ACIAR in Vietnam

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The VWU's President Nguyen Thi Thanh Hoa and Foreign Minister, the Hon. Julie Bishop visiting North West vegetable display area and talking with the cooperative members from Bac Ha, Lao Cai

Chủ tịch Hội LHPN Việt Nam - Bà Thanh Hòa và Ngoại trưởng Julie Bishop tham quan khu trưng bày rau sạch vùng Tây Bắc và trò chuyện với xã viên HTX đến từ huyện Bắc Hà, tỉnh Lào Cai

The Hon. Julie Bishop delivering her speech at the workshop
Bộ trưởng Ngoại giao Australia – Julie Bishop phát biểu tại Hội thảo

Foreign Minister, the Hon. Julie Bishop at the inception workshop of the North West vegetable project

By Nguyen Thi Thu Hien, Vietnam Women's Union

The new project: 'Towards more profitable and sustainable vegetable farming systems in the north-western region of Vietnam' was honoured to receive the Australian Foreign Minister, the Hon. Julie Bishop, and President of the Vietnam Women's Union, Nguyen Thi Thanh Hoa, at its signing ceremony and inception workshop on 19 February 2014 in Hanoi.

This A$2.2 million project will run for four years (2014–2018) with an aim to improve market engagement, as well as to enhance the profitability and sustainability of the vegetable farming systems for small householders living in the north-western region of Vietnam. The project activities will be implemented in Sa Pa and Bac Ha districts of Lao Cai province and focus on integrated soil, water resource and disease management practices, which are the most suitable to local conditions. The project will particularly target women and ethnic minorities who are engaged in horticultural value chains in northern region of Vietnam.

The livelihoods of women and vulnerable communities including the ethnic minorities are the key concern of both Vietnamese and Australian governments. In her speech, Minister Julie Bishop expressed that she was very interested in issues relating to women and gender equality. She stressed that in the role as Foreign Minister, she would place greater effort on women and girls' empowerment and capacity building.

'Gender equality and women's empowerment are key priorities of the Australian Government in our external policies and our ODA programme. We wish to be in the forefront of efforts to promote the empowerment of women and girls. We have recently appointed a new Ambassador for Women and Girls, Natasha Stott Despoja, to lead Australia's international efforts improve gender equality', said Minister Bishop.

In reality, women play a very important role in every step of the vegetable value chain. This is why Vietnam Women's Union (VWU) was selected to be the co-leading agency of the project together with the University of Adelaide, Australia. The dense and active members of VWU at local level will not only take part directly in research activities but are also expected to support by communicating the science and technology advancements effectively. The research results will be applied in practice by these women through the Farmer Business School (FBS) model according to a long-term strategy of the project.

At the signing ceremony and inception workshop, the VWU President, Mdm. Nguyen Thi Thanh Hoa expressed her gratitude to the Australian Government for their strong support and cooperation with Vietnam in general, and with Vietnamese women in particular for promoting gender equality over the past years.

Minister Julie Bishop and Mdm. Nguyen Thi Thanh Hoa then visited the vegetable display area and networked with members of Di Thang cooperative farm from Bac Ha district and the project team. Before leaving, the guests had a chance to try some local dishes, which were made from the north-western indigenous vegetables.

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Inception meeting on 16-17 September 2014 in Hanoi
Hội thảo khởi động tại Hà nội ngày 16-17 tháng 9 năm 2014

North West fruits – access to more profitable markets

Smallholder farmers from the north-western provinces will have good opportunities to improve their net income by selling temperate fruits to more profitable fruit markets. This is the overall aim of a new project funded by the Australian Government that was launched at the inception workshop held in Hanoi on 16 and 17 September 2014.

The project 'Improving smallholder incomes in the north-western highlands of Vietnam by increasing access and competitiveness in regional temperate and subtropical fruit markets' (AGB/2012/060), will be implemented over 4 years (2014–2018) with a budget of nearly A$1.4 million, provided by the Australian Centre for International Agricultural research (ACIAR). Major objectives of the project are:

1. Evaluate consumer and market dynamics and opportunities at the local, provincial, national and regional levels

2. Support government-led planning, coordination and development of the temperate fruit industry across north-western provinces

3. Overcome barriers to adoption of improved varieties and cultivation techniques currently constraining development of the temperate fruit industry in north-western Vietnam

4. Develop competitive consumer-driven marketing and value chain models for engagement with more profitable markets

How to link smallholders to more profitable markets remains one of the main challenges for the north-west highland provinces. Due to suitable natural conditions in north-west Vietnam, the Vietnamese Government invested considerable effort and resources over the past 25 years in the development of the temperate fruit industry that includes production of plums, pears and peaches. His Excellency Dr. Le Quoc Doanh, Vice Minister of the Ministry of Agriculture and Rural Development said the temperate fruit industry will help alleviate poverty. However he highlighted, 'after decades of limited success, new approaches are needed'.

The project will, therefore, need to apply an innovative interdisciplinary approach to facilitate dialogue and information exchange between researchers involved in horticultural, anthropological, market, consumer and value chain research, and government institutions from local to central levels; private sector organisations and farmers, with the aim to develop a market- driven temperate fruit industry.

Speaking at the inception workshop, Australian Ambassador Hugh Borrowman, focused on the importance of a strong collaboration mechanism, facilitating the process of applying research outcomes to farmers' conditions to improve their life. He confirmed the alignment of project objectives and implementation with the new foreign economic strategy of the Australian Government.

The inception workshop clearly demonstrated this strong collaboration through involvement of all main stakeholders involved in research and development of the temperate fruit industry. They include: scientists from University of Queensland, University of Adelaide, Australia, Fruit and Vegetable Research Institute, Centre for Agrarian Systems Research and Development, Plant Protection Research Institute, Northern Mountainous Agriculture and Forestry Science Institute, and distinguished representatives of Son La, Lai Chau and Lao Cai local government, Departments of Agriculture and Rural Development, and representatives from private sector involved in production and marketing of temperate fruit.

