ONLINE THIRD COUNTRY TRAINING PROGRAMME (TCTP) GENERAL INFORMATION ON

"FOSTERING STEM EDUCATION TO PROMOTE SUCCESSFUL LEARNING IN SCIENCE AND MATHEMATICS CLASSROOMS"

18 - 29 October 2021

Joint Collaboration between:





Organised by:



Southeast Asian Ministers of Education Organisation (SEAMEO) Regional Centre for Education in Science and Mathematics (RECSAM)

TABLE OF CONTENTS

GENERAL INFORMATION ON THE COURSE

1.	COURSE TITLE	1
2.	BACKGROUND	1
	OBJECTIVES	2
	OUTPUTS	2
5.	TARGET COUNTRIES, ORGANIZATIONS, AND PARTICIPANTS	2
0.	5.1 Target Countries and Organizations	2
	5.2 Target Participants	2
	5.3 Total Number of Participants	2
6.	REQUIREMENTS FOR ADMISSION	2
0. 7.	COURSE DESCRIPTION	2
1.	7.1 Duration	3
	7.2 Delivery	2
	•	ა ი
	7.3 Language	3
	7.4 Curriculum and Schedule	ა ი
~	7.5 Certificates	3
8.		2 3 3 3 3 3 3 3 4
	8.1 Country Report	
	8.2 Plan of Action (PoA) / Multiplier Effect Proposal	4
~	8.3 Summary Report	4
9.	ALLOWANCES, BENEFITS, AND PARTICIPANTS' RESPONSIBILITIES	5
	GENERAL CONDITONS OF TCTP PARTICIPANTS	5 5
	OTHER GENERAL REGULATIONS AND OBLIGATIONS	5
		6
13.	APPLICATION PROCEDURE	7
	13.1 Application Form	7
	13.2 Endorsement	7
	13.3 Application Submission	7
	13.4 Correspondence	7
	13.5 Notification to the Selected Participants	7
	13.6 Contact Information	8
GEI	NERAL INFORMATION ON COURSE ORGANISERS	
	MALAYSIAN TECHNICAL COOPERATION PROGRAMME (MTCP)	9
-	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	3 11
	SEAMEO RECSAM	12
-	SEAMEO RECSAM	12
API	PENDICES	
1.	TENTATIVE COURSE SCHEDULE	14
2.	GUIDELINES FOR PREPARING A COUNTRY REPORT	16
3.	FLOW OF THE DIPLOMATIC CHANNEL	17
4.	CONTACT INFORMATION OF:	18
••	 Malaysian Mission in the Invited or Nearest Country 	
	 National Focal Agencies in the Invited Countries 	
	 JICA Offices in the Invited or Nearest Country 	
5.	APPLICATION FORM	21

1. COURSE TITLE

This training programme is entitled, "Fostering STEM Education to Promote Successful Learning in Science and Mathematics Classrooms".

2. BACKGROUND

Malaysia supports 144 developing countries under the framework of the South-South Cooperation since 1980 via the Malaysian Technical Cooperation Programme (MTCP). In 1983, Japan started its Third Country Training Programme (TCTP) in Malaysia. Subsequently, Malaysia and Japan began to collaborate in 1992 to assist developing countries under the MTCP Recipient List within this TCTP arrangement. Meantime, upon the launch of Tokyo International Conference on African Development (TICAD) in 1993 by the Government of Japan, JICA streamlined its TCTP in line with the TICAD Initiative.

In this regard, several sectors pertinent to national development of a country have been identified, inter-alia, primary Science and Mathematics education.

STEM refers to the academic disciplines of science, technology, engineering and mathematics. Instead of teaching the four disciplines as separate and discrete subjects, STEM approach integrates them into a cohesive interdisciplinary learning curriculum based on real-world context for educating students. In the 21st century, scientific and technological innovations have become increasingly important as we face the benefits and challenges of both globalization and a knowledge-based economy. To succeed in this new information-based and highly technological society, students need to develop their capabilities in STEM to levels much beyond what was considered acceptable in the past. (National Science Foundation, 2007). Therefore STEM education is an important teaching and learning approach that offers students to make sense of the world and take charge of their learning. Promoting scientific/mathematical processes through inquiry of real life problems and projects provide students the foundations to acquire practical skills as they make their transition from schools to the job markets.

In this course, science/mathematics is intertwined with the other three disciplines. Various strategies such as inquiry-based learning model, problem-based learning, project-based learning and the engineering design approach will be discussed with relation to STEM approach. The inquiry-based learning model incorporates teaching science/mathematics through a process of exploring the world in a contextual manner. This creates a learning environment where learners ask questions, making predictions, making conjectures, discoveries, and generalization in the guest for new understandings. This approach helps make science/mathematics learning more appealing and enjoyable. Through an engineering design approach, learners get to learn and solve daily problems. These different strategies are vitally grounded in support of a meaningful learning that make sense. ICT applications can support STEM education by providing a platform to teach skills such as critical thinking, multitasking, strategizing, and problem solving. ICT embedded learning in STEM opens up the frontier to increase global awareness through collaboration with field experts and sharing best practices in the classrooms of others, support explorations with visual feedback on real world application of STEM concepts. Innovative forms of assessment will be integrated with appropriate teaching and learning to guide and chart the successful learning of science/mathematics.

3. OBJECTIVES

The main objective of the course is to develop participants' knowledge and skills in the teaching and learning of Science/Mathematics through the STEM approach.

4. OUTPUTS

Upon completion of this course, participants would be able to:

- provide appropriate context to promote STEM learning;
- apply relevant strategies to solve real world problems through STEM approach;
- practice STEM multi-disciplinary approach to promote meaningful learning in science/mathematics; integrate ICT in STEM learning of science/mathematics;
- assess STEM related learning using appropriate methods and tools; and
- plan, design, implement, analyze and make conclusion collaboratively on a science/mathematics lesson plan based on STEM approach.

