation and needs of farming communities.

For example, community stakeholder forums are being given opportunities to explore future scenarios, using an approach known as Representative Agricultural Pathways (RAPs).

Overall, these socio-economic tools provide a robust, ongoing framework for better decision making, and build on rich data obtained using mobile devices. Importantly, this is not a static one-off process – the stakeholder forums can enable ongoing input into the design of local project research activities.

From the technology toolkit, these future scenarios are informed by groundwater modelling using data obtained through local monitoring. This is vital given that groundwater availability and quality are constantly changing.



Farmers are gaining experience with water saving technologies and crops with

lower water requirements, and creating robust links with local expertise from relevant government departments.

The project's integrated approach is featured as part of a paper describing approaches to research involving complex contexts in a special Agricultural Science issue on ACIAR's research for development work. (See below)

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<u>Listening is a powerful tool for better irrigation</u>

Like the Groundwater project, this project engages closely with communities, taking the time to understand local issues. Importantly, women are included in the process in ways that are consistent with local cultural norms, but effective.

Capturing their ideas first enables these to influence the thinking of the male farmers. Additionally, some of the issues raised by women (such as the need to secure a local school teacher) may not directly relate to water management but are fundamental to community well-being.



Importantly, the process used ("Farmer Integrated Learning Model (FILM)") identifies community Assets as well as problems. FILM facilitators can help communities leverage these assets to develop action plans to address key issues, helping to instil self-reliance.

The water management devices available through the project are introduced on an as-needs basis, rather than the technology driving the agenda.

Some of the first communities to engage with the project have already participated in testing the devices and early results from mid-line surveys include positive feedback

"Mrs. Mumtaz shared what she learnt from chameleon installation at wheat and sugarcane crop. She was engaged with kitchen gardening and prepared her own seed and shared that seed with her fellow farmers."

"Mrs. Salma shared her experiences of using tools like Chameleon, Tensiometer and full-stop at her land and how much she saved."

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Agricultural Research for Development (R4D) is more than just complicated – it is complex and, to be successful, must adapt to new discoveries made along the way. ACIAR supports this adaptive approach by initiating mid-term reviews of all projects. In December, the research team from Pakistan Agricultural Research Council (PARC) met colleagues from Bangladesh, Myanmar and the World Vegetable Centre to share and discuss findings and adjust future plans accordingly.

The 2019 trials established that Ethrel was an effective desiccant. This, combined with fine-tuning of harvester operation, helped the economic analysis show clear benefits of mechanized harvesting over manual.



Importantly, the research teams kept in close touch with farmers as well as service providers involved in the mechanized harvesting. This ensures that technical ideas are grounded in practical and commercial realities. Return to Contents

Pakistan Australian Agriculture Alumni Network (PAAAN)

ACIAR places a high priority on the <u>education</u>, <u>training and professional</u> <u>development</u> opportunities for project participants. These scholars now play important roles in managing and conducting a diverse range of research and are keen to network and learn together, based on their Australian experience and education. The Country Office has facilitated an alumni network and organised a professional development event in January.



The first day focused on communication with storytelling workshop.
Stories are a powerful way to engage with the non-scientific community, but may not always spring to mind.

The workshop equipped participants with the knowledge, skill and tools to use stories to communicate more effectively.

On day two, different national and international agencies introduced their agencies and discussed their ongoing work in Pakistan. This created an environment that facilitated exchange of research ideas and collaborative

opportunities across a wide and varied range of disciplines.

ACIAR CEO, Professor Campbell, met the alumni over dinner and recognised the commitment of ACIAR Alumni Ambassador for 2020, Dr Sajida Shehzad.