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Ambassador Hugh Borrowman visiting Institute Life Science at TUAF
Đại sứ Hugh Borrowman thăm quan Viện Khoa học Sự sống tại ĐH Nông Lâm Thái Nguyên

Cooperation between Australia and Thai Nguyen University

By Nguyen Hung Quang, Thai Nguyen University for Agriculture and Forestry (TUAF)

Thai Nguyen University for Agriculture and Forestry (TUAF) is one of the long-term partners of the Australian Centre for International Agricultural Research (ACIAR). The Faculty for Animal Sciences of TUAF is currently participating in an ACIAR-funded project in the north-western highlands. The Australian Ambassador Hugh Borrowman visited the University in September on the launch of 'Clean up the world' compaign[1] in Thai Nguyen province.

The Ambassador was warmly welcomed by Dr Tran Van Dien, Rector; Assoc Prof, Dr Tran Van Hung, Vice-Rector; MSc Nguyen Huu Tho, Deputy Head of Science and Technology and International Cooperation Department; Assoc Prof, Dr Nguyen The Hung, Director of Centre for Training and International Development, and the ACIAR project researchers.

This 4 year (2011–2014) project aims to 'Overcome technical and market constraints to the emergence of profitable beef enterprises in the north-western highlands of Vietnam'. The project budget was A$1.5 million, of which TUAF received A$154,000 for research and experiments of technical options in order to increase market access, minimise impacts of harsh climate during winter time, and overcome a number of constraints that affect the beef cattle productivity.

After three years of participating in the research, small farmers from Thuan Chau district, Son La province, and Tuan Giao district, Dien Bien province have gained techniques of growing grasses and utilising crop by-products to fill the traditional feed gaps during dry and cold seasons, when the rice straws are the only main feed. Training materials on growing grasses have been developed and shared with farmers outside the project locations. In addition, this is also a training opportunity for TUAF students, 15 of which have been participating in the project and using the field information for their theses. Forty lecturers have joined the trainings conducted by experts from the University of Tasmania, Australia (the leading agency of the project).

In the welcoming speech, Dr Tran Van Dien highlighted the cooperation between TUAF and Australia over the past decades. Twelve teaching staff of TUAF are alumni of different Australian Universities and five others are currently studying in Australia. The Rector also wished to receive further support from the Ambassador in strengthening the existing cooperation between TUAF and Australian research institutes.

Ambassador Hugh Borrowman expressed his sincere thanks to the warm welcome of TUAF. He highly appreciated the effort and achievements of the University and the research team. He believed that the project would contribute to poverty reduction in the north-western highlands of Vietnam; and that the project team was building up a network for TUAF to continue its collaboration with Australian universities and research organisations in the future.

[1] *This is a global campaign, organised every year in September since 1993, initiated by an Australian, Mr Ian Kiernan.*

Technical workers of Pilot Marine Fish Farm of RIA1 are doing feeding demonstration for participants of RAF6 during field trip
Kỹ thuật viên tại Trại thực nghiệm nuôi lồng biển của RIA1 trình diễn kỹ thuật cho cá ăn bằng máy cho đại biểu tham dự RAF6 tham quan

The 6th Regional Aquafeed Forum in Nha Trang

By Nguyen Van Tien and Brett Glencross

Participants attending the ARF6
Các đại biểu tham dự RAF6

For the sixth year in a row, the Research Institute for Aquaculture Numbers 1, 2 and 3 and Nha Trang University co-organised the Regional Aquafeed Forum (RAF). The forum was initiated by an ACIAR-funded project, FIS/2006/141, and have been held every year since 2009. The objectives of RAF is to assist aquaculture nutritionists throughout the region, both from academia and industry, to better network, share findings and coordinate priorities. It also provides opportunities for stakeholders in aquafeed industry to interact and exchange information and knowledge.

The 6th Regional Aquafeed Forum (RAF6) was hosted by Nha Trang University from 27 to 30 September 2014. The RAF6 was well attended by 158 participants from nine countries, representing the aquafeed industry, university and institute scientists, large-scale farmers and policy-makers. Of particular interest, the attendance of the Australian Ambassador Hugh Borrowman and Dr Nguyen Huy Dien, Deputy Director General Directorate of Fisheries, showed strong support of both Australian and Vietnamese governments at this event.

RAF6 lasted for three days. The first two days of the forum were for presentations and the last day was a field visit to two large-scale marine fish farms in Ninh Van Bay, Khanh Hoa province. Twenty one presentations provided broad views on direction of aquafeed in Asia including: commercialisation of marine aquaculture, progress on amino acids, feed additives, nutrient requirements and alternative ingredients to replace fish meal in aquafeed. In addition, presentations addressed narrower topics such as digestibility, using natural extraction and the possibility of using GM soybean as a new ingredient in aquaculture.

The field trip on the last day provided excellent opportunities for participants to experience a large-scale farm established by an Australia organisation and a pilot marine fish farm at the Research Institute for Aquaculture No 1, where barramundi, pompano and cobia are cultured using formulated feed and model farm management techniques.

In his opening remark, Ambassador Borrowman emphasised the importance of RAF6: 'This forum helps connect enterprises with end-users in aquaculture. It is also very important for the dissemination of improved practices, techniques'. The fact that this forum is organised annually proves the success in cooperation between Australia and Vietnam in the aquafeed area.

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Meeting with DARD of Vinh Long province
Buổi làm việc với Sở NN và PTNT tỉnh Vĩnh Long

Small research for great strategies

By Do Manh Hung, Southern Centre for Agricultural Policy

I am pleased to share with you my research experience with the Australian Centre for International Agriculture Research (ACIAR). ACIAR cooperates as a research partner organisation with Vietnam. These research projects often commence with scoping studies. These are small research projects (SRAs) with an average value of A$200,000. The premise of these projects is to evaluate and identify opportunities, constraints and interventions with a view to a longer term planning. The value of scoping the context of a project is take a 'helicopter' view and then identify priority areas. During the SRA process, partnering with farmers, industry stakeholders and government ensures success in the project process and aligns multi-stakeholder strategic goals. Longer-term projects that result from an SRA have been through a rigorous process to proceed to the next stage. Often the first stage of a long-term project will last for four years with approximate budgets between A$1 million and A$2 million.

Despite a small fund, SRA tasks often include pre-feasibility research requiring a team with a broad range of discipline skills, including economics, marketing, agronomy and more. A new SRA (AGB/2013/018) is underway to evaluate and identify opportunities for a 10 year research and development strategy for selected fruits in the Mekong Delta of Vietnam. The first workshop of the SRA was held on 28 July 2014 in Ho Chi Minh City.