5. TARGET COUNTRIES, ORGANIZATIONS, AND PARTICIPANTS

This course is developed for the following countries, organizations, and participants:

5.1 Target Countries and Organizations

- Ministries of Education:
 - 1. Ethiopia, 2. Ghana, 3. Kenya, 4. Malawi, 5. Nigeria, 6. South Africa,
 - 7. South Sudan, 8. Tanzania, 9. Uganda, 10. Zambia

5.2 Target Participants

- Middle/ senior level of government officials from government ministries and other public agencies charged with education.
- Priority of selection will be given to applicants whose major task as <u>primary</u> science and/ or mathematics teachers/ teacher trainers/ national trainers.

5.3 Total Number of Participants

The number of participants for the course is thirty (30) in total (15 participants/ course) as follows:

15 participants for Science Course

15 participants for Mathematics Course

Each target country is encouraged to nominate more than five (5) applicants.

6. REQUIREMENTS FOR ADMISSION

Applicants of the course are obliged to fulfil the following requirements:

- (1) Should be a civil servant / government official from African countries.
- Should be nominated and obtained approval by their respective country government (detailed procedure is stated in 13. APPLICATION PROCEDURE AND ENQUIRIES);

- (3) Should be able to provide a colour copy of passport or identity card;
- (4) Between 26-50 years of age;
- (5) Should possess a minimum qualification of a diploma/degree in related discipline;
- (6) Should have practical experience of more than 5 years in the primary science and/or mathematics education;
- (7) Should possess a good command of written and spoken English (A phone interview with short-listed candidates will be conducted by the Embassy of Malaysia before a final decision is made);
- (8) Good health, physically and mentally, in order to complete the course;
- (9) Have not participated in any training programme under MTCP;
- (10) Not to be serving in the military;
- (11) Women are encouraged to apply;
- (12) Should possess basic computer literacy skills.

The organizer reserves the right not to consider applications that do not fulfil any of the above criteria.

7. COURSE DESCRIPTION

7.1 Duration

The duration of the course is two (2) weeks for each course. It will be held from **18-29 October 2021.**

7.2 Delivery

The course will be delivered by SEAMEO RECSAM, Penang Malaysia.

7.3 Language

This course will be fully conducted in English.

7.4 Curriculum and Schedule

This course shall include online lectures and assignments and feedback for Science and Mathematics.

7.5 Certificates

Certificates will be awarded upon successful completion of the course and submission of assignments.

8. COUNTRY REPORT, ACTION PLAN AND SUMMARY REPORT

Participants' presentations on the challenges/issues they are facing in their respective countries (8.1 Country Report) and on their Plan of Action (8.2 Plan of Action) are one of the key elements of the course.

Participants are also required to summarize the lessons learnt throughout the course in a form of two-page report (8.3 Summary Report) before the end of the course. The Summary Report will be sent to their respective Ambassador to Malaysia through the diplomatic channel. Participants are also required to report on the process and outcome of the school tryout (8.4 Project Report).

8.1 Country Report

Participants are required to prepare an individual report prior to the course on the areas as listed below:

- Summary of the duties and responsibilities of participants' organisation/agency.(*Note: to be written in individual reports only, not to be included during country presentation sessions)
- Challenges and issues in the participants' respective countries and organisation in science/mathematics education.
- Expectation for the course.

Upon commencement of the course, participants of each country are required to summarise the challenges and issues in their countries and organisation in science/mathematics education. Representative of the respective countries are required to present.

Presentation Time and Tool: The Country Report will be presented at the beginning of the course. Each speaker (representative from each country) is expected to provide a 5-minute presentation which is followed by a 5-minute question and answer session. It is recommended to use MS PowerPoint during the presentation.

For guidelines for preparing country report presentation, please refer to **Appendix 2**.

8.2 Plan of Action (PoA) / Multiplier Effect Proposal

Areas to be highlighted:

- Title of the Plan.
- Plan and implementation strategies for the challenges/problems.
- How to apply knowledge/lessons learnt from the course to the plan.

Participants are required to submit the proposal to their course supervisor which will be then reviewed and advised for any further improvement.

Participants are expected to implement their action plans for enhancing the multiplier effects of the course that they attend. Certificate of Recognition (endorsed by MTCP, JICA and SEAMEO RECSAM) will be awarded to participants who satisfactorily implement the action plans and submit a report as proof of their efforts within two (2) years after the complete implementation of the course.

8.3 Summary Report

Objectives: To summarise lesson learnt throughout the course and how it is approachable to their respective countries (one to two pages).

Deadline for the submission: Not later than the last day of the course to the course supervisor. The report will be sent to the respective Ambassador to Malaysia through the diplomatic channel.

9. ALLOWANCES, BENEFITS, AND PARTICIPANTS' RESPONSIBILITIES

- (1) **No allowances will be paid** to the participants, which includes, but not limited to, per-diem, transportation, accommodation, communication, any other incidental costs to the training participation.
- (2) Participants will, at their own risk and expense, <u>set up all communications</u> <u>environment such as the internet and provide all equipment and</u> <u>devices</u> that are necessary for participants to access the online training.

10. GENERAL CONDITIONS OF TCTP PARTICIPANTS

All applicants are subjected to abide by the following conditions of TCTP participants throughout the course.

Participants shall conduct themselves at all times in a manner compatible with their responsibilities as TCTP participants and abide by Malaysian laws, rules and regulations and specific regulation of the organiser.

- (1) Participants are required to dress appropriately during the course.
- (2) Requests for change of course or extension of the training period will NOT be entertained. Participants should fully participate in all activities related to the course.
- (3) Participants are NOT allowed to conduct any political and/or commercial activities in any capacity whatsoever during the course.
- (4) Participants are strictly advised to ensure that their surroundings is quiet and not surrounded by people during the class session.
- (5) The TCTP participation may be terminated at any time due to unsatisfactory conduct, breach of the conditions of TCTP participants, failure to make satisfactory progress or as deemed necessary by the organiser.

