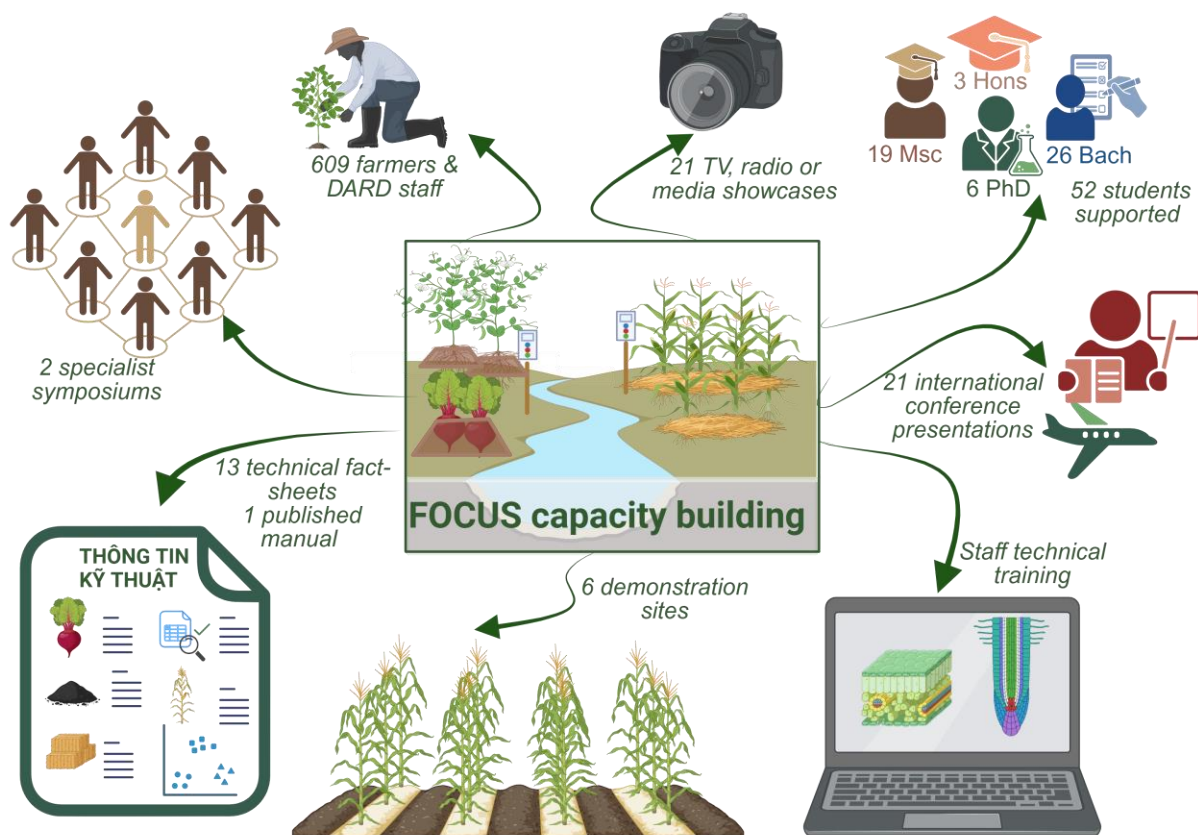


# FOCUS capacity building report



**Graphical abstract:** The outputs from the FOCUS project training objectives 1.1 & 2.3 and the projects capacity building strategy.

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## FOCUS training report

The FOCUS project placed a strong emphasis on training, prioritizing both deliverable outcomes and long-term capacity building. A diverse audience benefited from the training, including farmers, DARD staff, students, project personnel, and external stakeholders. To maximize impact and ensure the longevity of knowledge transfer, a variety of training methods and materials were employed—ranging from participatory, hands-on sessions and face-to-face instruction to online modules, pamphlets, videos, and live demonstrations. The sections below detail the breadth of training delivered, with examples of training materials provided in links. Participant feedback and training evaluations were gathered using online tools such as Slido polls and surveys, as well as traditional paper-based surveys. This training report segments the training into four sections: 1) training delivered to farmers and DARD, 2) field trial demonstration sites, 3) FOCUS team training and capacity building, and 4) leadership development.

### 1. Formalised training delivered to farmers and DARD

Objective 1.1 and 2.3 of the project proposal outlines the training of farmers and DARD staff in soil salinity, land management and crop options. A range of participatory workshops were held across the MRD with targeted training delivered to relevant areas.