The purpose of the workshop was to identify major fruits and activities to achieve the following research objectives:

1. Document the production and market situation, trends, opportunities and constraints
2. Document and identify issues and constraints in tropical fruit value chains
3. Identify priorities for skill development and capacity building
4. Develop a detailed ten-year ACIAR research investment strategy for tropical fruit in southern Vietnam.

Our project has appointed two chairs Dr Robin Roberts, the research leader (Griffith University, Australia) and Prof Nguyen Minh Chau (Former Director of the Southern Fruit Research Institute). Workshop participants were Vietnamese and international experts in tropical fruit production, value-chain and market analysis. After discussion, the research team firmly agreed that the project would focus on Mango (Cat Hoa Loc and Cat Chu varieties), Pomelo (Nam Roi and Da Xanh varieties), and Longan (Tieu Da Bo and Xuong Com Vang varieties).

The SRA focuses on collaboration and interaction with a number of partners, including: farmer groups; cooperatives on fruit production and collection; extension, science and technology offices at district and provincial levels; fruit trading, processing, branding, transporting and exporting companies.

The research group is documenting the fruit chains from production to the fresh and processed fruit markets, and then through to the customer and end consumer. While both exporting and domestic markets for fresh fruits require the best-quality fruits, processed products can utilise the lower-quality ones. Therefore, processed products potentially bring higher profits to the farmers and stakeholders who participate in the chains.

After four months of field work, the research team has gained information about the current situation of fruit production including policies and plans of local governments to develop these fruit markets. The team has also learned about potentials and constraints in fruit production, markets, and value chains. This knowledge will be important input in building a 10 year strategy for fruit research and development in the Mekong Delta. The research captured will be shared and the strategy will be developed in planning workshops in January and March 2015.

The research planning process is inclusive with representatives from the Ministry of Agriculture and Rural Development (MARD), members of the VinaFruit Association (industry representatives from Vietnam), Linfox (the logistic company) and other key strategic partners. The outcome of the workshops are to bring together key members to identify areas for capacity building and skill development that will deliver the longer-term benefits for tropical fruit in Southern Vietnam.

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Staff change at the Vietnam Country Office

There has been a big staff change at the ACIAR Vietnam Country Office in 2014. Mr Geoff Morris, the Country Manager, made the decision to leave ACIAR after seven years. In June, Geoff, together with his wife and daughter, returned to his home city of Melbourne. During the seven years, he made a significant contribution to ACIAR programs and the development of Vietnam's agriculture. He was involved in providing and advice and facilitating the design of 28 ACIAR-funded projects, worth approximately A$38.9 million. With a strong background in forestry, he recently teamed up with other Australian experts to design a new project on forestry policy in Vietnam and Laos PDR, continuing his strong connections with Vietnam. He intends to start his PhD study from next year. Geoff can be contacted at <*geoff@morris.net*>. Wishing him and his family happiness and success with their future plans!

The position of Country Manager is now assigned to Ms Nguyen Thi Thanh An. She has gained great experience and understanding of ACIAR after more than five years working as Assistant Country Manager. Before joining ACIAR, An had nearly four years of working as the Public Affairs Manager and Media Liaison of the Embassy. She has strong experience in agricultural research program management, stakeholder relations and communications. She completed her Masters at University of Queensland in 2013, with a Major of Communications for Development, and becomes the first Vietnamese Country Manager of the Program. Her team consists of two other longstanding Vietnamese colleagues: Ms Nguyen Thi Lan Phuong and Mr Kieu Xuan Hung. With 16 active projects and seven pipeline projects commencing in 2015–2016, altogether worth approximately A$5 million/year, 2015 will be a busy year for the Vietnam team.

‘Moc Chau safe vegetables’ for the common interest of farmers, suppliers, retailers and consumers

By Nguyen Thi Quynh Chang[1], Bui Thi Hang[2], Bui Van Tung[3], Le Khai Hoan[4] and Pham Thi Sen[5]

‘Rau an toàn Mộc Chau’ or ‘Moc Chau safe vegetables’ are now presented daily on the tables of many families, canteens and restaurants in Hanoi, meeting the demands of many consumers for safe, fresh and delicious vegetables. This is a result from strong linkages between the Moc Chau district authority, Son La provincial Department of Agriculture and Rural Development (DARD) and the research team of the ACIAR-funded project ‘Improved market engagement for counter-seasonal vegetables producers in North-West Vietnam’ (AGB/2009/053). The research staff are from the Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI), Centre for Agrarian Systems Research and Development (CASRAD), Vietnam National University of Agriculture (VNUA), Fruit and Vegetable Research Institute (FAVRI), Fresh Studio (FS), French Agricultural Research Centre for International Development (CIRAD) and the University of Sydney. Thanks to this multi-disciplinary, multi-organisational and multi-level partnership, farmers have been supported in all aspects, including policy, information and technical, to successfully change their production practices and develop linkages to Hanoi markets.

To help farmers sustainably develop safe vegetables and long-term value chains, the project has supported the formation of farmer groups and cooperatives. Two years after their establishment, the cooperative of Tu Nhien village, and the two groups of farmers from An Thai and Ta Niet villages are now operating well. Tu Nhien cooperative and Ta Niet group have both been granted certification for conforming to VietGAP (Vietnam Good Agricultural Practices) standards and the An Thai group has been granted certification for conforming to safe vegetable production standards.

With assistance from the Project’s research team, Son La DARD’s unit of Agricultural, Forestry and Aquaculture Products Quality Control, Moc Chau District Extension Station and District Department of Agriculture, farmers’ cooperative and groups have started self-monitoring and inspection as well as supporting their members to follow the requirements of safe vegetable production. They also regularly update market-related information and help member households develop production plans and apply suitable harvest and post-harvest techniques.

After three years, thanks to great efforts and the commitment of all stakeholders, the project has supported Moc Chau authority and farmers to take advantage of the local climate and land conditions for improving both the quality and diversity of vegetables. Nowadays, in addition to the region’s ‘traditional’ vegetables like cabbages, green onions, H’mong mustard, tomato and cucumber, many ‘new’ vegetables such as okra, potato and carrot are coming from Moc Chau to Hanoi markets fresh and safe.