11. OTHER GENERAL REGULATIONS AND OBLIGATIONS

In addition to the conditions stipulated in above, TCTP participants are also required to observe the followings:

- (1) To observe the course schedule by punctual attendance;
- (2) To attend/participate actively in all sessions;
- (3) To carry out instructions and abide by conditions as stipulated by the organiser;
- (4) To discontinue the course, should participants fall seriously ill and be considered unable to continue the course;
- (5) To refrain from committing any illegal or immoral acts. Should participants be found in contravention of this requirement, they will be barred from attending the course and will be asked to leave the course with immediate effect;

- (6) Participants who do not comply with the general conditions, regulations and obligations of the TCTP participants would be reported to their respective Embassies or High Commissions as well as to the Head of their respective organizations;
- (7) Participants will not utilize knowledge and skills acquired in the training for military purposes;
- (8) To not alter, decompile, disassemble or reverse engineer any or all of the information platform software in connection with the provision of the online training;
- (9) To not perform or cause third party to be performed unauthorized access to the information platform used for the online training as far as;
- (10) To not commit any act that would otherwise violate any law, regulation, order or public policy, or interfere with the operation of the online training;
- (11) To not commit any act that would infringe any right of third party or entity, interfere with the use of the online training by third party or entity, or otherwise cause third party or entity trouble or problem.
- (12) Participants will allow the Organizer to record and take photos of the training session.

12. DISCLAIMER

- (1) The Organizer makes every effort to assure the accuracy and completeness of the content of training materials consistent with high technical standards. However the Organizer hereby disclaim all warranties of any kind, express or implied, regarding the accuracy, completeness, quality or fitness for a particular purpose of the materials.
- (2) Online TCTP are provided "as is", and the Organizer make no representation or warranty, express or implied, including but not limited to representation or warranty of technical availability (including the absence of bugs or other failure, or fitness for or compatibility with User's devices, equipment or software), timeliness or continuity of provision of services, merchantability, fitness for a particular purpose, no infringement, the absence of latent or other defects, accuracy, or the presence or absence of errors whether or not discoverable. The Organizer accepts no liability for the conformity of any of the materials with any other materials. Further the Organizer makes no warranty that Online TCTP or any use thereof does not or will not infringe any patent, copyright or other intellectual property rights, or any other rights including right to privacy or reputation of the Organizer or any other person or entity.
- (3) In no event shall the Organizer, its trustees, directors, officers, employees or other affiliates be liable for incidental, consequential or any other damages, including but not limited to economic damages, damage or injury to persons or property, or lost profits, regardless of whether the Organizer has been advised, knows or has reason to know of such damages. However, the above provisions do not apply to any damages incurred by Users resulting from the Organizer's wilful misconduct or gross negligence.

13. APPLICATION PROCEDURE

A government applying for the course on behalf of its nominee(s) shall forward the completed and endorsed Application Form for each nominee to the Government of Malaysia through the diplomatic channels via Note Verbale addressed to the Embassy of Malaysia.

Application procedure and enquiries are as follows:

13.1 Application Form

All applications must be made via the standard application form, which is attached to this brochure and also obtainable from the Embassy of Malaysia or JICA offices in the respective countries. All sections of the form **must be** completely filled or printed according with CAPITAL LETTERS.

13.2 Endorsement

All application forms must be **duly completed and endorsed by the Ministry of Foreign Affairs or National Focal/Aid Coordinator Agency** in the respective countries (the relevant ministry or agency responsible for the overall coordination of international technical assistance).

Please take note that incomplete and/or unendorsed forms will not be processed.

13.3 Application Submission

Application form which has been endorsed and approved should be submitted **ONLY** through the diplomatic channel⁵ via Embassy of Malaysia in the respective countries no later than 15 September 2021.

Note⁵: Application forms **must be submitted from the Ministry of Foreign Affairs in the respective countries with a Note Verbale** to the Ministry of Foreign Affairs in Malaysia via the nearest Malaysia High Commission/ Embassy.

<u>Please take note that the forms that are submitted after the above deadline</u> <u>will not be processed.</u>

The flow of application forms submission (diplomatic channel) is as per **Appendix 3**.

13.4 Correspondence

All nominees must provide current, correct and reliable data as stated below. Confirmation of the course and other notifications will be made using e-mail address.

- Office address, office telephone number and office fax number;
- Residential address and telephone number;
- Contactable hand phone number, and;
- Contactable office and/or personal e-mail address/es.

13.5 Notifications to the Selected Participants

SEAMEO RECSAM will notify successful applicants no later than **30** September 2021 via email.

13.6 Contact Information

Contact information of the following is as per attached in **Appendix 4**:

- Malaysia Embassy or High Commission in the invited countries or in the nearest countries;
- National Focal Agencies in the invited countries; and
- JICA Offices in the invited countries or in the nearest countries.

For any inquiries regarding this course, please contact:

SEAMEO RECSAM

Jalan Sultan Azlan Shah 11700 Gelugor Pulau Pinang, MALAYSIA. Tel.: +604 – 6522 700 Fax: +604 – 6522737

Officer in-charge:

Ms. Bhavani Ramasamy	: bhavani@recsam.edu.my	+604 – 6522 752
Website	: www.recsam.edu.my	
Facebook	: SEAMEO RECSAM	



Malaysian Technical Cooperation Programme (MTCP)

The Malaysian Technical Cooperation Programme (MTCP) was officially launched on 7 September 1980 at the Commonwealth Heads of State Meeting in New Delhi, India, to signify Malaysia's commitment to South-South Cooperation, in particular Technical Cooperation among Developing Countries (TCDC).

The MTCP was formulated based on the belief that the development of a country depends on the quality of its human resources. The programme forms part of the commitment of the Government of Malaysia towards the promotion of technical cooperation among developing countries, strengthening of regional and sub-regional cooperation, as well as nurturing collective self-reliance among developing countries.