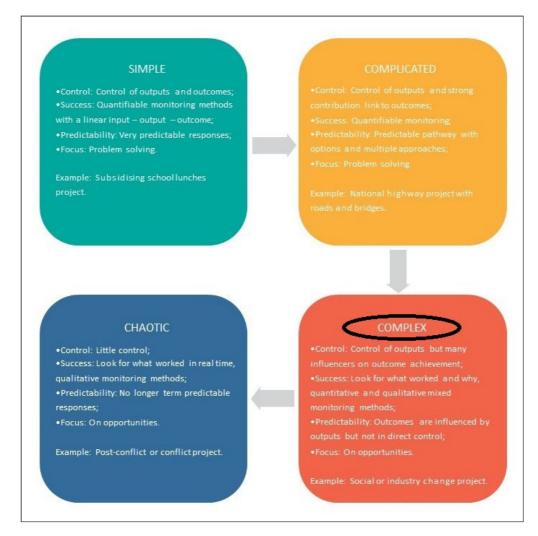
The participants agreed that the event had been very rewarding and nominated a team to design future alumni activities. Return to Contents



Planning and Partnering for long-term impact

A recent <u>paper</u> draws on ACIAR's experience in drawing together expertise from different research disciplines to address complex issues. When managed well, so that the areas of expertise complement eachother to create new perspectives and solutions, this approach is known as **interdisciplinary**. Naturally, this would include close attention to understanding the needs of smallholder participants.

However, sometimes these smallholder participants can be engaged and involved in the research in a way that is described as **transdisciplinary** ("an approach that enables integration across disciplines and with actors in society for a common research objective").



The authors argue that this is particularly necessary and valuable when working with the complexity of land and water resource management where social systems are co-evolving with natural systems.

The paper also highlights the value of planning R4D projects with a focus on what can be achieved by the end of the project, and also the project's intended longer term impacts. **Impact pathway analysis** (IPA) has enabled projects in complex contexts to be better designed.

Most Aik Saath projects have developed Monitoring, Evaluation, Research and Learning (MERL) plans based on IPA. This paper is a useful reminder of the value of this approach. Return to Contents

New Guidebook for people-centred Ag R4D

Adjunct Professors Barbara Chambers and John Spriggs (along with Dr Sandra Heaney-Mustafa, Dr Azeem and others from NARC and University of Canberra) led the Social Science component of ASLP (Agriculture Sector Linkages Program) in Pakistan from 2010 to 2015.

This work illustrated the benefits and the challenge of "bridging the gap"

between the social and biophysical science perspectives. It helped guide ACIAR and its partners in Pakistan in building inclusive, participatory approaches into the current program.

As announced last September, the authors of this new book have distilled their

lifetime lessons from the field into a step-by-step approach, based on their Collaborative Research in International Development (CRID) research model.

This book has now been published in hardcover or electronic format. For the hardcover book a temporary discount code



(SPGG35) is available which should give buyers a 35% discount. More information for hardcover book and for online book is available Return to Contents

For your diary

Australasian Seed Science Conference 2020

5 – 9 April 2020, Australian National Botanic Gardens, Canberra, ACT, Australia

Measure What Matters Global Conference

6 – 8 April 2020, ANU, Canberra, ACT, Australia

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About Aik Saath

Aik Saath is an Urdu phrase meaning "Together". It is also the everyday name for ACIAR's program of eleven Research for Development (R4D) projects in Pakistan (see links below).



Aik Saath represents:

- the **joint** Pakistani & Australian government commitment to the program
- multiple agricultural products, themes and research disciplines
- numerous technical, commercial and official **partners** in Australia and Pakistan
- all members of smallholder families and communities.

including women and youth

Facilitated by the ACIAR Country Office in Pakistan and the coordinator, Aik Saath fosters collaborations to help maximise the impact from ACIAR Research for Development projects in Pakistan.

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Project Information

The short updates above are drawn from the latest quarterly reports, which are used for project management.

For a list of ACIAR's projects in Pakistan, please click here.

Snapshots of the aims of each project are <u>here</u>.

Factsheets for all projects are available here

If required, please request more information from project leaders.

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Feedback or ideas for future editions? Please get in touch.

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