

出國報告（出國類別：其他）

參加 APO 舉辦之「亞洲食品及
農企業大會：食物供應鏈綠色化(Asian
Food and Agribusiness Conference : Greening
the Food Supply Chain)」
出國報告

服務機關：行政院農業委員會農糧署

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派赴國家：印尼峇里島

出國期間：105 年 10 月 25 日至 10 月 29 日

報告日期：106 年 2 月 23 日

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摘要

亞洲生產力組織（APO）於 10 月 26 日至 28 日在印尼峇里島舉辦為期 3 日之「亞洲食品及農企業大會：食物供應鏈綠色化(Asian Food and Agribusiness Conference: Greening the Food Supply Chain)」，主辦單位包括 MVDADT (Ministry of Village, Development of Disadvantaged Regions, and Transmigration of Republic of Indonesia)，協辦單位為 CIRDAP(Centre on Integrated Rural Development for Asia and the Pacific)，共有亞太地區 14 個會員國計 36 人及印尼當地相關農業人員數十名參加與會。本研習會目的在於(一)提供一個亞洲國家在農業中滿足其國家食品需求、資源枯竭和環境退化等當前問題和新挑戰的討論平台。(二)分享有關農業生態創新的最佳做法和先進知識，以建設綠色食品供應鏈。(三)制訂一個可普遍應用於亞洲國家，且具生產及永續性的共同行動方案，以促進食物供應鏈綠色化。透過與會專家授課講解，學習農業生產力、食物供應鏈綠色化的定義、方法，並共同研討出應用方案，同時與會各國亦就農業綠色生產進行報告。主辦單位亦安排參訪位於布勒冷縣塔班南地區(Batunya, Buleleng)的有機農場 Organic Farming Garden。

壹、目的

參與由亞洲生產力組織(Asian Productivity Organization, APO)主辦之「亞洲食品及農業企業大會：食物供應鏈綠色化(Asian Food and Agribusiness Conference: Greening the Food Supply Chain)」，研習會目的在於(一)提供一個亞洲國家在農業中滿足其國家食品需求、資源枯竭和環境退化等當前問題和新挑戰的討論平台。(二)分享有關農業生態創新的最佳做法和先進知識，以建設綠色食品供應鏈。(三)制訂一個可普遍應用於亞洲國家，且具生產及永續性的共同行動方案，以促進食物供應鏈綠色化。透過與會專家授課講解，學習農業生產力、食物供應鏈綠色化的定義、方法，並共同研討出應用方案，同時與會各國亦就農業綠色生產進行報告。。

貳、研習會基本資料

一、會議名稱：Asian Food and Agribusiness Conference: Greening the Food Supply Chain

二、舉辦機構：亞洲生產力組織(Asian Productivity Organization, APO)主辦，MVDADT (Ministry of Village, Development of Disadvantaged Regions, and Transmigration of Republic of Indonesia)承辦，協辦單位為 CIRDAP(Centre on Integrated Rural Development for Asia and the Pacific)。

三、日期：105年10月26日至28日，為期3日。

四、地點：印尼峇里島 (Tehran, Islamic Republic of Iran)

五、參加成員：本次研習會計有我國(1人)、柬埔寨(3人)、印度(3人)、孟加拉(2人)、斐濟(1人)、伊朗(3人)、馬來西亞(3人)、蒙古(2人)、巴基斯坦(2人)、菲律賓(3人)、斯里蘭卡(3人)、尼泊爾(1人)、越南(2人)及地主國印尼(7人)等共14個會員國，包含當地人士計70人參加。我國由本會推薦農糧署許技正鈺佩代表參加。