The MTCP emphasizes on the aspect of human capital development through the provision of technical training in various areas, which are essential for a country's development. The MTCP offers technical training and capacity building courses in vast areas of development such as in the field of Agriculture; Banking and Finance; Construction Industry; Diplomacy; Disaster Management; Economy; Education; Environment; Health Sciences; Industrial Technical Training; Peace Building; Public Management and Administration; Science, Technology and ICT including IR4.0.

In addition to these key broad areas, the MTCP also focuses on technical programmes in the following sub-areas namely, Oil and Gas Industry, Small Medium Enterprises (SMEs), Palm Oil and Renewable Energy, Retail Services, Halal Economy and Ecosystem, Islamic Finance and Banking, Rural Development, Poverty Alleviation and Technical and Vocational Education and Training(TVET).

Since its launching, more than 34,500 participants from 144 countries have benefited from the various programmes offered under the MTCP. Annually, more than 65 programmes are made available by MTCP training institutions, many of which are centres of excellence for training.

As the national focal point, the MTCP Secretariat of the Ministry of Foreign Affairs, Malaysia oversees the overall planning and operation of all activities and programmes under the MTCP, including coordination and collaboration with local and international development partners.

For further inquiries regarding MTCP, please contact:

MTCP Secretariat International Cooperation and Development Division, Department of Multilateral Affairs Ministry of Foreign Affairs No. 1, Jalan Wisma Putra Precinct 2 62602 Putrajaya MALAYSIA

Telephone	: 603 - 8887 4621/4549
Facsimile	: 603 – 8889 2936
Website	: <u>http://mtcp.kln.gov.my</u>
E-mail	: <u>mtcp@kln.gov.my/</u>



Japan International Cooperation Agency (JICA)

Japan began process of extending aid to developing countries while receiving aid itself from the World Bank in the 1950s. *In 2015, the Government of Japan revise*d the foundation of Japan's Official Development Assistance (ODA) policy and established *Development Cooperation Charter*, in which the term "development cooperation" is used in a broader sense.

- The Japan International Cooperation Agency (JICA) was established in 1974 as a special public institution of the Japanese Government. Currently, JICA is responsible for the implementation of development cooperation which provides technical cooperation, ODA loans and grant aid all under one roof.
- Vision Leading the world with trust
- **Mission** JICA, in accordance with the Development Cooperation Charter, will work on human security and quality growth.

For further information please contact:

Japan International Cooperation Agency (JICA) Malaysia Office Suite 29.03, Level 29, Menara Citibank 165, Jalan Ampang **50450 KUALA LUMPUR** MALAYSIA

Officers in charge: Mr. Egawa Zenjiro, Project Formulation Advisor, e-mail: <u>egawa.zenjiro@jica.go.jp</u> Mr. Tan Siew Chan, Project Manager, e-mail: <u>TanSiewChan.MS@jica.go.jp</u>

Telephone: +603-2166 8900 Facsimile: +603-2166 5900 Website: http://www.jica.go.jp/malaysia/english/index.html

or the nearest JICA Office in your country.

(Addresses of JICA overseas Offices can be found in JICA webpage: http://www.jica.go.jp/english/countries/index.html)



Southeast Asian Ministers of Education Organisation (SEAMEO) Regional Centre for Education in Science and Mathematics (RECSAM)

The Southeast Asian Ministers of Education Organisation (SEAMEO) is an intergovernmental organisation established in 1965 among the governments of Southeast Asian countries to promote cooperation in education, science, and culture in the region. At present, SEAMEO consists of 11 countries, namely, Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor Leste and Vietnam. It has eight associate member countries that include Australia, Canada, France, Germany, Netherlands, New Zealand, Spain and United Kingdom. The SEAMEO Secretariat is based in Bangkok, Thailand.

RECSAM, the Regional Centre for Education in Science and Mathematics, is one of 21 regional centres established by SEAMEO. It is located on the island of Penang in Malaysia and specialised in Science and Mathematics Education. RECSAM's goal is to enhance the quality of science and mathematics education in SEAMEO member countries. To achieve the goal, RECSAM plans and conducts programmes and activities for science and mathematics teachers and educators. These include training programmes (regular, customised and in-country courses), seminars, conferences, congress, workshops, research and development, and publication of journals. RECSAM also provides consultancy services to SEAMEO member countries in these two areas.

The idea to establish a science and mathematics centre was proposed in 1966 by delegates of six SEAMEO countries (Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam). They convened at a workshop in Kuala Lumpur and decided that the training of teachers in science and mathematics in the region should be given priority. Member countries supported the establishment of a regional centre devoted to this function and SEAMEO RECSAM was inaugurated in May 1967. A steering committee was formed to plan policy guidelines and strategies, and the committee came up with a five-year development plan beginning July 1970 - June 1975. The 1st Five-Year Plan was approved at the Fourth Ministerial Meeting of SEAMEO in Jakarta in January 1969. The proposed programmes of training courses and activities that would be undertaken by SEAMEO RECSAM were included in the plan.

In the interim phase, from August 1968 to June 1970, the Centre conducted some courses and workshops using the premises of the Malayan Teachers' College in Penang. The first course conducted by RECSAM was in August 1968 with 20 key educators from the SEAMEO Member Countries who attended the course on Integrated Science and Nuffield Physics, Chemistry and Biology. In June 1969, the Centre conducted a month-long BSCS Philippine Adaptation Course in High School Biology for 20 key personnel from the member countries. This was followed by a few more courses and workshops, before the implementation of the 1st Five-Year Plan in July 1970.

