# PROJECT IMPLEMENTATION PLAN

1 September 2017

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| 1. | **Project Code** | 17-AG-39-GE-NFP-C-02 |
| 2. | **Title** | National Conference on Biofertilizers and Biopesticides—from Development to Promotion |
| 3. | **Reference** | Project Notification 16-AG-30-GE-CON-A dated 30 March 2016; Project Notification 17-AG-39-GE-NFP-C dated 9 May 2017 |
| 4. | **Timing & Duration** | 29–30 November 2017 (two days) |
| 5. | **Venue** | Colombo, Sri Lanka |
| 6. | **Implementing Organizations** | 1. National Productivity Secretariat (NPS), Sri Lanka<br>Ministry of Public Administration and Management<br>10th Floor, Sethsiripaya 2nd Stage, Baththaramulla, Sri Lanka<br>Contact: Mr. W.M.D. Suranga Gunarathne<br>Tel: +94112187100/+94112186031<br>e-Mail: nposlanka@gmail.com<br><br>2. Wayamba University of Sri Lanka<br>Faculty of Agriculture & Plantation Management<br>Makandura, Gonawila<br>Contact: Dr. W.J.S.K. Weerakkody<br>Tel: 031 2299 247<br>e-Mail: weera@mkd.wyb.ac.lk; wjskweeera@gmail.com<br>Web : www.wyb.ac.lk<br><br>3. Sabaragamuwa University of Sri Lanka<br>Faculty of Agricultural Sciences<br>Belihuloya<br>Contact: Dr. M.L.M. Chandrika Dissanayake<br>Tel: +94452280046/Mobile: +94718315626<br>e-Mail: chandrika@agri.sab.ac.lk; chandrikadis@gmail.com<br><br>4. International Water Management Institute<br>Research Department, Resource Recovery and Reuse<br>Water Quality and Environment<br>127, Sunil Mawatha, Pelawatte, Battaramulla<br>Contact: Dr. Sudarshana Fernando<br>Tel: +94-11-2880000<br>e-Mail: s.c.fernando@cgiar.org<br>Web: www.iwmi.org |
| 7. | **No. of Participants** | 100 |

## 8. Objectives

The three major objectives of the conference, acting as pillars to support national-level long-term initiatives as the major outcome, are:

a. To create a forum for local scientists and stakeholders to present and communicate their research programs, scientific findings, and policy interventions;

b. To update local stakeholders on the latest technical and scientific advances at the global level; and

c. To enhance awareness of national policymakers and planners of the socioeconomic importance of including research, development, and regulation of biofertilizers and biopesticides as a key component in national policies on the development of sustainable agriculture (base policies derived from scientific findings).

## 9. Background

More than 50% of the soil in Sri Lanka is poor in organic matter (OM). This is an increasing challenge, especially in areas where drought is common, such as most of the agricultural land of the country with a high drought exposure index due to climate change impact (International Water Management Institute, 2010). The poor OM status of the soil cannot support any lengthy dry periods as expected with climate change, resulting in a potential increase in poverty and food insecurity. However, the use of chemical fertilizers and pesticides in agriculture continues to predominate.

An internal report of the UN WHO (2013) verified that Sri Lanka was the highest per-hectare user of pesticides and the eighth-highest user of chemical fertilizers worldwide. Chemical fertilizers provide major nutrients (nitrogen, phosphorus, potassium) but do not support OM buildup in soil or micronutrients as agricultural inputs. Prolonged overuse of chemical fertilizers leads to direct impacts such as soil quality diminution, environmental pollution, changes in soil properties (e.g., pH), and contamination/pollution of soil and water bodies. The indirect impacts include harm to microorganisms and friendly insects (i.e., soil ecosystems), increased crop vulnerability to pests and diseases, reduced soil productivity, and more health problems for farmers and consumers. There is an urgent need to develop and adopt nonchemical crop nutrition and crop protection management strategies.

Biofertilizers and biopesticides have emerged as potent alternatives to chemical fertilizers and pesticides due to their ecofriendly, nontoxic, cost-effective nature. The use of traditional biopesticides derived from herbal plants is diminishing, and the use of the biopesticides is negligible in Sri Lanka. Locally produced, high-quality organic fertilizers are seldom found on the market on a commercial scale despite a supportive policy environment. However, there are positive developments at the national level, which are likely to encourage the development and use of biofertilizers and biopesticides in Sri Lanka. For example, avoiding the overuse of chemical fertilizers and pesticides due to their food safety and health impacts is high on the national agenda. The Government of Sri Lanka recently launched the three-year national program A Wholesome Agriculture - A Healthy Populace - A Toxin-free Nation (*Wasa Visa nathi Ratak*) with the intention of discouraging the use of agrochemicals in the farming sector.