Acknowledging the benefits from participating in the value chain of safe vegetables, more farmers in Moc Chau wish to become members of the farmer groups and cooperatives that have been formed under the project. Thus, in 2014, the project supported farmer cooperatives and groups to expand their membership and extend their safe vegetable production areas. Local collectors have invested in vehicles to transport vegetables to Hanoi. They have been supported to develop linkages with diverse market channels, and are now able to supply Moc Chau safe vegetables to many consumers in Hanoi through supermarkets and shops - Fivimart, BigGreen, Bac Tom, Chat Viet, Dong Nam A and Metro.

Next year, the project plans to support more farmer groups, not only in Moc Chau but also in Van Ho district, for the long-term benefits of local farmers, local collectors, and Hanoi suppliers and consumers.

[1,2,3,4,5] Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI)

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Cattle raised at household in Binh Dinh
Bò nuôi tại nông hộ ở Bình Định

Developing productive and profitable smallholder beef enterprises in Central Vietnam

By Nguyen Huu Van, Hue University of Agriculture and Forestry

The growing demand for beef in Vietnam is providing an opportunity for smallholder crop livestock farmers in Central Vietnam to increase household incomes through more productive beef breeding and fattening enterprises as part of their farming systems. Farmers in the south central coast provinces of Binh Dinh and Phu Yen have responded positively to this opportunity by rapidly increasing cattle numbers since 2001. However, significant challenges need to be overcome to ensure these enterprises can both be profitable and sustainable. These include the low fertility of sandy soils in the region, long dry seasons, scarcity of good quality feed, and poor cattle management practices.

In addition, the central highlands province of Dak Lak has benefited from a strong history of research and development focused on cattle feeding and management. As a result, the breeding and fattening systems in Dak Lak are more developed than on the south central coast and the greatest opportunity for enhancing producers' livelihoods is through improved understanding of, and engagement with, the growing market opportunities.

This project aims to assist in developing productive and profitable smallholder beef enterprises in Central Vietnam. Its specific objectives are to: (1) develop more efficient smallholder cow-calf and cattle growing systems through improved feeding and management; (2) develop stronger integration with markets for beef cattle producers who already have a production orientation; and (3) identify and develop knowledge exchange and adoption pathways for expanding impacts within smallholder beef cattle enterprises.

The project has been implemented by University of Tasmania (UTAS), Hue University of Agriculture and Forestry (HUAF), Tay Nguyen University (TNU), and Research and Development Centre of Animal Husbandry (RDCAH) from February 2014 to January 2018 with a budget of A$1.05 million.

The project inception meeting was held in Qui Nhon from 25-27 February 2014. A series of activities were initiated to target the project planned objectives such as: developing detailed protocols for each activity; conducting value chain training sessions for the core team and local staff; organising baseline surveys on cow-calf production systems; preparing to conduct on-station research of cow-calf nutrition; and testing the survey protocols, research questions and methods for value chain and social research.

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Demonstration plots in Vi Thuy district, Hau Giang province: rotating upland crops with rice (left) vs. rice mono-culture (right)
Lô trình diễn kỹ thuật ở huyên Vị Thủy, Hậu Giang: luân canh rau/màu với lúa (bên trái) so với đối chứng lúa chuyên canh 3 vụ (bên phải)

Improve the adaptive capacity for change for rice farmers in the Mekong Delta

By Dang Kieu Nhan, Can Tho University

Improving the adaptive capacity of farmers to projected climate change needs will not only provide them technical solutions but also foster innovation capacity for all relevant stakeholders in the development process.

Rice production is a major agricultural activity in the Mekong Delta. Rice production accounts for about 70% of 2.6 million hectares devoted to agricultural production and directly influences livelihoods of 55% of the population in the Delta. Annually, rice produced from the Delta has contributed to about 52% of total rice productivity and to 90% of total rice export volume out of the country. However, rice farmers in the region have faced serious water-related threats such as abnormal floods from the Mekong, droughts, inundation, and salinity intrusion from the sea.

As part of CLUES project—Climate change affecting land use in the Mekong Delta: Adaptation of rice-based cropping systems , theme 4 'Analysis of farming systems and socio-economic settings' has highly interacted with other themes within CLUES and local stakeholders during the project implementation. The main objectives of the theme are to identify local needs for improving capacity of farmers to adapt to climate change, to determine factors influencing farmers' decisions and capacity to adapt, and to evaluate feasibility of tested technologies of CLUES in terms of technological, socio-economical and environmental considerations.

In the first and second years of the project, baseline surveys on households livelihoods and assessments of farmers' livelihood strategies were conducted, with the participation of local farmers, to identify needs and possible solutions in improving rice cropping technologies. This information was used as input to other research themes to set up trials or to develop adaptation master plans. In the third and fourth years, policy and institutional analysis was conducted, with the participation of local government officials, extension staff and private sector. This was to understand policy and institutional gaps, determine key stakeholders and their roles, and processes to scale out and scale up promising technologies created from the project.

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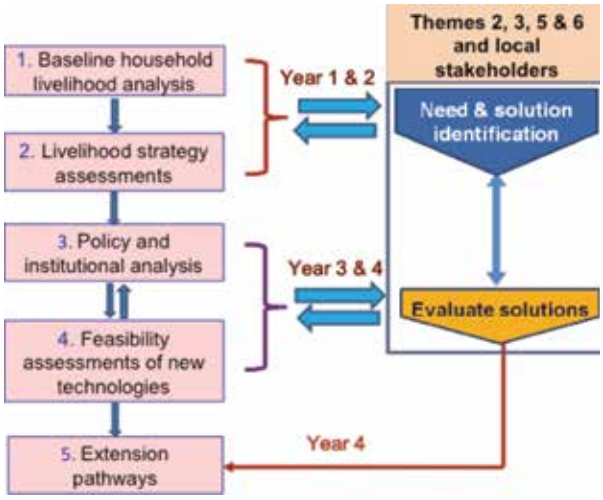

Figure 1: Activity framework of Theme 4

In the last year of the project, theme experts assessed the feasibility of tested farming technologies created from the project in terms of technical, socio-economical and environmental aspects. The assessments were done with nine field demonstrations and 13 workshops, with participation of local farmers, extension staff, community-based organisation representatives (i.e. Farmers Association and Women's Union) and government staff. Promising technologies identified at this step were used as inputs to define extension pathways, which will point out where, who, when and how the new technologies will be scaled out and scaled up.