#### 1.1 Soil salinity training

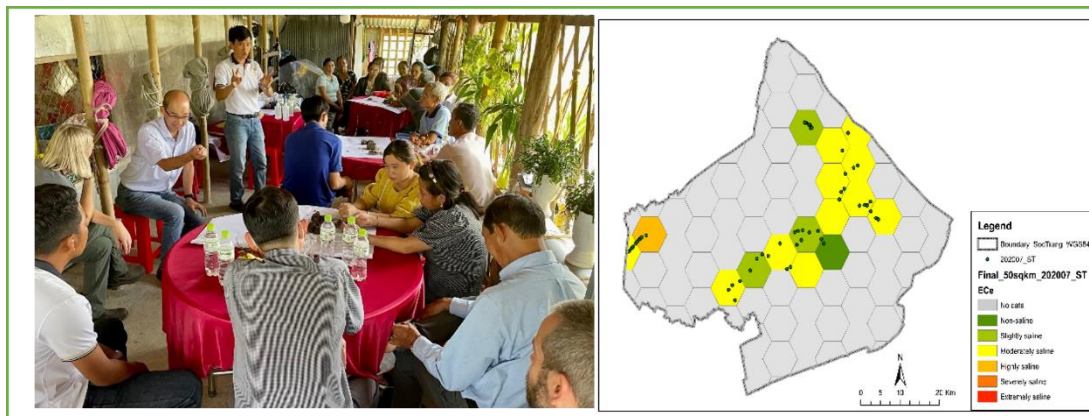
Participatory training was designed in partnership with multidisciplinary teams of soil, plant, agricultural and spatial data science researchers. Training was delivered across target areas of the MRD at local DARD offices (Soc Trang, Hau Giang, Can Tho and An Giang) where farmers and DARD staff were taught soil salinity principles through practical exercises utilising their own soil; the measurement of soil and canal salinity and gravimetric soil moisture; and how to record georeferenced data via an app. The app was accessible to farmers and DARD staff via their phones and allowed real-time data to be recorded and spatially analysed by researchers to show area trends through time.

The 4 workshops trained 145 people (30% female); only 34% of participants had previous access to an EC meter and only 2% had measured soil salinity using an EC meter prior to the training. Following the training, participants indicated that they were now confident in identifying signs of salinity (99% of participants) and measuring salinity (100%).

Post-training problems encountered include confusion of salinity units on meters, and the problems with data recording where the interchangeability of commas and decimal points between Vietnam and Australia led to confusion. The FOCUS project was designed to span a geographic transcript across the MRD which also spanned a range of

severity of salinity. The drawback in this design feature was that in areas where salinity was not yet severe (e.g. An Giang), the prioritisation and interest of staff of salinity as a limiting factor was low. However, participants sought skills to identify soil constraints in general, hence the workshops led to the development of a second series of workshops that cover other soil constraints. COVID delayed the rollout of further training and ultimately remote sensing was used as a broad scale data collection of impacts of salinity on land use changes.

Farmer participatory research works well for recording on farm data and capacity building. Intensity of collected data varied depending on location due to engagement of stakeholders which was linked to severity of salinity. Maps of temporal saline intrusion collected as a result of this training have been used in ground truthing remoted sensed data and the modelling of forecast intrusion events to determine locations where crops were suitable for the changing environment. An overview of the salinity training is provided [here](#).



**Figure 1:** Participatory training of farmers and DARD at Soc Trang (left) and the resultant geo-referenced spatial map of saline intrusion in the province using farmers data inputs (right).

## 1.2 Soil constraints workshops

Feedback from DARD and farmers who attended the soil salinity workshops identified that farmers wanted additional soil constraints knowledge. The soil constraint training was designed to be train participants in identification of soil constraints using a system of training developed by team members that work with Australian farmers. This approach is field-based, and hands on; a different approach to what was normally conducted in Vietnam via the DARD extension staff. This meant that the confidence of trainers needed to be fostered for successful delivery and engagement with participants.

An advantage in pivoting from training in only salinity to soil constraints in general was that the team was able to provide specific benefit and relevance to the farmers and

DARD staff involved. In many of the areas, salinity was the main constraint, but the team was able to build on the enthusiasm of farmers to cover broader soil management that supports the production of upland crops as an alternative to rice in the dry season.

Training packages for the identification of soil constraints that limit upland crop production were developed with a pilot training program developed and trialled in 4 provinces during May 2023 (Soc Trang, Hau Giang, Can Tho and An Giang). A series of train the trainer events took place prior to the pilot program which served to refine content and delivery but to also increase the confidence of Vietnamese trainers in new training techniques. Training targeted both male and female farmers and DARD staff. The training was also covered by local TV and web-based media. The workshop topics addressed soil texture and organic matter content, soil pH, soil structure, and microbial activity. The advantage of this training was that participants gained a broader skillset to help them meet the challenges of diversifying from rice production to include upland crops, and the training is applicable to farmers in all regions (not just those suffering salinity).

The workshops were held at local farms which allowed participatory learning and practical engagement compared to conventional lecture-style teaching. A total of 67 people (31 female, 36 male) attended the pilot hands on training of soil constraints identification across the four events. It was observed that farmers valued the training. At one venue, a participating female farmer began calling her friends to suggest that they should also attend; the number of participants grew as the training continued. Soil constraint [factsheets](#) and a [handbook](#) was developed for distribution to participants.