學員名單

| 國家 | 姓名 | 職稱/服務單位 |
|-----|-----------------------------|---|
| 柬埔寨 | Ms. Hor Rathna | Lecturer/ Royal University of Agriculture Dongkor Dist. |
| | Mr. Rany Vireak | Deputy Director /Department of International Cooperation Ministry of Agriculture, Forestry and Fisheries |
| | Ms. Sao Chenda | Deputy General Manager/ BPS (Cambodia) Co., Ltd. |
| 斐濟 | Ms. Raijieli Nabaku Bakewa | Principal Administrative Officer – Research / Ministry of Rural and Maritime Development and National Disaster Management |
| 印度 | Mr. Nitin Kumar | Assistant Professor/ National Institute of Food Technology Entrepreneurship and Management |
| | Dr. Pagadala Radhika | Professor/ Director, International Programmes Jayashankar Telangana State Agriculture University Admn. Office, Rajendranagar |
| | Mr. Surendra Singh | Assistant Industrial Advisor/ Ministry of Food Processing Industries Panchsheel Bhawan, August Kranti Marg |
| 印尼 | Mr. Agus Purwantoro | Head/ Subdivision of International NGO Cooperation, Ministry of Village, Development of Disadvantaged Region and Transmigration |
| | Mr. Ajen Kurniawan | Officer for Productivity Cooperation/ Directorate of Productivity Development Ministry of Manpower Republic Indonesia |
| | Ms. Ayu Primarini | Functional Staff/ Bilateral Cooperation, Ministry of Village, Development of Disadvantaged Region and Transmigration |
| | Mr. Muhammad Chandra Kaisar | Staff/ Bureau of Planning, Ministry of Village, Development of Disadvantaged Region and Transmigration |
| | Mr. Raja Amin Hasibuan | Head/ Section of Infrastructure Development of Fourth Region Directorate of Food-Scarce Prone Region Development |
| | Ms. Theresia Junidar | Head/ Foreign Cooperation Division, Ministry of Village, Development of Disadvantaged Region and Transmigration |
| | Mr. Yoga Sidharta | General Functional Staff/ Ministry of Village, Development of Disadvantaged Region and Transmigration |

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|------|------------------------------|--|
| 伊朗 | Dr. Ali KianiRad | Research Deputy/ Agricultural Planning, Economic and Rural Development Research Institute (APERDRI), Ministry of Agriculture Jihad |
| | Mr. Jamshid Pishkar | Member of Scientific Board/ Director of Learn and Earn Project in Agribusiness, Institute of Technical and Vocational Higher Education of Jihad-e-agriculture |
| | Mr. Seyed Mahmoud Zavarei | Agriculture Expert/ National Iranian Productivity Organization |
| 孟加拉 | Ms. Undral Sambuu | Safety and Internal Control Manager/ Max Food LLC, Trade and Fastfood Supermarket |
| | Mr. Vanchinkhuu Purevdorj | General Manager/ New Pax Mongol LLC |
| 尼泊爾 | Mr. Pankaj Jalan | Executive Director/ Lord Buddha Education Foundation |
| 菲律賓 | Dr. Fezoil Luz Caga Decena | Senior Science Research Specialist/ Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development - Department of Science and Technology |
| | Ms. Leilani D. Pelegrina | Supervising Science Research Specialist/ Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development - Department of Science and Technology |
| | Ms. Lucille Magbanua Busog | Chief Agrarian Reform Program Officer/ Designated as Provincial Agrarian Reform Program Officer Department of Agrarian Reform Provincial Office |
| 斯里蘭卡 | Ms. M.M.K. Dilrukshi Walpola | Assistant District Secretary/ District Secretariat |
| | Mr. W.H.D. Priyadarshana | Senior Research Officer, and Head/ Marketing Food Policy and Agribusiness Division Hector Kobbekaduwa Agrarian Research and Training Institute |
| 越南 | Ms. Nguyen Thi Loan | Deputy Manager/ Research and Application of Technology for Plant Division Research and Development Center for Hi-tech Agriculture |
| | Ms. Tran Thi Thuy Tien | Researcher and Trainer/ Sub-National Institute of Agricultural Planning and Projection Ministry of Agriculture and Rural Development |

六、專家講師名單：

| 國家 | 姓名 | 職稱/服務單位 |
|----|-------------------|---|
| 澳洲 | Ms. Victoria Mack | Director / Secretariat for International Landcare |

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| | | (SILC) Inc. |
| 孟加拉 | Dr. Md. Jashim Uddin | Associate Professor/ Department of Soil, Water and Environment University of Dhaka |
| 印度 | Mr. Manoj Kumar Menon | Executive Director/ International Competence Centre for Organic Agriculture (ICCOA) |
| 巴基斯坦 | Mr. Syed Saquib Mohyuddin | Chairman/ Pakistan Enterprise Development Facility (PEDF) |
| 菲律賓 | Mr. Jose Apollo Y. Pacamalan | Executive Director and CEO/ Rice-Duck Movement Inc. |
| | Dr. Louie A. Divinagracia | Professor Lecturer/ College of Public Affairs, University of the Philippines Los Banos (UPLB) College |
| 新加坡 | Dr. Wee Kheng Soon Rodney | Chief Executive and Principal Consultant/ Asia Cold Chain Centre (Singapore) |
| 斯里蘭卡 | Dr. M.I. Mohammed Mowjood | Professor/ Department of Agricultural Engineering Faculty of Agriculture, University of Peradeniya |