Rice farmers have experienced a combination of "climatic" and "non-climatic" problems and they usually used multiple responses. The perceived "climatic" problems as abnormal temperature, heavy rains, droughts, floods and salinity intrusion. Significant "non-climatic" problems were pest occurrence, unavailability of agricultural labour and instability of market prices for inputs and outputs. The degree of risk associated with the problems was highly determined by temporal and spatial exposure that is strongly affected by infrastructure (dike, irrigation and drainage systems) and natural resources. The decision making of farmers to adapt is highly dependent on infrastructure, rice-cropping systems, financial capacity of households and natural conditions. For example, farmers in the saline zone or with double rice-cropping would be more intent on adapting than those in the flood or alluvial zone or with triple rice-cropping. Working with local farmers and other local stakeholders, the theme researchers have recognised that it is important to help farmers first solve their current and short-term problems and gradually build farmer capacity in local development process, due to constant changes of bio-physical and socio-economic factors.

Researchers of theme 4, in collaborating with CLUES's experts and local relevant stakeholders, assessed feasibility of six rice farming technologies, which had been tested and monitored on farmer fields in different agro-ecological zones: (1) adaptive rice varieties, (2) appropriate phosphorus application rates, (3) the effect of rice transplantation practice, (4) alternate wet – dry irrigation practice, (5) rotational rice – upland crops cropping systems, and (6) soil salinity flushing practices in the saline zone. Rice transplantation practice and rotating upland crops with rice are considered promising in terms of adapting to anticipated-hydrological threats and/or giving higher income, compared to locally conventional rice-cropping practices. Currently however, stakeholder participants ranked these technologies as low feasibility, due to high labour demands and limited market for outputs.

In fact, the adoption of tested technologies by local farmers and other relevant stakeholders is an 'evolutionary' process. The uptake of CLUES's tested technologies by local farmers at a large scale highly depends on: (1) variation of farmer's specific contexts, (2) the network among farmers within community and between farmers and service suppliers for inputs and outputs, (3) availability of input and output services, (4) availability and effective implementation of relevant policy packages, and (5) dynamic drivers at different scales.

Currently, local government and NGOs are implementing several development programs related to agricultural and rural transformation. Therefore, mainstreaming the extension of CLUES's promising technologies into the existing development programs is essential. Participatory technology development approaches would be helpful. Improvement of adaptive capacity of farmers to anticipated climate change needs not only to provide them technical solutions but also foster innovation capacity of all relevant stakeholders in the development process.

Participatory workshop on policy and institution to building adaptive capacity of rice farmers to climate change - focus group discussions in Bac Lieu province

Hội thảo có sự tham gia về chính sách và định chế đối với tăng cường năng lực thích ứng của nông dân trồng lúa với biến đổi khí hậu – thảo luận nhóm ở tỉnh Bạc Liêu

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Dr Chi standing next to a triploid individual in a field trial of tetraploid A. mangium
TS Chi đứng cạnh 1 cá thể 3x trong khảo nghiệm Keo tai tượng 4x

A new era in the genetic improvement of Acacia for the Vietnamese forest industry

By Rod Griffin[1], Ha Huy Thinh[2], Chris Harwood[3], Jane Harbard[4], Aina Price[5], Do Huu Son[6], Nghiem Quynh Chi[7], and Duong Thanh Hoa[8]

Acacia plantations are dominant in Vietnam's wood supply, yielding an annual harvest of over 10 million cubic metres of logs that provide the feedstock for pulp and paper industries, furniture manufacturing and fibre board production. Long-term collaboration between Vietnamese and Australian scientists has improved the genetic quality of the planting stock available to growers, but new varieties are now needed with adaptation to a wider range of climatic and site conditions and improved resistance to emerging diseases.

Today, fewer than ten hybrid clones approved by the Ministry of Agriculture and Rural Development (MARD) are widely planted in Vietnam's 500,000 hectares of hybrid plantations. Most of these were selected in the 1990s and although they are still performing well, there is a need to broaden the genetic base available for planting.

Project field trials have tested normal diploid (2x) hybrid clones and staff of the Institute of Forest Tree Improvement and Biotechnology (IFTIB) at Vietnamese Academy of Forest Sciences (VAFS) are also developing and testing polyploidy Acacia varieties with three (3x) or four (4x) chromosome complements. Polyploid may confer the advantage of improved wood properties, stress tolerance, and reduced seed production; hence lower the risk of weeds. Polyploidy may also facilitate making new inter-specific hybrids with desirable attributes.

The project produced 550 new 2x hybrid clones and tested them on four sites across Vietnam. Three years after planting, many of these new clones display faster growth than the commercially planted hybrid controls. IFTIB is now evaluating other traits such as wood density and disease and wind resistance. The project identified efficient methods to screen for new clones, and set up new hybridizing orchards to yield further outstanding candidates.

Tetraploid lines of three Acacia species and acacia hybrid clones have been produced by treating seeds or tissue cultured clones with colchicine, providing a base for long-term polyploid breeding in Vietnam. Field trials have shown that the wood quality of these 4x lines is superior to that of 2x trees but early growth is slower, so they cannot be recommended to growers without further breeding.

If 4x trees are crossed to 2x it is possible to make 3x individuals which, in many crop plants, have increased vigor as well as being almost completely seedless. Dr Nghiem Quynh Chi of VAFS has successfully produced and propagated 3x hybrid acacia clones and seven of these clones are now under testing in field trials. If some combination of rapid growth, seedlessness and improved wood properties would be seen, the commercial triploid clones could be released within 5 years.

The potential value of the program is recognized by MARD with the recent award granted to Dr Chi. This will allow IFTIB to progress the strategic polyploid breeding plans developed by the ACIAR project team.

ACIAR will continue to support the collaboration between Vietnamese and Australian scientists, with increased emphasis on improving resistance to the diseases which are becoming more prevalent in South East Asia.