Therefore, it has become the foremost responsibility of researchers, policymakers, regulatory authorities, and industries to ensure the availability of biofertilizers and biopesticides at competitive market prices for the development of sustainable, safe agricultural and food production systems. The bright side of this is that many universities, state agricultural departments, research institutes, and commercial enterprises are involved in research and product development. However, knowledge sharing to transform scientific findings into practical commercial solutions has been minimal so far due to a lack of linkages among different stakeholders.

This conference will provide a unique platform for bringing together all key stakeholders who will provide inputs to make concrete recommendations and devise action plans for promoting the development and use of biofertilizers and biopesticides in Sri Lanka. The networks created will go a long way in promoting sustainable productivity in agriculture.

## 10. Scope and Methodology

The tentative topics to be covered are:

a. Biofertilizer and biopesticide research findings and projects in Sri Lanka;
b. Global trends and advances in related development, commercialization, legislation, and field-level applications; and
c. Examples of successful commercialization and the future outlook of biofertilizers and biopesticides in Sri Lanka.

The conference will consist of plenary thematic sessions with expert presentations, sharing of experiences, and panel discussions.

The tentative program is given in Appendix 2.

## 11. Requirements of Participants

Participants will be university academics, researchers from agriculture-related institutes, government officials in the agriculture sector (e.g., Ministry of Agriculture, plantation sector), policymakers, practitioners, managers of private-sector companies, and representatives of industries/industry associations/farmers' associations in charge of organic agriculture.

## 12. Resource Persons

The APO will assign one overseas resource person. Local resource persons from relevant agencies will be assigned by the implementing organizations.

## 13. Financial Arrangements

### To be borne by the APO

a. All assignment costs of one overseas resource person.
b. Implementation costs up to a maximum of USD10,000 for making local arrangements. An itemized breakdown of the implementation costs is attached (Appendix 1).

### To be borne by the host country (Sri Lanka)

a. Implementation costs exceeding the APO share of USD10,000.
b. Project management fees and personnel costs of the implementing organizations in Sri Lanka.
c. Any other local implementation costs not covered by the APO.

## 14. Roles and Responsibilities

The roles and responsibilities of the implementing organizations (as listed in section 6 above) and APO are:

**Implementing organizations**
a. Inviting local participants and arranging mass media coverage;
b. Assigning local resource persons;
c. Making copies of the conference materials;
d. Organizing a two-day national conference program in Colombo, Sri Lanka; and
e. Bearing part of the project cost in excess of USD10,000.

**APO**
a. Providing financial support for organizing the national conference as detailed in section 13;
b. Assigning one overseas resource person for the national conference; and
c. Coordinating with the overseas resource person and implementing organizations.

## 15. Procedures for Project Implementation

This project is to be implemented by the three local implementing organizations in Sri Lanka in close collaboration with the NPS and APO Secretariat, referred to as the APO in this document.

a. A temporary advance of up to 50% of the total APO share will be remitted to the local implementing organizations in Sri Lanka, if necessary.

b. The proposed project will be carried out by the implementing organizations.

c. The local implementing organizations in Sri Lanka will make the expenditures for the assigned items and settle the entire account by providing all necessary proof of payment, e.g., bills, payment records, and receipts issued by third parties, which must be submitted together at one time, written in clear English, and with an English translation of all documents not originally written in English. In general, internal evidence is not accepted as proof of payment and will not be reimbursed. The final payment will be made based on the actual expenditure after the implementing organizations submit the project completion report.

d. The local implementing organizations in Sri Lanka will submit a comprehensive project completion report including a statement of expenses to the APO within one month of project completion. The report will provide details on how the project was carried out in the country; program of activities; a registration list of participants and resource persons; statement of the expenses related to the APO's contribution to the project; number and type of participants; benefits and advantages to the local/national rural tourism sector, implementing organizations, and host country; recommendations and follow-up action plans; selected photos; and summary of the onsite evaluation of the program by the participants, resource persons, and implementing organizations along with the original evaluation forms completed by them. Other forms of documentation may also be submitted as part of the comprehensive project completion report.