Nearly 50 years have passed since the first regular course started under the 1st Five-Year Plan in July 1970. The Centre has trained key educators from the SEAMEO

Member Countries and beyond. These key educators include supervisors, teacher educators, curriculum designers, and heads of pilot schools, senior science/mathematics teachers, examination officers, research officers, educational administrators, and project organisers. RECSAM also welcomes teachers and educators from beyond the SEAMEO region to its campus community, and continues to make every effort to help them towards the fulfilment of their personal and career goals. The Centre is currently implementing its 10th Five-Year Plan for the period starting from July 2016 to June 2020, as it continues to address the needs and challenges prevailing in the region.

For further information, please contact:

SEAMEO RECSAM

Jalan Sultan Azlan Shah 11700 Gelugor Pulau Pinang, MALAYSIA. Tel.: +604 – 6522 700 Fax: +604 – 6522737

Officer in-charge:

Ms. Bhavani Ramasamy	: bhavani@recsam.edu.my	+604 – 6522 752
Website	: www.recsam.edu.my	
Facebook	: SEAMEO RECSAM	

Appendix 1

TENTATIVE COURSE SCHEDULE (MATHEMATICS)

Date: 18 - 29 OCTOBER 2021 Time: 15:00-18:30 Malaysia (GMT+8)



Third Country Training Programme "Fostering STEM Education to Promote Successful Learning in Mathematics Classrooms"

TENTATIVE TIMETABLE

18-29 October 2021 (9 days)

Course Supervisor: Teh Kim Hong

	Mon	Tue	Wed	Thu	Fri
Course Week 1	18 Oct 2021	19 Oct 2021	20 Oct 2021	21 Oct 2021	22 Oct 2021
1500-1630	Issues of STEM education in math	-	Learning mathematics through STEM	Three-phase model to plan a STEM	Incorporating mathematical processes in
	classroom		challenges	challenge(I)	STEM learning(I)
			JICA		
1700 -1830	STEM learning as a pedagogical approach	-	Key elements of math incorporated in	Three-phase model to plan a STEM	Incorporating mathematical processes in
			STEM challenges	challenge (II)	STEM learning (II)
Week 2	Mon	Tue	Wed	Thu	Fri
	25 Oct 2021	26 Oct 2021	27 Oct 2021	28 Oct 2021	29 Oct 2021
1500-1630	STEM related Web- resources to	Drafting a math lesson via STEM	Teaching math through contextual	Teaching math through project (I)	Teaching math through project (II)
	enhance math learning	approach (I)	problem solving(I)		
1700 -1830	Application tools to enhance math	Assessing STEM learning in a math	Teaching math through contextual	Review a math lesson via STEM approach	Toys and manipulative for math lesson
	learning	lesson	problem solving (II)	(11)	
					JICA

*Opening Ceremony: 18 Oct 2021 (Mon), 1415-1500 *e-Certificate Presentation Ceremony: 29 Oct 2021 (Fri), 1415-1500

TENTATIVE COURSE SCHEDULE (SCIENCE)

Date: 18 - 29 OCTOBER 2021 Time: 15:00-18:30 Malaysia (GMT+8)



Third Country Training Programme "Fostering STEM Education to Promote Successful Learning in Science Classrooms"

TENTATIVE TIMETABLE

18-29 October 2021 (9 days)

Course Supervisor: Dr Loh Su Ling

	Mon	Tue	Wed	Thu	Fri
Course Week 1	18 Oct 2021	19 Oct 2021	20 Oct 2021	21 Oct 2021	22 Oct 2021
1500-1630	Issues of STEM education in Science	-	Inquiry-based learning and science	Instructional designs for learning science	STEM related Web-based tools and
	classroom		process skills	through STEM approach (I)	resources to enhance STEM education
1700 -1830	STEM learning as a pedagogical approach	-	Problem-based and project based	Workshop:	Workshop:
			learning science	Instructional designs for learning science	Application tools to enhance Science
				through STEM approach	learning through STEM approach
Week 2	Mon	Tue	Wed	Thu	Fri
	25 Oct 2021	26 Oct 2021	27 Oct 2021	28 Oct 2021	29 Oct 2021
1500-1630	STEM project-based learning examples	Assessment of STEM approach in	Developing instructional materials and	Strategies and lesson plan for science	Science lesson plan through STEM
		science projects	games	learning through STEM approach	approach
			(JICA)		
1700 -1830	Workshop:	Workshop:	Workshop:	Workshop:	Multiplier Effect
	STEM project-based learning	Assessment of STEM approach in	Developing instructional materials and	developing lesson plan	
		science projects	materials	and multiplier effect	
			(JICA)		

*Opening Ceremony: 18 Oct 2021 (Mon), 1415-1500 *e-Certificate Presentation Ceremony: 29 Oct 2021 (Fri), 1415-1500

<u>Appendix 2</u>

GUIDELINES FOR PREPARING A COUNTRY REPORT PRESENTATION

- 1. **Preparation of country report:** Each participant is required to prepare an individual report prior to the course highlighting areas as listed in 8.1 Country Report, and upon commencement of the course, each country must prepare only one country report for the purpose of presentation.
- **2.** Duration of Presentation: Presentation of the country report can be done by one person or by group. Each country is given a 10-minute session to present their fellow participants and followed by a 5-minute question and answer session.
- 3. **Presentation Material:** It is recommended to use MS PowerPoint during the presentation.

