



PROJECT NOTIFICATION

Ref. No. 20-AG-28-GE-WSP-A-PN2000017-001

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| PN Issue Date | 27 March 2020 |
| Project Code | 20-AG-28-GE-WSP-A |
| Title | Workshop on Empowerment of Small-scale Farmers in Adopting Internet of Things Technologies |
| Timing and Duration | 7-11 September 2020 (five days) |
| Venue | Kuala Lumpur, Malaysia |
| Implementing Organization(s) | Malaysia Productivity Corporation |
| Maximum Number of Overseas Participants | 19 |
| Maximum Number of Local Participants | 6 |
| Closing Date for Nominations | 26 June 2020 |

1. Objectives

- a) To enhance participants' awareness of global trends in digital agriculture, opportunities that the Internet of Things (IoT) presents for Asian agriculture, and the APO Agriculture Transformation Framework;
- b) To increase understanding of key concepts of smart farming based on advanced ICT solutions such as precision equipment, the IoT, sensors, ge positioning systems (GPS), geographical information systems (GIS), big data, cloud computing, unmanned aerial vehicles (UAVs) and robotics, and the enabling environment needed to attract digital investment for small farmers from the policy and business perspectives;
- c) To review the current status of agricultural digitization in member countries, share successful models of digital agricultural practices applicable to small-scale farms, and discuss strategic actions and enablers needed to promote their adoption in member countries; and
- d) To contribute to member countries' efforts to achieve the Sustainable Development Goals (SDGs) under the UN 2030 Agenda for Sustainable Development, in particular SDG 2 of ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture.

2. Background

Agriculture faces enormous challenges to feed more than nine billion people by 2050, which will require 70% more food production, with shrinking land and water resources for agriculture, aging farming communities, and shortages of productive farm labor. The negative impact of climate change on the performance of both crop and livestock farming will be a major constraint in increasing food production on a sustainable basis. Smart farming, with the potential to develop a climate-resilient, smarter, more competitive and resource-efficient agricultural sector, may offer a solution.

Smart farming is a management concept using advanced technology to increase the productivity and quality of agrifood products. It focuses on providing the infrastructure to leverage advanced ICT for tracking, monitoring, automating, and analyzing agricultural operations. ICT solutions include precision equipment, the IoT, sensors and actuators, GPS, GIS, big data, the cloud, and UAVs such as drones and robotics. These technologies enable farmers and other stakeholders to make more informed, timely, appropriate decisions. Smart farming equipment makes operations easier and more convenient for farmers of all ages and abilities.

Promoting the adoption of smart farming will require addressing key issues of Internet connectivity at farm level in rural areas, connecting ground-based sensors with the iCloud, collecting and analyzing huge amounts of data, developing cheaper IoT devices and sensors, and policy support for small farmers, among others. However, small-scale farmers lack funds for capital investment in smart technologies and may not understand IoT solutions and their benefits. It is thus necessary to devise strategies for supporting small-scale farmers in adopting digital agricultural technologies. Strengthening academia/research–industry–farmer linkages and promoting public–private partnerships (PPPs) will be critical for the development of need-based, cost-effective technologies and their adoption by small farmers to reap the benefits of smart farming on a wider scale. Digitization offers consumers more information on where food comes from and how it is processed, enabling them to make better choices. The traceability of products is also beneficial for upgrading agribusiness in rural areas and adding value to products, which ultimately benefits producers, consumers, and entire food systems.

In developed countries, farmers have access to smart technologies and devices like automated moisture sensors, drones, and smart irrigation systems, while in developing countries, farmers' access to such tools and technologies may be limited. APO member countries are at different stages of digital farming research, development, and adoption. They can learn a lot from each other's experiences.

This workshop is being organized to create awareness of digital agribusiness concepts, global trends, and the opportunities IoT connectivity presents for the future; review the current status of digitization of agriculture in member countries; and share successful models of digital agricultural practices and approaches applicable for small-scale farmers.

3. Scope and Methodology

The workshop will consist of themed presentations, sharing of country experiences, group exercises, and field/company visits.