**Figure 2.** Farmers participating in practical soil constraints training in Soc Trang.

### 1.3 Technical training

The key findings of the FOCUS project were compiled and delivered in a range of face-to-face training packages across the MRD. The topics extended across all areas of the project including soil and crop management, spatial, and socioeconomic. Workshops provided detail relevant to that technical package, whilst informative factsheets with ‘big picture’ messages were developed for farmers and DARD staff to take home and access in the future via the website.

Over 660 people received technical training across the four areas of research in the MRD on the following topics:

- Alternative crops
- Time of sowing in the dry season
- Chameleons- water saving
- Mulch and biochar management
- Soil microbiology
- Building soil organic matter
- Greenhouse gases
- Soil salinity training
- Soil constraints training
- Annual risk of water salinity
- Soil salinity and spatial land use changes
- Upland crop areas optimization
- Agricultural value chains and markets in the MRD

The gender split on training participation was 302: 344 female:male from recorded data. The factsheets are available online to participants on the project website at [www.focusprojectmrd.com](http://www.focusprojectmrd.com) in both Vietnamese and English.



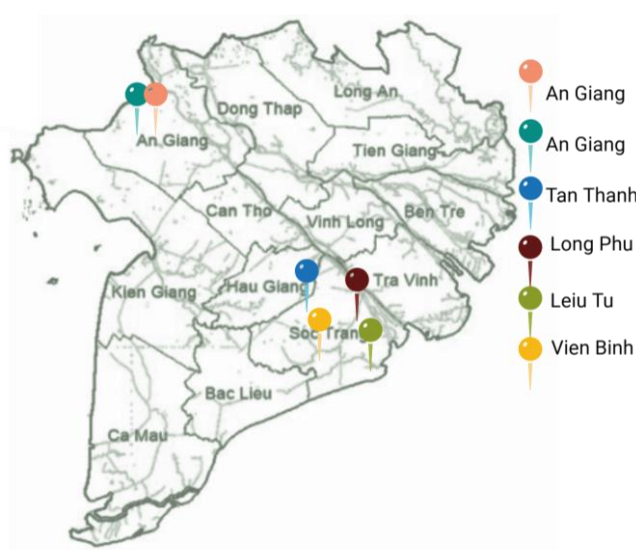
**Figure 3:** Dr Dang Duy Minh presenting messages of key components of successful production of upland crops to farmers and DARD staff (13 Dec 2025 ).



**Figure 4:** Agricultural value chains and markets training hosted in Long Phu, Soc Trang Province.

## 2. Field trial demonstration sites

A range of demonstration sites were sown to be a resource for farmer and DARD staff training on different upland crops and associated management practices at scale. This included maize, redbeet and cowpea grown with rotation of mulch and biochar using Chameleons for irrigation management. The trials existed at Lieu Tu, Long Phu, Vien Binh, Tan Thanh and two in An Giang. These demonstration sites allowed farmers and DARD staff to trial and view upland crops being grown in their regions, and provided scaling up of experimental findings without the cost of replicated field trials. The demonstration sites engaged new farmers and DARD staff, whilst examining the growth of alternative crops and associated management practices across a range of locations.



**Figure 5:** Map of the MRD with demonstration sites (base map from Yen *et al* 2019).



**Figure 6:** Maize being grown at the Long Phu demonstration site with 7 t ha<sup>-1</sup> straw mulch, April 2025.

Whilst there is clear value of demonstration sites as a resource to extend findings of the project to next and end users, several problems have been encountered in their implementation and utilisation. In 2024, planned expansion of demonstration sites was hampered by elevated forecasted rice prices which encouraged farmers to plant rice rather than upland crops. Furthermore, the widespread sowing of rice caused flooding of the demonstration sites that were established, and where localised water was controlled by sluice gates, rice crops consumed available water held before failing.

The project team also observed that the use of the demonstration sites by DARD staff was less than expected. This was possibly due to demarcation of perceived roles and responsibilities of CTU and DARD extension staff.

### 3. Research team training

Capacity expansion of the research team through training was a project priority and occurred throughout the duration of the project. Knowledge gaps and consequential training topics were identified by staff and delivered using project and external expertise. Early online training workshops were driven by COVID-19 travel restrictions and the requirement to share knowledge between the team without the ability to demonstrate in person. Training then developed from online platforms to in-country workshops and field trips as travel commenced.

#### 3.1 Chameleon soil moisture training

Online Chameleon training occurred in 2021 when travel restrictions were in place. Dr Brooke Kaveney was trained in Chameleon function and applicability by the founder of the Chameleon Soil Moisture Sensor, Dr Richard Stirzaker (CSIRO). The Chameleons were then used in FOCUS glasshouse trials in Australia under conditions similar to the MRD to further investigate their suitability for use in the dry season. This knowledge was compiled and transferred to the soil and plant team online to prepare in-country researchers for the delivery and implementation of Chameleons in greenhouse and field trials.

In-country training of staff and students (undergraduate and postgraduate) occurred in May 2022 upon the commencement of travel: 24 participants (15 male, 9 female). This training was held at Can Tho University and included presentations and practical training. Prior to the training, 64% of participants had heard of Chameleons but 91% of participants had never used a Chameleon. The easy-to-understand colour coded indicator system was the highest ranked benefit of using Chameleons.