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Enhancing bivalve production

Replicated larval rearing system
Hệ thống ương ấu trùng

By Vu Van In[1], Vu Thi Ngoc Lien[2], Phan Thi Van[3] and Wayne O'Cornor[4]

The project 'Enhancing bivalve production in northern Vietnam and Australia' funded by ACIAR (FIS/2010/100) was developed based on the success of a recently completed ACIAR project on 'Improvement of bivalve hatchery capacity in Vietnam and Australia' (FIS/2005/114). The FIS/2010/100 project targets the improvement of bivalve production in order to generate further livelihood options for coastal communities in northern Vietnam.

The success of the former project in hatchery and grow-out production has helped establish a new industry for oyster production in Vietnam that has grown rapidly from nil in 2008 to over 7,000 tonnes per annum in recent years, employing approximately 1,500 people in poor coastal communities. To support the industry, hatchery production in Vietnam has grown rapidly with the capacity of more than 100 million spat per annum. However, spat quality, bivalve health, environmental monitoring, disease control and food safety, are the issues that pose a threat to the continuation and further development of sustainable oyster production.

To address the above challenges, this project has set a series of goals for 2014–2018. Programs are being established to promote techniques to improve hatchery reliability and oyster seed quality. Cultivation systems will be designed to increase oyster marketability. Bivalve health workshops have commenced to address specific training needs. Environmental management systems are planned to strengthen capacity for technical staff and stakeholders to safely regulate sustainable bivalve production. An extension program is being conducted, covering a number of different regions of Vietnam.

Work has begun on an oyster breeding program, which will include stocks from three key populations: RIA1, Nam Dinh and China. The genetic structure of these stocks has been analysed, using a suite of nine microsatellite loci to ensure they have sufficient diversity for the establishment of a breeding program. A new highly replicated larval rearing system has been designed and built at the National Marine Broodstock Centre (NMBC) RIA1. Using reproductively mature stocks from Van Don and Cat Ba islands, this larval system is currently holding 100 oyster families that are approaching settlement and are destined to be available for ongoing research.

The working plan for the next six months will focus on family-based single seed production, single seed grow-out trials and comparisons between single seed techniques and the existing farming techniques that require spat (young oysters) to be settled on cultch (oyster shells). As they grow, the oysters and the environment in which they are being cultivated will be monitored on a regular basis to ensure they are healthy and that their consumption poses no food-safety risks.

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Developing technologies for giant grouper

Cá giống
Fingerling

By Nguyen Huu Ninh, Research Institute for Aquaculture No 1

Groupers form the basis of the live reef food-fish trade in the South-East Asian region. The giant grouper, Epinephelus lanceolatus, is a high-value fast-growing grouper species with significant aquaculture potential, however commercial production of juveniles has not yet been successful in most countries. This limitation is due to a lack of knowledge of their maturation and spawning behaviour, as well as low larval survival.

Establishing a sustainable aquaculture industry for the giant grouper is of high priority for Australia as well as India, Indonesia, Malaysia, the Philippines and Vietnam. Therefore, the FIS/2012/101 project 'Developing technologies for giant grouper (Epinephelus lanceolatus) aquaculture in Vietnam, the Philippines and Australia' is being carried out in the three partner countries. The research partners include: the University of the Sunshine Coast (USC) and the Australian industry partner, Finfish Enterprise (who replaced the Department of Agriculture, Fisheries and Forestry's Northern Fisheries (DAFF/NFC) in Australia, which closed); the South-East Asian Fisheries Development Centre's Aquaculture Department (SEAFDEC/AQD) in the Philippines; and the Research Institute for Aquaculture No.1 (RIA1), primarily the National Marine Broodstock Centre (NMBC) in Northern Vietnam.

Vietnam is one of the South-East Asian countries where grouper production is an important aquaculture industry along the coast. Most of the small-scale grouper farming is based on seed from the wild. RIA1 in Vietnam has a captive broodstock of giant grouper in excellent condition. The availability of giant grouper broodstock would ensure the success of the seed production technology development for this proposed project. Currently RIA1 has 57 (18 males and 39 females) available mature broodstock of giant grouper that originated from Vietnam and Taiwan, with weights from 27 to 80 kg/individual. RIA1's NMBC has good facilities, including cages, big tanks for broodstock and hatcheries to carry out all activities of this proposed project. RIA1 also has good experience working with other grouper species (E. coioides, E. fuscoguttatus, C. altivelis).

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Cá hương
Fry

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Broodstock management to induce spawning was carried out for three months, from July to September. Breeders were fed by trash fish at 1.5–2% body weight. In addition, crab and squid were supplemented at 1–2% body weight two times per week for about 2.5 months prior to the main spawning season. As a result, the proportions of reproducing mature male and female, which were ready for spawning, were 90% and 60% respectively. Slow release GnRHa implants, prepared by USC, were implanted for spawning induction in both cement tank onshore and wooden cage at sea. The applied hormone dose was 0.54 mg/80 kg male and 1.09 mg/40 kg female. Water parameters at spawning were 27–29 ^{0}C, pH 8.0 and 29–32% salinity. The rate of spawning varied from 30–100% and very high survival rate of brooder after spawning. Fertilization rates were from 42–80% while hatching rates ranged from 11.5–45%.

Nursing was carried out in both indoor and outdoor tanks. Water parameters for nursing environment were 28–30% salinity, 22–27 ^{0}C, 4.5–5.5 mg/L for DO, pH 8–8.2, light from 6.00 am to 10.00 pm by neon lamp. The stocking density was 10.000 larvae/m^3. Feed for nursing included microalgae, copepods and Artemia. Low survival rate was observed in nursing from larvae to fingerling. In most cases, poor survival rate may be because of VNN disease.

RIA1's NMBC is responsible for genetic conservation and technology development for breeding marine species. NMBC is also responsible for education, training and technology transfer. Through the project, RIA1's and NMBC's staff have been learning new technologies for giant grouper spawning that can be applied to other grouper and finfish species in Vietnam. Through local and overseas training opportunities, the research capacity within NMBC is developing.

The primary success of FIS/2012/101 at RIA1 are in giant grouper breeding and larval rearing, adaptation of alternative approaches to seed production, capacity building of staff that initiate the development of giant grouper aquaculture in Vietnam. These outputs will be improved with developed technologies and benefit to wider marine aquaculture industry and natural resources conservation in Vietnam.