The tentative program outline of the workshop is given below:

| Date/Time | Activity |
|-------------------------|---|
| Sun., 6 September 2020 | Arrival of participants in Kuala Lumpur |
| Mon., 7 September 2020 | <p>Opening session and registration</p> <p>Technical Session 1: Digital farming: Key concepts, global trends, challenges and opportunities in scaling up, and the way forward</p> <p>Presentation 1: Key concepts and global trends in digital farming and opportunities offered by the IoT</p> <p>Presentation 2: Basic infrastructure and facilities needed for adoption of digital farming, challenges in their development, and transforming those challenges into opportunities</p> <p>Presentation 3: Enhancing the enabling environment for attracting investment in digital agriculture in rural areas</p> <p>Presentation 4: Strengthening academia–industry–farmer linkages and PPPs for promoting need-based R&D on digital farming technologies</p> <p>Presentation 5: APO Agriculture Transformation Framework</p> |
| Tues., 8 September 2020 | <p>Technical Session 2: Smart farming technologies and models in agriculture</p> <p>Presentation 1: Advanced ICT for smart farm management</p> <p>Presentation 2: Digital tools and technologies for smart irrigation management</p> <p>Presentation 3: Digitizing farm machinery for small-scale farmers: Case study</p> <p>Presentation 4: Digital technologies for marketing agricultural produce</p> <p>Presentation 5: Digital technologies for product traceability in agrifood supply chains</p> <p>Technical Session: Sharing the status of readiness for digital farming, current status of adoption of agricultural digitization, and successful models of digital agricultural practices and IoT adoption applicable for small-scale farmers.</p> |
| Wed., 9 September | |

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|---------------------------|---|
| 2020 | Field/site visits |
| Thurs., 10 September 2020 | Group workshop/exercise |
| Fri., 11 September 2020 | Presentation of group workshop output Program evaluation by participants, resource persons, and implementing organization Formulation of individual action plans by participants Summing-up session Closing session |
| Sat., 12 September 2020 | Departure of participants |

4. Qualifications of Candidates

The participants are expected to possess the following qualifications:

| | |
|------------------|--|
| Present Position | Government officials, policymakers, executives of farmers' associations, senior academics, senior consultants, and extension officers engaged in R&D on digital technology applications in agriculture and/or in charge of promoting the adoption of digital agricultural technologies for greater multiplier effects. |
| Experience | At least three years of experience in the position described above. |
| Education | University degree or equivalent qualification from a recognized university/ institution. |
| Language | All proceedings of the project are conducted in English, and participants are frequently required to make oral and written presentations. They must therefore be proficient in spoken and written English. Those who are not proficient in English will not be accepted. |
| Health | Physically and mentally fit to attend an intensive project requiring participants to complete a number of individual and group activities and strenuous fieldwork. It is therefore recommended that member countries do not nominate candidates likely to suffer from physical and mental stress. |
| Age | Candidates who fit the above profile are typically between 30 and 50 years of age. |
| Attendance | Participants are required to attend the entire program. |

5. Requirement

The participants are required to undertake preparatory work such as writing country papers prior to departure for the project venue.

All participants are required to prepare and submit action plans to the APO and to share them with their NPOs within 10 working days after attending the project. The participants are also required to submit postproject follow-up reports six months after project completion to document the achievement of outcome(s) of the project. The NPOs will monitor the follow-up actions and report submission by participants.

The Guidelines for Project Preparatory Work will be provided in the project circular, and the Postproject Activity Guidelines are given in Attachment 1.

5-1. Repeat Participants (who attended previous APO projects and are applying for another)

- a. In the Candidate's Biodata form (application form), candidates are required to provide details of follow-up actions taken after attending a previous APO project(s) and outcomes (benefits) of those activities.
- b. Candidates are also required to state in the Candidate's Biodata form whether they submitted a report on their follow-up actions.