七、研討會議程：

| Timing | Activity | Speaker / Organizer |
|---|--|---|
| Day 1: Wednesday, 26 October 2016 | | |
| 08:30-09:00 | Registration | National Indonesia Productivity Organization (NIPO) |
| 09:00-10:00 | Opening session <ul style="list-style-type: none"> ➤ Opening remarks by NPO-Indonesia ➤ Address by APO Representative, Dr Shaikh Tanveer Hossain Program Officer. ➤ Speech by CIRDAP, Mr. Tevita G. Boseiwaqa Taginavulau, DG. ➤ Speech by MVDDRT, Dr. Anwar Sanusi, Secretary General. ➤ Introduction of experts and participants Group photo & coffee break | Workshop Secretariat |
| 10:00-10:30 | Tea/coffee break | |
| Session 1: Linkage between agrifood supply chains and agriculture/rural development | | |
| Chair: Dr. Rodney Wee, Principal Consultant, Asia Cold Chain Centre, Singapore | | |
| 10:30-11:15 | Development of community-based enterprises for promoting green rural development. | Dr. Anwar Sanusi, Secretary General, MVDDRT |
| 11:15-12:00 | Mainstreaming Green Supply Chains in CIRDAP Member-States' Rural Development Programs | Ms. Eva Tuzon Director (Pilot Projects), CIRDAP |
| 12:00-12:30 | Open Forum | |
| 12:30-13:30 | Lunch break | |
| Session 2: Policy environment and external driving forces influencing the greening supply chains | | |
| Chair: Dr. Anwar Sanusi, Secretary General, MVDDRT | | |

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| 13:30-14:15 | Policy and institutional settings for greening the value chains in selective Asian countries | Dr. Louie A. Divinagracia Professorial Lecturer, University of the Philippines Los Banos, Laguna, Philippines |
| 14:15-15:00 | Green market trends: Consumers as drivers of the adoption of green supply chains | Mr. Syed Saquib Mohyuddin, Chairman-PEDF, Pakistan |
| 15:00-15:15 | Discussions | |
| 15:15-15:30 | Coffee break | |
| Session 3: Natural resource management for sustainable rural development and greening the environment | | |
| Chair: Mr. Manoj K. Menon, Executive Director, ICCOA, India | | |
| 15:30-16:15 | Biogas - a Landcare solution for rural people in Indonesia and around the world | Victoria Mack Director Secretariat for International Landcare (SILC), Australia |
| 16:15-17:00 | Conversion of farm waste into biofuel | Prof. Dr. M.I. M. Mowjood Dept. of Agricultural Engineering, Faculty of agriculture, University of Peradeniya, Peradeniya, Sri Lanka |
| 17:00-17:30 | Open Forum | |
| 19:00-21:00 | Welcome Reception by MVDDRT & CIRDAP | |
| Day 2: Thursday, 27 October 2016 | | |
| Session 4: Best practices and knowledge of agro-eco innovations and emerging technologies to green food supply chains | | |
| Chair: Dr. Shaikh Tanveer Hossain, Program Officer, APO | | |
| 08:45-09:30 | Food Security in the Arid Upland of East Indonesian Archipelago | Prof. Dr. Made Merta, Universites Udayana, Kampus Bukit Jarbaran Ball |
| 09:30-10:15 | Sustainable and integrated biovillage model for livelihood and rural development | Mr. Manoj K. Menon Executive Director, ICCOA, India |
| 10:15-10:30 | Coffee break | |
| 10:30-11:15 | Duck powered organic rice-duck value chain development for sustainable food production and rural community development in the Philippines | Mr. Jose Apollo Y. Paca- malan Executive Director and CEO Rice-Duck Movement Inc. Philippines |
| 11:15-11:30 | Open Forum | |
| Session 5: Modern technologies and innovative ways to improve the rural commodity development | | |
| Chair: Ms. Victoria Mack Director, Secretariat for International Landcare (SILC), Australia | | |
| 11:30-12:15 | Role of ICTs in promoting sustainable rural development: Geo-informatics applications | Md. Jashim Uddin, Associate Professor, Department of Soil, Water and Environment, University of Dhaka, Bangladesh |
| 12:15-12:30 | Open Forum | |
| 12:30-13:30 | Lunch break | |
| Session 6: Green packaging (eco-packaging, biodegradable packaging, green packaging, and recycling) and sustainable supply chain models | | |
| Chair: Mr. Syed Saquib Mohyuddin Chairman-PEDF, Pakistan | | |