Further face to face training occurred 1 June 2022 at CTU where 43 students (16 female, 27 male) were trained in chameleon use. After this training, students used Chameleons in their undergraduate, Masters and PhD projects as part of their experiments.

The use of chameleons was also an important component of the training events held as part of Activity 4.4 when the project team communicated key components of crop diversification options to DARD and farmers in the provinces (Figure 7).



**Figure 7:** Dr Dang Duy Minh conducts chameleon training for Soc Trang farmers and DARD staff at Soc Trang (14 Dec 2024).

### 3.2 Experimental planning, statistics and analysis

The team indicated that a statistical knowledge gap existed and consequently, a regression analysis workshop was developed by Dr Ben Stewart-Koster and delivered at Can Tho University (23 participants, 12 female, 11 male) in October 2022. The training included staff (16 people) and students (6 people), of which 30% were not funded by the FOCUS project. Over 95% of participants said they would apply the information they learnt from the training in their work or studies, with participants highlighting the importance of learning about regression analysis criteria, interpolation and extrapolation for implementation in their future studies.

An experimental and long-field trial planning session was hosted by senior researcher at NSW DPI Dr Guangdi Li for Vietnamese researchers attending the Crawford Fund soil training program (1 Female, 5 Male) in Australia. Training included experimental design, field trial implications and analysis of data.

### 3.3 Microbiology and PCR

Six project researchers (1 Female, 5 Male) from Can Tho University and Charles Sturt University (1 female), including five junior researchers completing Masters or PhD's, attended a FOCUS run, Crawford Fund supported, soil training program in Australia during September 2023. This enabled the FOCUS team members to be trained in soil microbial analyses including soil DNA extraction and PCR analysis ran by Dr Brooke Kaveney and Dr Jessica Rigg (Soil MICRO project- Select Carbon). A detailed [Soil microbiology workbook](#) was developed for participants to utilise, which was then further distributed to staff and students upon return to CTU. Practical components of

the trip included participants planning a small experiment, collecting soil samples, performing extractions, and running PCR before analysing results at Charles Sturt University. Participants expressed a desire for further PCR training and a willingness to engage the techniques they learnt in their future research.



**Figure 8:** Collecting soil samples from the field to use in DNA extraction and PCR analysis training.

Senior project staff that attended the PCR training in Australia identified the need for further PCR, principal component analysis and microbial training for in-country staff and students to use in future experiments. Consequently, a workshop was held in December 2024 for 15 students and staff (9 female/ 6 male) at Can Tho University to expand the groups knowledge of microbial function and PCR analysis. Dr Brooke Kaveney, Dr Jessica Rigg and Dr Nguyen Van Sinh from the Soil MICRO project ran the training and explored methodology and analysis that could be applied in the field and greenhouse trials.

### 3.4 Waterlogging and salinity technical training

Technical training on waterlogging risks and salinity impacts in crops was conducted in 2022 by Professor Edward Barrett-Lennard. The training involved FOCUS staff and students from CTU and aimed to establish a foundational understanding of key physiological and soil processes.

The program covered principles and practical approaches for measuring and reporting solute potential and soil water potential, understanding waterlogging dynamics in plants, and examining sodium behaviour and salt accumulation in plant tissues, particularly in leaves. This training provided a baseline capacity for consistent data collection, interpretation, and reporting across subsequent field and experimental studies.

A training session on ‘writing a paper’ was also delivered to CTU undergraduate and junior FOCUS staff. It included the topics writing for impact, formatting, structure, hypothesis development and information delivery. This was conducted at CTU in June 2022.

### 3.5 Greenhouse gas emissions and carbon markets

The FOCUS project created opportunity to collaborate with the private sector (Select Carbon Pty Ltd) to expand capacity to measure greenhouse gas emissions (GHGe) from the FOCUS field sites at Long Phu. Semi-automated greenhouse gas chambers supplied by QUT and Prof David Rowlings trained FOCUS team member Tran Duy Khanh in operation and maintenance of the equipment. Khanh was then able to train CTU and local DARD staff in GHGe and the operation of the samplers (Figure 9).



**Figure 9:** Tran Duy Khanh providing training to DARD staff, 6-13 Dec 2024.

As the Vietnamese government has set targets for the implementation of access to national and international carbon markets, and with the introduction of the one million hectares of low emission rice program, much interest exists in Provincial Government agencies about greenhouse gas emissions and carbon markets. The FOCUS team and Professor David Rowlings (QUT) delivered a workshop in August 2024 to Mekong Provincial officials and researchers to outline the processes involved. Dr Susan Orgill shared the Australian experience of implementing agriculturally relevant carbon markets. More than 100 attendees joined the workshop (Figure 10).



**Figure 10:** Dave Rowlings (QUT) explaining GHGe and Susan Orgill sharing information about Australian carbon credit systems during a training workshop for DARD staff, 1 august 2024.