5-2. All Participants

- a. In the Candidate's Biodata form, candidates are required to list their expectations from the project and planned postproject actions/activities. This is a tentative list, which participants are free to revise or replace after attending the project (as in item b below).
- b. All participants are required to develop and submit final follow-up action plans within 10 working days of project completion, in the format to be provided by the APO Secretariat later.
- c. All participants are required to submit reports on the follow-up actions taken within six months (or a period specified for a particular project) of project completion.
- d. The reports on follow-up actions are separate from the trip reports participants usually submit to their organizations/NPOs immediately after returning from project venues. The report format will be provided before project completion.

6. Financial Arrangements

6-1. Airfare

The APO will bear the cost of round-trip economy-class international airfare between the international airport nearest to the participants' place of work and Kuala Lumpur, Malaysia.

Participants should note that the arrangements for the purchase of air tickets should follow the "Guide on Purchases of Air Tickets for APO Participants," which will be sent to the selected participants and is also available on the APO website and from APO Liaison Officers in member countries.

6-2. Insurance Coverage

Participants' insurance premiums: All participants should be fully insured against accident and illness (including hospitalization and death) for a principal sum equivalent to USD10,000.00 for the entire duration of the project and travel and must submit to the APO Secretariat a copy of the comprehensive travel insurance certificate before participation. Such insurance should be valid in the host country. This insurance requirement is in addition to existing government insurance coverage in some member countries. Neither the APO nor the implementing organization will be responsible for any eventuality arising from accident, illness, acts of war, force majeure, or any unexpected events beyond human control such as those related to natural disasters.

6-3. Cost Sharing

Subject to the conditions stated in the Financial Arrangements section, the following table shows the cost-sharing arrangements between the APO, host country, and participants or participating countries.

| Cost item | Cost to be met by | | |
|--|---|--------------|-----|
| | Participants or participating countries | Host country | APO |
| Round-trip economy-class international airfare (refer to paragraph on Airfare for conditions) | No | No | Yes |
| Participating Country Expenses (PCEs) (refer to paragraph on Participating Country Expenses (PCEs)) | NA | NA | NA |
| Hotel accommodation at the Kuala Lumpur | No | Yes | No |
| Per diem allowance at the Kuala Lumpur | No | Yes | No |
| Transportation costs to and from hotel and airport at the Kuala Lumpur | No | Yes | No |
| Insurance coverage in Malaysia (refer to paragraph on Insurance Coverage) | Yes | No | No |
| Any expenses related to visa fees and airport taxes | Yes | No | No |
| All expenses incurred by participants for any reason including but not limited to: a. Stopovers b. Extension of stay c. Early arrival or late departure d. Flight cancellation | Yes | No | No |
| Any cancellation charges for expenses such as airfare and accommodations incurred by the APO or host country after issuance of Letters of Acceptance | Yes | No | No |
| Assignment costs of international resource persons | NA | No | Yes |
| Assignment costs of local resource persons | NA | Yes | No |
| All local implementation costs including but not limited to: a. Meeting rooms b. Documentation c. Preparatory costs | NA | Yes | No |
| Notes: | | | |

7. Actions by Member Countries

a. Each participating country is requested to nominate three or more candidates in the order of preference. Please ensure that candidates nominated meet the qualifications specified under section 4 above.

b. No form of self-nomination will be accepted. All nominations must be endorsed and submitted by an APO Director, Alternative Director, Liaison Officer, or their designated officer.

c. Please note that nomination of a candidate does not necessarily guarantee that he/she will be selected. Selection is at the discretion of the selection committee of the APO Secretariat. A basic criterion for selection is the homogeneity of the participants in terms of qualifications and work experience. Nonselection therefore does not mean that the candidates concerned are not competent enough. Sometimes candidates are not selected because they are overqualified for a project.

d. Each nomination should be accompanied by the necessary documents. A nomination lacking any of these documents may not be considered:

- i. The Biodata Form should be entered in the Document Management System (DMS)/Fleekdrive. The form can be downloaded from the APO website (www.apo-tokyo.org). The Biodata Form (Ver. 1.1) in the Excel (xlsx) format should be uploaded to the specific project folder in nominees' member country folders in DMS/Fleekdrive.
 - ii. The APO Medical and Insurance Declaration/Certification Form must be completed and submitted with candidates' biodata at the time of nomination through DMS/Fleekdrive. Please note that self-declaration is sufficient for candidates without any of health conditions or illnesses listed on the reverse side of the medical form. However, for all others, medical certification by a licensed physician on the reverse side of the medical form is required.
- e. Member countries are requested to adhere to the nomination deadline given on page 1. The APO Secretariat may not consider late nominations as they have in the past resulted in considerable difficulties to the implementing organization in its preparatory work for the project.
- f. For member countries where nominations are required to be approved by higher government authorities and require a longer time, APO Liaison Officers/NPOs are urged to send the names of nominees on or before the deadline, indicating that government approval will follow.
- g. If a selected participant becomes unable to attend, he/she should inform the APO Liaison Officer/NPO in his/her country immediately and give the reason for withdrawal. The NPO concerned is requested to transmit that information to the APO Secretariat and the host country promptly.
- h. NPOs are requested to inform the selected participants that they are not to bring family members or to engage in any private business activities during the entire duration of the project.
- i. Each selected participant should be instructed to arrive at the venue one day before the start of the official project. Also, he/she is expected to return home upon completion of the official project because he/she is visiting the host country for the specific purpose of attending this APO forum.
- j. NPOs should inform participants that they must attend all three days of the project.
- k. NPOs should assist the APO and/or host country in collecting amounts corresponding to cancellation charges arising from withdrawal or no-show of a participant.

8. Actions by the APO Secretariat

- a. Under normal circumstances, candidates who are selected will be informed of their acceptance at least four weeks prior to the start of the project.
- b. If some candidates fail to qualify or be unable to participate after selection, or if some member countries fail to nominate any candidate, their slots may be filled by alternates from the same or another member country on a merit basis.

9. Project Preparation

The participants are required to prepare a short paper prior to departure for the project venue. In preparing the paper, they are expected to follow the "Guidelines for the Preparation of Country Papers" to be provided later.

10. Postproject Actions

All participants are required to prepare action plans and share the plans with their NPOs. The APO also requests participants to submit progress reports six months after completion of the project. In addition, participants taking part in training-of-trainers courses must also submit a report summarizing a training project that they conducted following the action plans to the APO and NPOs within six months after project completion.

11. Evaluation of Participants

If the conduct/attendance/performance of a participant is not satisfactory, these will be reported to the APO director concerned.

12. Guide for Participants

Other conditions for participation are given in the APO Guide for Participants, which is available from APO Liaison Officers/NPOs in member countries and on the APO website (www.apo-tokyo.org).

13. Dress Code

Participants are required to wear business attire during the project. Other instructions will be provided in the circular for participants.

A handwritten signature in dark ink, appearing to read 'Dr. AKP Mochtan', with a long, sweeping flourish extending upwards and to the right.

Dr. AKP Mochtan
Secretary-General

POSTPROJECT ACTIVITY GUIDELINES

The follow-up actions by participants after project attendance determine the extent of multiplier effects (outcomes) of APO projects in member countries. The APO has therefore established an interdepartmental Participant Selection Committee to ensure selection of the most appropriate candidates. A key consideration is whether individuals are in a position, have the ability, and are willing to undertake follow-up actions after project attendance.

Each participant is required to undertake follow-up actions after attending an APO project based on his/her learning from it and report on those activities to the NPO of his/her country and the APO Secretariat, following the guidelines below:

Examples of Follow-up Activities

The examples below are suggestions and are not meant to limit participants' choices of follow-up actions:

- a. An official report on project attendance to participants' organizations, or NPOs, or both;
- b. Newspaper/magazine articles based on learning from the project;
- c. Application of knowledge, skills, techniques, or technologies for improving job performance and/or organizational capacity;
- d. Delivering a presentation or lecture on the project topic;
- e. Conducting a workshop/seminar/conference/forum on the project topic;
- f. Improving training/teaching/extension materials related to the project topic; and
- g. Sharing project findings with colleagues, professional groups, or others.