## 16. Final Project Output

Upon completion of the project, the local implementing organizations in Sri Lanka in collaboration with the NPS will undertake the following:

a. Submit a project completion report on the national conference to the APO and disseminate the report on the proceedings of the conference including recommendations

to relevant government bodies such as the Ministry of Agriculture and/or Ministry of Industry, Sri Lanka within one month after project completion.

b. Submit a statement of expenses supported by third-party receipts/bills within one month after project completion.

c. Submit documents and e-links relating to promotional material on the national program, e.g., newsletters, news articles, brochures, bulletins, and news clippings, written in English or the local language with an English translation of the main points.

d. Disseminate the knowledge and experience gained to the public and private sectors through publications, consulting and training services, etc.

Santhi Kanoktanaporn
Secretary-General

**Appendix 1**

Project Code: 17-AG-39-GE-NFP-C-02

Estimated cost for the APO National Conference on Biofertilizers and Biopesticides—from Development to Promotion (Colombo, Sri Lanka, 29–30 November 2017)

| | Item | Breakdown (USD) | Total (USD) | APO budget (USD) | Local partners & sponsor (USD) |
|---|---|---|---|---|---|
| 1 | Rental cost of conference hall including multimedia | 750 × 2 days | 1,500 | 750 | 750 |
| 2 | Accommodation and breakfast for participants from outside Colombo | 45 × 2 nights × 20 + 50 x 1 night x20 | 2,800 | 2,800 | |
| 3 | Lunch and refreshments for conference days | 25 × 2 × 125 persons | 6,250 | 5,000 | 1,250 |
| 4 | Conference dinner | | 3,500 | | 3,500 |
| 5 | Conference and seminar materials and hall arrangements | | 500 | 500 | |
| 6 | Cost for training materials (seminar cases, notebooks, pens, photos, video, monograph) | 2.50 × 100 sets | 250 | 250 | |
| 8 | Transportation (bus, etc) | | 700 | 700 | |
| 9 | Coordination activities (pre-conference coordination meeting fee, program assistant, etc.) | | 500 | | 500 |
| 10 | Promotion and publicity (invitations, leaflets, T-shirts, streamers, etc.) | | 600 | | 600 |
| 11 | Cost of an overseas resource person (airfare + accommodation) | | 1,500 | | 1,500 |
| 12 | Other expenses | | 1,200 | - | 1,200 |
| | **Total** | | | **10,000** | **9,300** |

**Notes:**

1. The APO will make reimbursement based on the actual expenses for a maximum of USD10,000.
2. The NPS is required to submit to the APO receipts issued by third parties for all expenses incurred in implementing this national project.

**Appendix 2**

Project Code: 17-AG-39-GE-NFP-C-02

APO National Conference on Biofertilizers and Biopesticides—from Development to Promotion (Colombo, Sri Lanka, 29–30 November 2017)

**Provisional Program of Activities**

| Time | Activity | Resource person/Presenter |
|---|---|---|
| Venue:<br>International Water Management Institute (IWMI)<br>Research Department Resource Recovery and Reuse<br>Water Quality and Environment<br>127, Sunil Mawatha, Pelawatte, Battaramulla<br>e-Mail: s.c.fernando@cgiar.org<br>Web: www.iwmi.org | | |
| **Day 1: 29 November 2017** | | |
| 8:00–8:45 | Registration | |
| Opening ceremony | | |
| 8:45–8:50 | National anthem | |
| 8:50–8:55 | Lighting of the traditional oil lamp | |
| 8:55–9:05 | Welcome remarks and introduction to the conference | Dr. W.J.S.K. Weerakkody |
| 9:05–9:15 | Overview of APO programs to improve productivity in organic agriculture | Director, NPS |
| 9:15–9:25 | Address by Vice Chancellor, Wayamba University of Sri Lanka | |
| 9:25–9:35 | Address by Vice Chancellor, Sabaragamuwa University of Sri Lanka | |
| 9:35–9:45 | Address by IWMI | |
| 9:45–9:55 | Address by Secretary, Ministry of Agriculture | |
| 9:55–10:10 | Address by Chief Guest | |
| 10:10–10:15 | Vote of thanks | Dr. M.L.M. Chandrika Dissanayake<br>Faculty of Agricultural Sciences<br>Sabaragamuwa University of Sri Lanka<br>Belihuloya |
| 10:15–10:30 | Tea break | |
| 10:30–10:45 | Presentation 1: Current status of the development and application of biofertilizers in APO countries | Dr. W.J.S.K. Weerakkody<br>Faculty of Agriculture & Plantation Management<br>Wayamba University of Sri Lanka<br>Makandura, Gonawila |
| 10:45–11:45 | Presentation 2: Global trends in the development, commercialization, legislation, and field-level applications | Prof. M.S. Reddy<br>Chairman, Consultant & Entrepreneur<br>Asian PGPR Society, Auburn University |