**Figure 11:** Carbon market training held at Can Tho University 1 August 2024.

### 3.6 Gender and qualitative research

Training in Gender mainstreaming was provided to the project team and CTU students at CTU in 2022. It was noted that there was great interest by all staff across project themes in learning more about gender studies and the influence of gender in aspects of research and extension. This training has been a useful precursor to the “gender in FOCUS” study of the influence of gender in the research creation to adoption continuum of Activity 4.3.

Associate Professor Paul Kristiansen provided training to project staff on qualitative research methods. It was observed that the CTU staff were experienced in quantitative research methodology but sought training and mentored experience in qualitative research. Associate Professor Jen Bond has further expanded the capacity building experience of FOCUS staff with supportive collaboration with Le Thanh Sang and Dr Nguyen Anh Minh on qualitative research methodologies in FOCUS studies related to gender.

#### 4. Salinity symposium

The [International ACIAR Salinity Futures Symposium](#) was held March 3-7 2024 at Can Tho University, Vietnam and attended by 95 attendees (additional attendees from Vietnam that attended individual sessions were not counted). ACIAR was represented by staff of the Vietnam Country Office (Huong Nguyen) and RPMs for Climate Change (Veronica Doerr) and Water (Neil Lazarow).

The symposium brought together teams from three ACIAR projects:

SLaM2018/144 Farmer options for crops under saline conditions in the Mekong River Delta, Vietnam

LWR/2017/027 Adapting to Salinity in the Southern Indus Basin

LWR/2014/073 Cropping system intensification in the salt-affected coastal zones of Bangladesh and West Bengal, India

Presentations were provided in themes relating to changes in the landscape due to climate change, crop options for farmers adapting to salinity, gender dimensions of impact, building knowledge and creating impact for communities, and building socioeconomic benefits through markets. A field day allowed the 95 attendees to visit field sites of the FOCUS project in Soc Trang Province on the 5<sup>th</sup> March.

An post-event evaluation provided evidence of high satisfaction of attendees with the symposium. Attendees valued the opportunity to create new networks and great value was seen in the symposium bringing together researchers working on a common problem but from many disciplines. The sharing of interdisciplinary knowledge and response to challenges was a key takeaway for many attendees. Details of the symposium are contained in the [report to ACIAR](#). A publicly available summary of the conference including presenter's profiles can be found on the FOCUS website under the Salinity Symposium page [ACIAR Symposium | My Site](#).



**Figure 13:** ACIAR salinity symposium hosted at Can Tho University on the 3-7<sup>th</sup> March 2024.

## 5. Media opportunities

The project team sought opportunities to tell the FOCUS story to a broader audience but also to give staff opportunities to build capacity to deliver project messaging via media experience. The range of media outputs from the project are shown in the [project website](#) and includes ACIAR newsletters, Australian and Vietnamese television, and social media. Note that many of the media outputs are from junior team members supported in the media experience by senior project staff.

The FOCUS team is fortunate to include Dr Nguyen Anh Minh, a gender studies expert with a talent for video production. She has produced several videos about the impact of climate change on farmers in the Vietnamese Mekong Delta and the influence of gender in the adaptation to conditions of climate change.

## 6. Leadership development

- PhD and Masters supervision (CTU and CSU)

The FOCUS project created valuable opportunities for early- and mid-career staff to gain experience in supervising undergraduate and postgraduate students. With the guidance and support of experienced project staff serving as co-supervisors, these individuals were able to build their supervisory skills and grow in confidence throughout the process.

- Undergraduate

The project placed a strong emphasis on developing leadership skills among undergraduate students by providing them with opportunities to organise and present their research findings. This included frequent chances for Can Tho University students to practise presenting in English, often to high-profile delegations from organisations such as DARD, MARD, MOET, the ACIAR Commission, and the ACIAR PAC. Several of these students also featured in media and video interviews about the project, including the recent ABC iView program [Beyond Awesome](#).

- ECR leadership

The SRA project [Soil MICRO](#) (SLAM/2022/175), conducted alongside the FOCUS project, provided the early-career project lead (Dr Brooke Kaveney) with valuable, hands-on experience in managing an international research initiative. This experience was instrumental in developing essential skills in project planning, leadership, and coordination. The knowledge and confidence gained through this process will play a key role in shaping future career development, strengthening the ability to lead research initiatives, and supporting success in future grant applications.

Project team member, Nguyen Thi Kim Phuong, was awarded an ACIAR Meryl William Fellowship and took part in program activities in 2025 to support her research leadership and management skills.

## 7. Student engagement with FOCUS

Capacity building is a core pillar of the FOCUS project. As the commissioned agency (CSU) and lead collaborating organisation (CTU) are universities, the team has an inherent interest in using formal educational opportunities to build capacity of individuals to enhance their career development. The project utilised “provincial research projects” (PRPs) to engage and support DARD staff in higher degree training related to the project. Table 1 contains a list of the Vietnamese and Australian students engaged via the project. The organisation column shows the agency from which the student belongs.