For further information, please contact Dr Nguyen Huu Ninh <nhninh@ria1.org>

Australia Awards

John Allwright fellowship

Applications for post-graduate study in Australia through ACIAR's John Allwright Fellowship program for the academic year 2015 closed on the 31 July 2014. The ACIAR Hanoi Office received a total of ten applications and we are pleased to announce that six candidates have been shortlisted. They are Pham Thi Thuy from Centre for Agricultural Policy (IPSARD), Luu Duc Dien from Research Institute for Aquaculture No.2, Nguyen Thanh Tung from Vietnam Academy Forest Science, Vu Manh Hai from Centre Division of Water Resources Planning and Investigations, Nguyen Anh Duc and Duong Nam Ha from Vietnam National University of Agriculture. Except Nguyen Anh Duc, who took fast track to study his first semester at the University of Adelaide from February 2015, the others will commence their English training course from December 2014 to May 2015. Subject to successful completion of this course and the required test, they will be eligible to take up the scholarship offer.

We wish them GOOD LUCK and SUCCESS in the next IELTs test and beyond!

Pham Thi Thuy

Luu Duc Dien

Nguyen Thanh Tung

Vu Manh Hai

Nguyen Anh Duc

Duong Nam Ha

Australia Awards

John Dillon fellowship — building capacity in leadership and research management

We are delighted to announce that Ms Dam Thi Van Thoa (Vietnam Women Union-VWU) and Dr Chau Minh Khoi (Can Tho University) were selected and invited to visit Australia from 15 February to 26 March 2015 to take up this prestigious fellowship. A total of 15 Vietnamese fellows have been selected for this program so far. Each year, only about 10–12 fellows from across all the ACIAR partner countries are selected. The program includes a leadership and management course in Melbourne, followed by targeted visits to institutions related to their field of work and a week in ACIAR headquarters in Canberra.

We wish Ms Thoa and Dr Khoi an enjoyable and successful visit to Australia, and hope the program provides many ideas and opportunities to help them in their future work in Vietnam.

Dam Thi Van Thoa

Chau Minh Khoi

Ms Dam Thi Van Thoa is the Deputy Head of the Department of Ethnic and Religious Affairs, VWU. She graduated with a Bachelor degree from Hanoi University of Law in 1998 and Masters degree in public administration from the National Academy of Public Administration in 2010. She has had over 10 years of experience in management of projects on gender equality and enhancing roles of ethnic women.

Dr Chau Minh Khoi is currently working in the College of Agriculture and Applied Biology, Can tho University. In 1995, after obtaining a Bachelor of Science degree in Agronomy, he was employed as a lecturer and researcher in Can tho University. He got his Masters degree in 2000 and completed his PhD in 2006 in the field of Soil Science. From 2008–2009, he was awarded a grant from VEF (Vietnam Education Foundation) and spent 1 year at California University in Davis as a visiting scientist. From 2012 to now, Dr Khoi was appointed as the Head of Soil Science Department, Can Tho University. Since 2011, he has been involved in the two ACIAR-funded projects: 'Climate change affecting land use in the Mekong Delta: Adaptation of rice-based cropping systems (CLUES)' (SMCN/2009/021) and 'Improving the sustainability of rice-shrimp farming systems in the Mekong Delta, Vietnam' (SMCN/2010/083).

HE Minister Julie Bishop giving the JDF certificate to Nguyen Viet Hung
Bà Julie Bishop, Ngoại trưởng Australia trao kỉ niệm chương JDF cho Nguyễn Việt Hùng

John Dillon fellowship 2014:

An unforgettable and useful experience in Australia

By Nguyen Viet Hung, International Livestock Research Institute (ILRI)

The aim of the John Dillon Fellowship (JDF) is to provide career development opportunities for outstanding young agricultural scientists or economists from ACIAR partner countries, who are involved in a current or recently completed ACIAR project. I am so happy to have been awarded a John Dillon Fellowship (JDF) together with 8 other colleagues from Southwest Asia, Pacific and Pakistan in 2014. Quite similar to last year's program, the JDF included a training week on scientific communication in St Kilda followed by a week of leadership development training at Melbourne Business School. In the third week, the group was split into several groups to have one week of field exposure. I was sent to South Australia in Adelaide with some colleagues. In the fourth week, the group convened in Canberra at ACIAR headquarters where we had training on research management and interacted with ACIAR staff. We spent the final week at the Charles Sturt University and the University of Western Sydney, to talk with our respective hosts to get a glimpse into how their research institutions work. Meetings and fieldwork, sightseeing and social events were interestingly organised alternately. In short, the stay was great and useful to me and I would like to reflect on this stay after eight months back in Vietnam.

An interesting and useful fellowship for young or emerging research managers

I co-founded and have led the Center for Public Health and Ecosystem Research (CENPHER), a research unit under the Hanoi School of Public Health (HSPH) with a "doing by learning" approach. I was doing fine with this small group of about 10 people with various funding resources from my research experiences. However, I did not have formal training on leadership or research management. What I could learn from the full and intensive training weeks at the Melbourne business school was really interesting and useful for me. It helped me understand and practice the principles of dealing with

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development of a group, managing the conflict and changes, setting the priorities and visions as well as identifying my personalised way of managing the group in an effective way. Before coming to Mt Eliza, I thought that the leadership training was exclusively developed for the JDF group, but I realised quickly that it is a regular program developed for any person. Therefore, it was good to interact with many new participants in the program from Australia and New Zealand for networking and also to understand the leadership styles in these countries. The research management workshop at ACIAR also provided good background and taught skills in managing research. In addition, I had individual meetings with several research program managers, the General Manager/ Country Programs of ACIAR to better understand how the donor agency works to explore future opportunities for collaborations.