4. Format of MS PowerPoint presentation:

Slide 1 - Brief introduction of the country (1 minute)

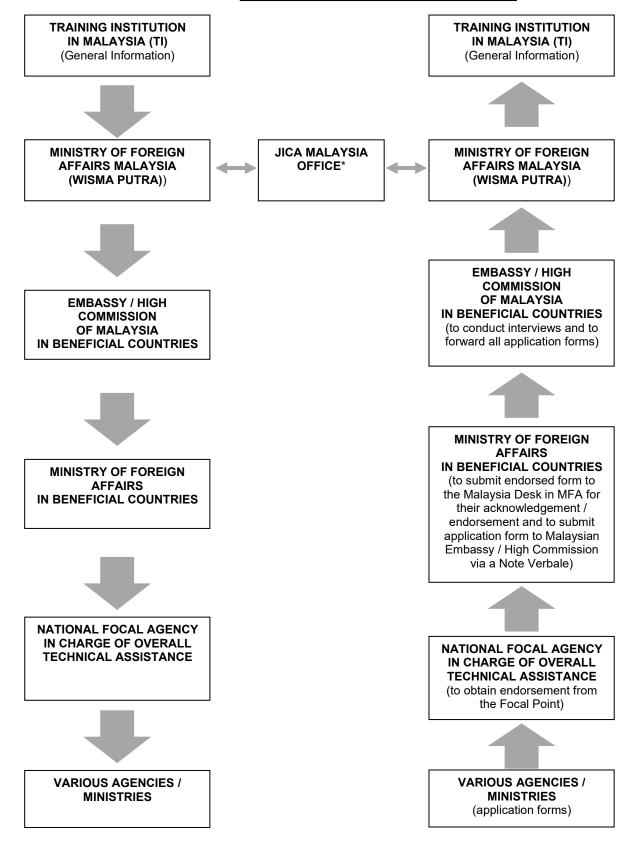
Slide 2– Issues and challenges (5 minutes)

• Challenges and issues in the participants' respective countries and organisation in science/mathematics education.

Slide 3– Expected outcome of the course (4 minutes)

18 - 29 October 2021 Appendix 3

Diplomatic Flowchart for TCTP Courses



*Should a problem be found in the GI distribution in host country, JICA Overseas Office in the country will distribute the GI in lieu.

Appendix 4

CONTACT INFORMATION

COUNTRY	MALAYSIA'S MISSION IN THE INVITED/NEAREST COUNTRY	NATIONAL FOCAL POINT	JICA OFFICE
ETHIOPIA	International Cooperation and Development Division Ministry Of Foreign Affairs, Malaysia (Wisma Putra) No. 1, Jalan Wisma Putra, Precinct 2, 62602 Putrajaya, Malaysia Tel: 03 - 8889 4000 Email: icadd@kln.gov.my	Ministry of Foreign Affairs of Ethiopia P.O.Box 393, Addis Ababa 4/2/2008 Tel: +251-11-551-7345 Fax:+251-11-551-4300 Email: MFA.Addis@ethionet.et	JICA Ethiopia Office Kirkos Sub-city, Wereda: 01, House No: 301 Hansem Building 2nd & 3rd Floor Addis Ababa, Ethiopia. P.O. Box 5384, Addis Ababa, Ethiopia Tel: +251-11-5504755 Fax: +251-11-5504465 et_oso_rep@jica.go.jp
GHANA	High Commission of Malaysia, Accra No. 15, Roman Ridge Ambassadorial Area, Korsah Link 2, Accra, Ghana. Tel: (+ 233 - 30) 2763691 Fax: (+ 233 - 30) 2764910 Email: mwaccra@kln.gov.my	Name: Mr. Maxwell Awiaga Designation : Director Department : Asia and Pacific Bureau Ministry of Foreign Affairs and Regional Integration No 5 Agostinho Neto Rd. Liberation Avenue, Airport Residential Area, Accra, Republic of Ghana Tel (Office) : +233 302-999-604 Email : asiaandpacific@mfa.gov.gh	JICA Ghana Office 2nd Floor, The Elizabeth, No. 68A, Senchi Link, Airport Residential Area, Accra, Ghana. (P.O. Box. 6402, Accra-North, Ghana) *The reception desk is on 1F. Tel: +233-30-2760781, 2760782 Fax: +233-30-2760954
KENYA	High Commission of Malaysia, Nairobi Block 91/404, Gigiri Grove, Gigiri, P.O. Box 42286, 00100 Nairobi, Kenya. Tel: + 254 - 20) 7123373/ 74/ 75 Fax: + 254 - 20) 7123371/ 67 Email: mwnairobi@kln.gov.my	Name: Amb. Galma M. Boru, MBS Designation : Ambassador Department : Foreign Service Academy Ministry of Foreign Affairs Tel: +254 20 3318888 ext: 171 Mobile No. : 0795 957 825 Fax : 224006/34195/344333 Email : fsi@mfa.go.ke or foreignservacademy11@gmail.com	JICA Kenya Office BRITAM Tower, 22nd & 23rd, Hospital Road, Nairobi, KENYA P.O.Box 50572-00200, Nairobi, Kenya Tel : +254 20 2775000 ky_oso_rep@jica.go.jp
MALAWI	Embassy of Malaysia, Harare 40 Downie Avenue Avondale, Harare Republic of Zimbabwe Telephone:+263 242 33 4413/ 14 +263 77 500 1441 (Emergency Only Duty Officer after office hours) Fax: + 263 242 33 44 15 Email: mwharare@kln.gov.my	Name: Ms. Grace Njala Director For Asia, Australia And Pacific Ministry of Foreign Affairs and International Cooperatio n P.O. Box 30315, Capital Hill Lilongwe, Malawi Tel: +265 1 789 088/323 Mobile: +265 999 804 443 Fax: +265 1 788 482 / 516 Email: gbnjala@gmail.com	JICA Malawi Office Pacific House, Area 13, Plot No.100, City Centre, Lilongwe 3, MALAWI Mailing Address: P.O.Box 30321, Capital City, Lilongwe 3, MALAWI Tel : (265-1) 771644 Fax : (265-1) 771125 mw_oso_rep@jica.go.jp