Vietnamese project team members were awarded scholarships to conduct PhD studies in Australia. Le Thanh Sang (Australia Award) will study “Climate-Driven Agricultural Transformation in the Vietnamese Mekong Delta: Visibility, Inclusion, and Empowerment in Gender, Youth, and Ethnicity” at CSU under the supervision of FOCUS team Associate Profs. Jen Bond, Jason Condon and Dr Brooke Kaveney. Cao Dinh An Giang (John Allwright Fellow) will study “Microbial interactions for greenhouse gas emissions and soil health in rice-legume crop rotations” at CSU under the supervision of Associate Professor Jason Condon, Drs Brooke Kaveney and Ben Stoddart, and Prof David Rowlings (QUT).

The project was also able to utilise existing networks between CTU and Japan to support the higher degree training of project staff Nguyen Thi Kim Phuong, Doan Thi Truc Linh and Huynh Mach Tra My in Japan during the life of the project.

**Table 1:** Postgraduate, masters, honours and undergraduate students who used the FOCUS project field trails and data in their thesis or dissertation.

<b>PhD</b>						
<b>#</b>	<b>Name</b>	<b>Gender</b>	<b>Level</b>	<b>Thesis topic</b>	<b>Supervisor</b>	<b>Organization</b>
1	Huynh Mach Tra My	Female	PhD	Rice Straw Management to Enhance Soil Si Availability and Crop Performance on Salt-Affected Paddy Fields of the Mekong River Delta, Vietnam	Professor Koki Toyoda (Tokyo University of Agriculture and Technology) - Associate Professor. Chau Minh Khoi	CTU
2	Nguyen Ngoc Mong Kha	Female	PhD	Integrated application of GIS and modeling to investigate opportunities for crop diversification on saline-affected rice paddy fields	Associate Professors. Chau Minh Khoi Quoc Tuan, Truong Chi Quang	DOST An Giang
3	Chau Thi Nhien	Female	PhD	Assessment of Crop Diversification Potential and Proposed Land Management Measures for Salt-Affected Rice Monoculture Areas in the Mekong Delta (Ongoing)	Associate Professor. Chau Minh Khoi	DOST Ca Mau (previous Bac Lieu)
4	Sijja Song	Female	Exchange/ PhD	The study plan of the impact of biochar on upland crops uptake phosphorus	Professor Koki Toyoda (Tokyo University of Agriculture and Technology); Chau Minh Khoi; Nguyen Thi Kim Phuong	Tokyo University of Agriculture and Technology
5	Le Thanh Sang	Male	PhD	Climate-Driven Agricultural Transformation in the Vietnamese Mekong Delta: Visibility, Inclusion, and Empowerment in Gender, Youth, and Ethnicity	Jen Bond Jason Condon Brooke Kaveney	CSU
6	Cao Dinh An Giang	Male	PhD	Investigating microbial interactions for greenhouse gas emissions and enhancing soil health in rice-legume crop rotation systems.	Jason Condon Brooke Kaveney David Rowlings Dang Duy Minh	CSU/CTU

<b>Master</b>						
<b>#</b>	<b>Name</b>	<b>Gender</b>	<b>Level</b>	<b>Thesis topic</b>	<b>Supervisor</b>	<b>Organization</b>
1	Cao Dinh An Giang	Male	Master	Evaluating the applicability of soil moisture sensors and straw mulching levels on irrigation water saving and yield of maize ( <i>Zea mays</i> L.) under saline intrusion in Soc Trang Province, Vietnam	Dr. Dang Duy Minh Associate Professor. Chau Minh Khoi	CTU
2	Truong Trung Tham	Male	Master	Effects of mulching levels on irrigation efficiency, salt accumulation and movement in soil under upland crop cultivation in dry season. (Dry season 2022, Long Phu and Tran De)	Associate Professor. Chau Minh Khoi	DARD Soc Trang
3	Phan Tuan Nguyen	Male	Master	Growth and productivity of upland crop species rotated on paddy fields under drought and saline conditions in Long Phu district, Soc Trang Province. (Dry season 2022)	Associate Professor. Chau Minh Khoi	DARD Dong Thap
4	Vo Thi Kim Bang	Female	Master	Effects of rice straw mulching on production of alternative upland crops grown on saline-affected paddy rice field in the dry season	Associate Professor. Chau Minh Khoi	Hau Giang
5	Phan Bach Van	Female	Master	Applying soil moisture Chameleon sensors to save irrigating water for red beet grown on saline-affected paddy rice field in the dry season	Associate Professor. Chau Minh Khoi	DARD Soc Trang
6	Vo Hoang Dan	Male	Master	Effects of rice straw mulching on soil chemical properties under cultivation of alternative upland crops	Associate Professor. Chau Minh Khoi	DARD Soc Trang
7	Thi Cam Lien	Female	Master	Assessing the effects of saline irrigation and organic fertilizers on soil chemical properties and growth and yield of sesame ( <i>Sesamum indicum</i> L.) grown on saline soil under greenhouse conditions	Dr. Nguyen Thi Kim Phuong	DARD Kein Giang
8	Le Ngoc Son	Female	Master	Effects of phosphorus fertilizer rates on growth and yield of beetroot grown in the dry season in Soc Trang province	Dr Dang Duy Minh	DARD Soc Trang
9	Le Ho Minh Thien	Male	Master	Evaluation of soil management practices on nitrogen and carbon content in rice-upland crop rotation soil in An Giang province	Dr. Chau Minh Khoi	DARD An Giang
10	Lam Tha Sa	Male	Master	Potential for growing upland crops on saline-affected rice paddy fields	Associate Professor. Chau Minh Khoi	DARD Soc Trang
11	Tu Hai Long	Male	Master	Water use efficiency for growing upland crops in the dry season	Associate Professor. Chau Minh Khoi	DARD Soc Trang
12	Lam Hoang	Female	Master	Saline tolerance of redbeet	Dr. Tran Ba Linh and Dr.	VTV Television