Australia: a truly operational inter-sectoral partnership in agriculture research and development

When I visited different organisations in South Australia (SA), it was impressive to witness how different partners and sectors in agriculture work together across research, extension and/ or policy making. The host of the JDF group in SA was the Primary Industries and Resources SA (PIRSA) who showed us how PIRSA – as a government body – works with the University of South Australia and other research institutions, and NGOs and companies in improving and promoting local agricultural products of SA. There you can see how the local government creates a good environment for enabling farmers, traders and other value chain actors. For example with fishing products, the SA government and the university support some companies to have several representative offices around the world to find the best international customers to export Australian products and get the best price. The university hosts these companies for free and they work together very well to translate research into application. I have experienced this in Thailand when the local government in Lamphun treated Vietnamese traders very well when buying Thai fruits. It was even more interesting to see a higher level of support and partnership in Australia.

Public democratic discussion at the Parliament and meeting with high profile personalities

It was an amazing experience to observe a Question Time session of the Australian Parliament when visiting the Senate where various hot issues of that week were discussed, such as saving Qantas airlines, hostages in Russia, and international policy with China. In that same day, we met the Minister of Foreign Affairs, the Hon. Julie Bishop with whom we had good discussion on development and international aids (photo 1). We had dinner with CEOs of different public organisations such as ACIAR, PIRSA. I realised that these positions are competitively recruited and with tough performance evaluations, meaning they could not stay too long in the same position to keep the organisation innovative and fresh all the time

Impressive farms in Australia

When seeing how dairy and beef cattle farms work in Australia, there is no surprise to learn that Australian beef is cheaper than Vietnamese beef in Vietnam. We visited several dairy farms in New South Wales: an average farm of 400 cows is taken care of only three or four persons with highly mechanised facilities. As a result, this system is very competitive and certainly profitable for farmers. We also visited some farms of about 500 hectares of wheat with only 2 farmers working. Note that most of the farms in Australia are only rain-fed and not irrigated.

Scientific and cultural exchanges

I gave two presentations at Charles Sturt University (CSU) for staff and students of the Faculty of Veterinary Sciences respectively and learned about their international partnership activities. We were invited to a Crawford Fund seminar in Sydney, where some stimulating discussions on research for development (some funded by ACIAR) took place. As a Vietnamese, I was lucky to be accompanied by a Vietnamese-Australian professor to visit Cabramatta where a large Vietnamese community settled and live in a mixed culture. This shows the generosity of Australia to the refugees in the past, at the same time also shows how Vietnamese work hard and have integrated well in the new society to achieve respectful successes in their life. We were very happy to visit the Professor John Dillon's family in Canberra on an early morning, meeting his son and grandson to understand the life and family of this respected Professor, whose name is for the fellowship.

In conclusion, The JDF is a good program for developing research management and leadership skills for research managers, in particular for middle career people. I really enjoyed the JDF experience in Australia and took the useful training for my work and for my institutions.

For further information, please contact Dr Nguyen Viet Hung <h.nguyen@cgiar.org>

Group photo of participants attended the Agribusiness Master Class
Ảnh chụp chung học viên tham dự khóa học

Agribusiness master class, it is more than just a course!

By Ha Thi Tra My, Fresh Studio

Time does fly!

Without noticing, the Agribusiness master class program is more than half way through and we have only one more module before the course finishes…

It is still fresh in me, the feeling of joy and happiness knowing that I was selected to attend the course. It is definitely one of the most memorable moments to me. When applying for the course, I was expecting to have a chance to restructure my knowledge and yet learn more about how marketing and research tools work in the agribusiness sector. After two modules, I am happy to admit that so far my expectations were fulfilled:

Module 1: Market and consumer research; in which I had a chance to learn, restructure and update new information about agri-food chains, agricultural sector, study about consumers and research methods.

Module 2: Value chain research. After great experiences in the first module, I remember counting down the days to attend the class. Value chain research is such a broad topic that you will never feel that you learn too much or know enough and I am no exception. I was overwhelmed by all the information in the module. Thanks to our great lecturers and guest speakers, we had opportunities to learn about the differences between value chain and supply chain, updates about value chain research and analysis, and study a bit more about research methods including advantages and disadvantages of each method.

In both of the classes, I was amazed and impressed by the level of knowledge that was transferred from our lecturers, guest speakers and also our dear classmates. I feel truly blessed that I did have this chance to attend the AMC course. Without it, I would never be able to meet inspiring people like them. It is not only theory that I learn about but also real life experiences they shared. They are truly the richest and juiciest source of information about agri-business! And just connecting these awesome people together for sharing their knowledge, I personally think the AMC course has already succeeded!

Why is AMC more than just a course?

If you ask me what I like most about this course? I will not hesitate to answer that: people – yes, it is people in this course. Coming from different cities and even countries, working for different organisations or companies but when being together, we are like a family.

In the first AMC class, I had come with the hope of making new friends, expanding my network and having chance to learn more from other people. Then, the second AMC class was like a family reunion – an occasion for me to meet my close cousins, my big brothers and sisters.

My most sincere thanks and regards to ACIAR and the Crawford Fund for bringing us a chance to know and learn from each other and more importantly to become a family. Thank you a lot!

LOCATIONS OF ACTIVE PROJECTS IN VIETNAM
CÁC ĐIỂM DỰ ÁN HIỆN TẠI Ở VIỆT NAM

North West *(5 projects)*: Production and markets for Vegetables, Temperate fruits, and Beef cattle; and Agroforestry;

North East and North *(4 projects)*: Pig value chains; Oysters; Groupers; and Veneer processing;

Central and South Central Coast *(3 projects)*: Beef cattle; Soil and water management; Sea cucumbers;

Mekong Delta *(4 projects)*: Policy for rice famers; Land-use planning to adapt with (climate) changes for rice farmers, Rice-shrimp farming systems; and Forest tree breeding.

Tây Bắc *(5 dự án)*: Sản xuất và thị trường Rau, Cây ăn Quả ôn đới, Bò thịt; và Nông-lâm kết hợp;

Đông Bắc và Bắc Trung bộ *(4 dự án)*: Chuỗi giá trị lợn; Hàu, cá Song; và Chế biến gỗ;

Trung bộ và Duyên hải Nam Trung bộ *(3 dự án)*: Bò thịt; Quản lý đất và nước nông nghiệp và Hải sâm;

Đồng bằng Sông Cửu Long *(4 dự án)*: Chính sách cho nông dân trồng lúa; Lập kế hoạch sử dụng đất để thích nghi với biến đổi khí hậu cho nông dân trồng lúa; Hệ thống lúa-tôm; và Giống cây rừng trồng.

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