NIGERIA	High Commission of Malaysia, Abuja No. 4A,Plot 2232 B, Rio Negro Close, off Yedseram Street, Maitama Abuja Republic of Nigeria Tel: (+ 234) 92908488 Email: mwabuja@kln.gov.my	18 - 29 October 2021 National Planning Commission (NPC) Plot 421 Constitution Avenue Central Business District F.C.T , Abuja Tel: +234 –98709063 Email: info@npc.gov.ng	JICA Nigeria Office 3 rd Floor, Relais International Business Center, 12 Charles de Gaulle Street, Area 11 – Asokoro, Abuja, NIGERIA Mailing Address: P.M.B. 5090, Wuse, Abuja, Nigeria Tel : +234(0)806-652- 3611/+234(0)701-323-4598 ng_oso_rep@jica.go.jp
SOUTH AFRICA	High Commission of Malaysia, Pretoria No. 1007, Schoeman Street, Arcadia, P.O. Box 11673, Hatfield 0028, Pretoria 0083, Republic of South Africa Tel: (+ 271 – 2) 3425990 / 1 / 2 Fax : (+ 271 – 2) 4307773 Email : mwpretoria@kln.gov.my	Name: Ms P Reddy Assistant Director South East Asia Department of International Relations and Cooperation Republic of South Africa Tel : +27 (0) 12 351 0742 Fax : +27 (0) 12 329 0117 Email : ReddyP@dirco.gov.za	JICA South Africa Office Lord Charles, Building -B, 1 st Floor, Cnr. Justice Mohamed and Brooklyn Streets, Brooklyn, Pretoria, South Africa Mailing Address: P.O.Box 14068, Hatfield 0028, Pretoria, Republic of South Africa Tel : +27-12 346-4493 Fax : +27-12 346-4966
SOUTH SUDAN	High Commission of Malaysia, Nairobi Block 91/404, Gigiri Grove, Gigiri P.O. Box 42286 00100 Nairobi Telephone: +254 20 7123374/5 +254 20 2377720 +254 20 2377732 Fax: +254 20 7123371/67 Email: mwnairobi@kln.gov.my	Name: Amb. Victoria Samuel Aru Director of Training Ministry of Foreign Affairs and International Cooperation, Juba, South Sudan Tel (Office): +211 928 383 357 / +211 916 076 794 Email: mofaic.rss@gmail.com	JICA South Sudan Office Plot No. 300, Block 3-K South, First Class, Hai Thongpiny, Juba, Republic of South Sudan Tel: +211-922-363-343
TANZANIA	High Commission of Malaysia, Nairobi Block 91/404, Gigiri Grove, Gigiri, P.O. Box 42286, 00100 Nairobi, Kenya. Tel: +254 (20) 7123374 / 7123375 Fax: +254 (20) 7123371 / 7123367 Email:mwnairobi@kln.gov.my	Name: Chiku B. Kiguhe Designation : PHRO Ministry of Foreign Affairs and East African Cooperation, (Wizara ya Mambo ya Nje na Ushirikiano wa Afrika Mashariki) Government City, Mtumba Area, 40466 , Dodoma, Tanzania. P.O. Box 2933, Dodoma, Tanzania. Tel: + 255 26 232308 Email : nje@nje.go.tz	JICA Tanzania Office 3rd Floor, ABSA House, 1008/1 Ohio Street, Dar es Salaam (P.O.Box 9450, Dar es Salaam, TANZANIA) Tel : +255- 22- 2113727 – 2113730 Fax : +255- 22- 2112976
UGANDA	High Commission of Malaysia, Nairobi Block 91/404, Gigiri Grove, Gigiri, P.O. Box 42286, 00100 Nairobi, Kenya Tel: (+ 254 – 20) 7123373 / 74 / 75 Fax: (+ 254 – 20) 7123371 / 67 Email: mwnairobi@kln.gov.my	Name: Mr. Michael Abooki Karugaba Designation : Ag/Head Consular Department Ministry of Foreign Affairs P.O.Box 7048, Kampala 2A/B Apollo Kaggwa Road Tel: +256 414 343 319 / +256 772 474 320 Email : mikeabooki@yahoo.co.uk	JICA Uganda Office 4 th Floor, Course View Towers Plot 21 Yusuf Lule Road, Nakasero, Kampala UGANDA Mailing Address : P.O.Box 12162, Kampala, Uganda Tel : +256-393-000014 , +256- 200-911123 Fax : N/A

Third Country Training Programme on "Fostering STEM Education to Promote Successful Learning in Science and Mathematics Classrooms",

ZAMBIA	Embassy of Malaysia, Harare	Name: Joseph Machina	JICA Zambia Office
	40 Downie Avenue, Avondale,	Designation: Senior Human	Plot No.11743A, Brentwood
	Harare, Republic of Zimbabwe	Resource Development Officer	Lane, Longacres, Lusaka,
	Tel: +263 242 33 44 13/14, +263	Department: Administration	Zambia
	8644 20 6676/77, +263 77 500	Ministry of Foreign Affairs of the	(P.O.Box 30027, Lusaka
	1441,	Republic of Zambia	10101, Zambia)
	Emergency Only-Duty Officer	P.O. Box 50069	Tel : +260-211-254501 /
	after	Lusaka,	254508 / 254883
	office hours	ZAMBIA	Fax : +260-211-2545935
	Fax: + 263 242 33 44 15	Tel (Office): +260 211 258 735 /	
	Email: mwharare@kln.gov.my	+260 977 232 136	
		(H/p): +260 961 035 491	
		Email:	
		Joseph.Machina@mofa.gov.zm	

Appendix 5



Please affix Passport size photograph

APPLICATION FORM

FOR OFFICIAL USE ONLY

SHORT TERM COURSE IN MALAYSIA UNDER THE THIRD COUNTRY TRAINING PROGRAMME (TCTP) AND THE MALAYSIAN TECHNICAL COOPERATION PROGRAMME (MTCP)

Reference no	:
Received	:
Checked	:

Please type or write clearly in capital letters. Do not leave any space blank. Use "NIL" or "N/A" where Applicable

Please tick $\sqrt{1}$ your choice. Kindly note that once you have indicate the subject, you are NOT allowed to change. **Application for:** Science Mathematics

TITLE OF COURSE:	Date of commencement:
NAME OF IMPLEMENTING AGENCY :	