	Bich Ngoc				Chau Minh Khoi	station Can Tho City
13	Vo Thuy Linh	Female	Master	Soil physico-chemical properties under cropping rotation on the mono-rice cropping system	Dr. Chau Minh Khoi	
14	Tran Vinh Nghi	Male	Master	Vertical and horizontal distribution of salinity in soil under growing upland crops on rice paddy fields affected by seawater intrusion in dry season	Dr. Chau Minh Khoi	DARD Soc Trang
15	Vo Van Vu	Male	Master	Effect of mulching on soil water retention and crop yields in the areas affected by seawater intrusion in dry season	Dr. Chau Minh Khoi	DARD Soc Trang
17	Phan Tuan Nguyen	Male	Master	Promising production of upland crops in rotation with rice in the conditions of drought and saline intrusion in Long Phu, Soc Trang	Dr. Chau Minh Khoi	DARD Soc Trang
18	Lam Thien Tan	Male	Master	Fertilization for red beet grown on the rice-based cropping system	Dr. Chau Minh Khoi	DARD Soc Trang
19	Nguyen Thi Kieu Tien	Female	Master	Changes in soil physical properties under cropping rotation of rice and upland crops	Dr. Tran Ba Linh	DARD Soc Trang

<b>Honours</b>						
1	Sarah Fraser	Female	Honours	Influence of biochar application on nitrogen fixation on cowpea	Dr. Nguyen Thi Kim Phuong	CSU
2	Campbell Watt	Male	Honours	Effect of phosphorus nutrition of cowpea under saline conditions	Dr. Dang Duy Minh	CSU
3	Natalie Mullins	Female	Honours	Exploring opportunities for climate-smart agriculture in the Vietnamese Mekong Delta	Jen Bond Jason Condon Dang Duy Minh	CSU

<b>Bachelor/ Engineer</b>						
1	Nguyen Quoc Huy	Male	Student NNCNC45	Application of Chameleon soil moisture sensor system and soil management approaches for Maize grown on saline soil in Long Phu district, Soc Trang province (Dry season 2022)	Associate Professor. Chau Minh Khoi	CTU
2	Nguyen Phuoc Thinh	Male	Student NNCNC45	Effects of different levels of straw mulching on improving soil properties and yield of Beetroot in Long Phu district, Soc Trang Province (Dry season 2022)	Dr. Nguyen Thi Kim Phuong	CTU
3	Nguyen Thi Thu Lan	Male	Student NNCNC45	Effects of different levels of straw mulching on improving soil properties and yield of Beetroot in Tran De district, Soc Trang Province (Dry season 2022)	Dr. Dang Duy Minh	CTU
4	Le Thi Phuong Quyen	Female	Student KHD45	Effect of compost, biochar and agricultural super absorbent polymer on chemical properties of salt-affected soil and beetroot's yield ( <i>Beta vulgaris</i> L.) in greenhouse conditions	Associate Professor. Chau Minh Khoi	CTU