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| | of biofertilizers and biopesticides | Auburn, AL, USA |
| 11:45–12:15 | Presentation 3: Past experiences and future potential of biofertilizers and biopesticides in Sri Lanka | Expert from Department of Agriculture or Dr. K.M. Mohotti<br>Deputy Director (Research)<br>Tea Research Institute, Sri Lanka |
| 12:15–12:45 | Presentation 4: Biopesticide and biofertilizer regulations in Sri Lanka | Dr. J.A. Sumith<br>Office of the Registrar of Pesticides, Sri Lanka |
| 12:45–1:15 | Open discussion | |
| 1:15–14:00 | Lunch | |
| 14:15–14:45 | Presentation 6: Current status of biofertilizer and biopesticide use and biodynamics in Sri Lankan agriculture | Dr. M.A.P.K. Senevirathne<br>Director General of Export Agriculture |
| 14:45–15:15 | Presentation 7: Private-sector involvement in biofertilizer and biopesticide development and production in Sri Lanka | Representative of horticultural company/ organic grower (TBC) |
| 15:15–15:30 | Open discussion | |
| 15:30–15:45 | Tea break | |
| 15:45–16:15 | Presentation 8: Examples of successful commercialization of biofertilizers in Sri Lanka | Prof. Gamini Senevirathne<br>National Institute of Fundamental Studies<br>Hantana, Kandy |
| 16:15–16:45 | Presentation 9: Successful examples of commercialization of biofertilizers in Australia | Microbiologist<br>Nutrog Biofertilizer Company<br>Australia |
| 16:45–17:30 | **Panel Discussion**<br>What are barriers to/challenges in biofertilizer production and use in the country and which incentives/strategies would be appropriate for promotion? | TBC |
| 19:00–21:00 | Evening gathering for conference participants | |

| **Day 2: 30 November 2017** | | |
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| **Time** | **Activity** | **Resource person/Presenter** |
| 9:00–9:30 | Presentation 10: Examples of development, application, and successful commercialization of biopesticides in APO countries | Dr. M.L.M. Chandrika Dissanayake Sabaragamuwa University of Sri Lanka |
| 9:30–10:00 | Presentation 11: Successful cases of commercialization and the future outlook of biopesticides in Asia and Africa | Dr. Srinivasan Ramasamy<br>Entomologist and Head<br>Entomology Group, World Vegetable Center, ROC |

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| 10:00–10:30 | Presentation 12: Current status of the development and application of biopesticides in Sri Lanka | Prof. Devika Malkanthi De Costa<br>Department of Agricultural Biology, Faculty of Agriculture, University of Peradeniya |
| 10:30–10:45 | Open discussion | |
| 10:45–11:00 | Tea break | |
| 11:00–11:30 | Presentation 13: Current status of the development and application of biopesticides in the plantation sector of Sri Lanka | Dr. (Ms.) N.S. Aratchige<br>Principal Entomologist<br>Coconut Research Institute<br>Bandirippuwa Estate, Lunuwila |
| 11:30–12:00 | Presentation 14: Use of microorganisms in plant disease management in Sri Lanka | R.G.A.S. Rajapakse<br>Horticultural Crop Research and Development Institute<br>Gannoruwa, Peradeniya |
| 12:00–12:30 | Presentation 15: Use of biocontrol agents as biofertilizers in Sri Lanka | Expert from Agriculture Department/industry (TBC) |
| 12:30–13:00 | Discussion | |
| 13:00–14:00 | Lunch break | |
| 14:00–14:20 | Presentation 16: Successful partnerships for development and commercialization of natural pesticides | Dr. R.M. Dharmadasa<br>Research Fellow, Herbal Technology Section, Modern Research and Development Complex |
| 14:20–14:50 | Presentation 17: Successful commercialization of botanical pesticides in Sri Lanka | TBC |
| 14:50–15:10 | Presentation 18: Biopesticide market in Sri Lanka | Expert from industry (TBC) |
| 15:10–16:00 | **Panel Discussion:**<br>How to strengthen national cooperation and national trade in biopesticides and biofertilizers by improving collaboration among government, researchers, academia, and industry | TBC |
| 16:00–16:30 | Establishment of a national stakeholders' platform | |
| 16:30–17:00 | Closing session<br>Closing remarks | Dr. H.A.W.S. Gunathilake<br>Head, Department of Plantation Management, Faculty of Agriculture, Wayamba University of Sri Lanka |