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| 13:30-14:15 | Value-added innovative and green packaging for fresh produce for SME farms in Asia | Dr.Rodney Wee Principal Consultant Asia Cold Chain Centre, Singapore. |
| 14:15-15:00 | TBD | TBD |
| 15:00-15:15 | Open Forum | |
| 15:15-15:30 | Coffee break | |
| 15:30-16:30 | Country paper presentation (selective) | |
| 16:30-17:00 | Open Forum | |
| 19:00-21:00 | Farewell dinner hosted by Asian Productivity Organization | |
| Day 3: Friday, 28 October 2016 | | |
| 7:00-12:00 | Field visit Organic Farm of Mr. I Wayan Balik Adimerta at Baturiti, Tabanan | Participants |
| 12:30-13:30 | Lunch Break | |
| Session 7: Panel Discussion on the way forward to greening the food supply chain in agrifood business | | |
| Moderator: Leroy Samy Uguy, Head of R & D, MVDDRT | | |
| 13:30-14:00 | Follow-up actions by participants ; Evaluation by Participants, Resource persons and Local Organizers | Dr. Louie A. Divinagracia (Chief expert) Professorial Lecturer, University of the Philippines Los Banos, Laguna, Philippines |
| 14:00-15:45 | Introductory Statements by Panel Members •Open discussions •Wrap up by Chief expert | |
| 15:45-16:00 | Coffee break | |
| Session 8: Summing up and closing ceremony | | |
| Chair: Dr. Anwar Sanusi, Secretary General of MVDDRT | | |
| 16:00-17:00 | Closing remarks - Certificate conferment | - RPs and participants - CIRDAP Representative - APO Representative - Official of NPO Indonesia (tbc) - Secretary General of MVDDRT |
| Day 0: Saturday, 29 October 2016 | | |
| 14:00 | Departure of Participants from Bali | |

參、研習結論

為協助各國推進食物供應鏈綠色化，以及利用創新加強供應鏈生產力和永續性，

本研習會共同討論建議如下：

(一) 政策面

企業的領導及政府輔導措施的支持，以複製及擴大綠色食物價值鏈模式(green agri-food value chain model)，小農及小農場的發展將有預期性的影響。

(二) 技術

1. 鼓勵使用生物能源和生物質技術來生產具有低碳排放性的可再生能源。
2. 參考原住民攜帶食物的方式，輔導小農從生產、包裝、運送及零售新鮮農產品等符合綠色生產技術之基礎。
3. 鼓勵亞洲農民及農民組織採用ICT技術，為農業帶來可持續的效益。

(三) 市場

在綠色農產食品價值鏈中，必須加強市場聯繫和保證公平價格。“綠色”食品必須符合最終用戶的要求，並遵守食品安全和營養標準。

(四) 管理體系

結合農業與生態體系，如禾鴨共生，並可進一步推行至其他亞洲國家。

(五) 教育

透過多元平台及永續教育協助農民及企業參與訓練課程，瞭解綠色食品價值鏈制度。

肆、心得與建議

- 一、近來我國農委會推行的施政方針及執行的重大計畫項目，包括「有機農業」、「產銷履歷」及「地產地消」等，均與本次研討會「農業綠色生產力最佳範例」目的與議題等相關，惟本次研討之議題由自然農法、村落農業到有機法規等涵蓋範圍太廣泛，各國代表背景專精及有興趣之領域亦多不同，且來自亞洲地區計 12 國不同農業型態，不易針對議題進行深入討論，若可與相近似農業型態之國家一起開會研討，例如日本、韓國、中華民國、泰國等東亞地區，討論較能獲得共識。
- 二、本次會議邀請的講師中，來自斯里蘭卡的 Mowjood 博士分享生質能源(Biofuel)推廣成果，Mowjood 博士將原來認為是農業剩餘物，如一般常見的稻殼、菜葉或家禽、家畜之排泄物，在簡易的設備經發酵反應轉為生質能源，直接作為生火的燃料或再儲存為電力，不僅提高二次利用價值，也減少當地砍伐樹木作為柴火的需求及民眾的支出。

伍、參訪研習照片



圖一、全體學員團體照



圖二、斯里蘭卡農戶已實際利用 Mowjood 博士研發的生質能轉換器