5	Tran Nhut Hao	Male	Student NNCNC45	Application of Chameleon soil moisture sensor system and soil management approaches for Beetroot grown on saline soil in Long Phu district, Soc Trang province (Dry season 2022)	Dr. Nguyen Thi Kim Phuong	CTU
6	Nguyen Thien Hao	Male	Student NNCNC45	Application of Chameleon soil moisture sensors in irrigation management for beetroot ( <i>Beta vulgaris</i> L.) in the salt-affected soil under greenhouse conditions	Dr.Dang Duy Minh	CTU
7	Tran Thi Ngoc Binh	Female	Student KHD44	Effects of straw mulching levels on maize growth and yield on saline soil in Long Phu District - Soc Trang Province (dry season 2021)	Associate Professor. Chau Minh Khoi Dr.Dang Duy Minh	CTU
8	Luong Trong Duc	Male	Student KHD44	Effects of straw mulching levels on beetroot growth and yield on saline soil in Long Phu District - Soc Trang Province (dry season 2021)	Dr.Dang Duy Minh	CTU
9	Tran Nguyen Nam Khuong	Male	Student NNCNC45	Effectiveness of different straw mulching levels on the nutrient supply potential of salt-affected soil cultivating maize ( <i>Zea mays</i> L.) and cowpea ( <i>Vigna unguiculata</i> ) in Long Phu, Soc Trang province.	Dr. Nguyen Thi Kim Phuong	CTU
10	Nguyen Thi Ngoc Tham	Female	Student NNCNC47	Effectiveness of different straw mulching levels combined with biochar on the nutrient supply potential of salt-affected soil for cowpea ( <i>Vigna unguiculata</i> ) in Long Phu district, Soc Trang province.	Dr. Nguyen Thi Kim Phuong	CTU
11	Ly Thi Xuan Nhi	Female	Student NNCNC47	Effectiveness of different straw mulching levels on the nutrient supply potential of salt-affected soil cultivating maize ( <i>Zea mays</i> L.) and cowpea ( <i>Vigna unguiculata</i> ) in Tran De, Soc Trang province.	Dr. Nguyen Thi Kim Phuong	CTU
12	Nguyen Thanh Vuong	Male	Student NNCNC47	Effectiveness of different straw mulching levels combined with biochar on the nutrient supply potential of salt-affected soil for cowpea ( <i>Vigna unguiculata</i> ) in Tran De district, Soc Trang province.	Dr. Nguyen Thi Kim Phuong	CTU
13	Le Hong Yen	Female	Student NNCNC47	Effects of different straw mulching levels and biochar on soil properties and growth of cowpea ( <i>Vigna unguiculata</i> ) on salt-affected soil in Tran De, Soc Trang province.	Dr. Nguyen Thi Kim Phuong	CTU
14	Pham Vo Thuy Lieu	Female	Student NNCNC47	Effects of different straw mulching levels on soil properties and growth of maize ( <i>Zea mays</i> L.) on salt-affected soil in Long Phu, Soc Trang province.	Dr. Nguyen Thi Kim Phuong	CTU
15	Nguyễn Trần Mỹ Ngọc	Female	Student NNCNC47	Effect of Straw Mulching on Salt Tolerance of Quinoa ( <i>Chenopodium quinoa</i> Willd.) under Greenhouse Conditions	Dr. Nguyen Thi Kim Phuong	CTU

16	Moc Thi Thuy Kieu	Female	Student KHD47	Evaluating the potential use of the Chameleon soil moisture sensor on quinoa growth ( <i>Chenopodium quinoa</i> Willd.) under saline irrigation conditions in the greenhouse.	Dr. Nguyen Thi Kim Phuong	CTU
17	Huynh Viet Quoc	Male	Student NNCNC47	Effect of Straw Mulching on soil properties and growth of cowpea ( <i>Vigna unguiculata</i> ) on salt-affected soil after 5 yield experiments.	Associate Professor. Chau Minh Khoi Dr. Nguyen Thi Kim Phuong	CTU
18	Pham Minh Luan	Male	Student NNCNC47	Effectiveness of using Chameleon soil moisture sensor for upland crops in field trials	Associate Professor. Chau Minh Khoi Dr. Nguyen Thi Kim Phuong	CTU
19	Vo Anh Hao	Male	Student QLD&CNP B K47	<i>Investigation of the effects of farming practices on soil nematode communities in paddy fields in Long Phú, Sóc Trăng</i>	Dr. Nguyen Van Sinh	CTU
20	Nguyen Phu Thinh	Male	Student QLD&CNP B K47	Assessment of farming practice impacts on the trophic structure of soil nematode communities in paddy fields of Liêu Tú District, Sóc Trăng Province.	Dr. Nguyen Van Sinh	CTU
21	Nguyen Phan Bao Chan	Male	Student QLD&CNP B K47	Synergistic Effects of Cowpea Cultivation, Mulching, and Biochar Application on Nematode Community Structure and Soil Quality in Paddy Rice Fields	Dr. Nguyen Van Sinh	CTU
22	Tran Quoc Qui	Male	Student QLD&CNP B K47	Efficacy of legume crop rotation combined with biochar amendment in suppressing plant-parasitic nematodes and enhancing soil health under a triple rice cropping system	Dr. Nguyen Van Sinh	CTU
23	Phan Thuy Vy	Female	Student Land Management Course 47	Assessment of changes in rice cropping patterns under the impacts of salinity intrusion in Soc Trang province	Associate Professor. Vo Quoc Tuan	CTU
24	Le Nguyen Bang Tam	Female	Student Land Management Course 47	Assessment of the correlation between flooding area and rice production in the Mekong Delta in the period of 2016 - 2022	Associate Professor. Vo Quoc Tuan	CTU
25	Nguyen Nhu Ngoc	Female		Effects of soil management and irrigation water saving on soil chemical properties, growth and yield of corn ( <i>Zea mays</i> L.) grown in the greenhouse conditions	Dr Dang Duy Minh	CTU
26	Liarna Miller	Female	B Env Sci and mgt	Harnessing biochar for rural livelihoods and environmental benefit in Vietnam	Jen Bond Susan Orgill	CSU