1. PERSONAL DATA

Family Name (surname) :		Date of birth :	
		Day Month Year	
First Name :		Nationality (citizenship) :	
Other Names :		Gender :	
		Male / Female #	
City and country of birth :		Marital status :	
		Single / Married #	
Passport No :	Type of Passport:	Religion :	
Expiry Date:			

Delete accordingly

2. COMMUNICATION AND MAILING ADDRESS

Applicant's Office Address :		Applicant's Postal / Home Address :
Mobile Phone Number		Home telephone
	Country Area Number	Country Area Number
Office telephone	Telefax	Email
Country Area Number	Country Area Number	
Person to be contacted in case of	emergency :	
Name :		
Telephone :	Mobile Phone N	lumber:
Address :		
Email :		

NOTE : This application form should be duly completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in your country. Forms which are incomplete or not endorsed will not be accepted 21

3. EDUCATION (list in order of time, starting with last institution attended)

Name of institution and place of study	Major field of study	Years of study : from - to	Degree

EMPLOYMENT RECORD 4.

A. Present or most recent post	B. Previous post
Employer :	Employer :
Years of service (from – to) :	Years of service (from – to) :
Title of your post/position :	Title of your post/position :
Present salary per month (US Dollars) :	Salary per month (US Dollars) :
Name of supervisor and title :	Name of supervisor and title :
Type of organization :	Type of organization
Government / Semi Government / Private / NGO #	Government / Semi Government / Private / NGO #
Main functions of organization :	Main functions of organization :
Total number of employees :	Total number of employees :

Delete accordingly

Description of your work including your responsibility :

Please continue on supplementary pages if necessary

NOTE : This application form should be duly completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in your country. Forms which are incomplete or not endorsed will not be accepted

5. REASONS FOR APPLYING THIS COURSE

Please state briefly the reasons for applying to this course and how you hope to benefit from the programme.

Please continue on supplementary pages if necessary

Have you participated in any training progra	mme in Malaysia before? : YES / No #	
Name of programme	Organizer	Year
Have you participated in any MTCP training	programme in Malaysia before? : YES / NO	#
Name of Course	Name of Training Institute	Year
Have you participated in any JICA programm	ne, including TCTP training, before? : YES / N	NO #
Name of Course	Name of Training Institute	Year

Delete accordingly

6. ENGLISH LANGUAGE PROFICIENCY (Kindly provide certificate as proof of proficiency)

	Excellent	Good	Fair	Basic	Remarks
Listening					
Speaking					
Writing					
Reading					
Mother tongue :					
Language test admi	nistered by	: _			
Title		: _			
Address		: _			
		_			
Tel Number		: _			
Email		: _			
Date and signature		: _			

7. INFORMATION, COMMUNICATION AND TECHNOLOGY (ICT) SKILLS PROFICIENCY

	Excellent	Good	Fair	Basic	Remarks
Microsoft Office					
Email					
Internet					

APPLICANT'S DECLARATION	

I.		of		
-/	Name of applicant		Representing Country	
Declare that:				

- 1. All information provided is true, complete and accurate to the best of my belief and knowledge, and that I have not wilfully suppressed any material facts;
- 2. I am medically fit and free from any medical problems which may impair my ability to attend and complete the training;
- 3. I grant my portrait right licence to MTCP and JICA, which is to allow MTCP and JICA to shoot photographs and/or videos of my participation to the MTCP-TCTP and utilize them for the public relation materials of MTCP and JICA where and when necessary.

Upon successful selection for the training award, I undertake to:

8

- 1. Carry out instructions and abide by such terms and conditions as may be stipulated by the nominating and host governments in respect of this training course;
- 2. Abide by the rules and regulations of the training institution in which i undertake to study in or be trained under;
- 3. Submit/present any report which may be required;
- 4. Refrain from engaging in political activities and any form of employment for profit or gain;
- 5. Return to my home country upon completion of the training; and
- 6. Discontinue the course should i be found guilty of misconduct or be medically unfit.
- 7. Not to utilize knowledge and skills acquired in the training for military purposes.

I fully understand that if I fail to company with the terms and conditions of the training award, and/or any of the above declarations are found to be untrue, the award will be terminated with immediate effect and I will be liable to depart from Malaysia at my own expense.

Date

Signature of applicant

NOTE : This application form should be duly completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in your country. Forms which are incomplete or not endorsed will not be accepted

, hereby declare that I shall b Government of Malaysia anda actions, suits, proceedings, costs or expenses, in part/total, whatsoever law which may be made or taken against the Government of Malaysia a or incurred or become payable by the Government of Malaysia and/or medical illness, personal injury (whether fatal or otherwise), or the d carelessness, negligence, omission or default, in the course of my train is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	all be personally liable for and shall indemnify the against all liabilities, claims, losses, demands, ever arising under the laws of Malaysia or commor sia and/or
at, hereby declare that I shall b Government of Malaysia anda actions, suits, proceedings, costs or expenses, in part/total, whatsoever law which may be made or taken against the Government of Malaysia a or incurred or become payable by the Government of Malaysia and/or medical illness, personal injury (whether fatal or otherwise), or the d carelessness, negligence, omission or default, in the course of my train is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant) Date)	against all liabilities, claims, losses, demands, ever arising under the laws of Malaysia or commor sia and/or
Government of Malaysia and	against all liabilities, claims, losses, demands, ever arising under the laws of Malaysia or commor sia and/or
actions, suits, proceedings, costs or expenses, in part/total, whatsoever law which may be made or taken against the Government of Malaysia and/or or incurred or become payable by the Government of Malaysia and/or medical illness, personal injury (whether fatal or otherwise), or the d carelessness, negligence, omission or default, in the course of my train is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	ever arising under the laws of Malaysia or common sia and/or
law which may be made or taken against the Government of Malaysia a or incurred or become payable by the Government of Malaysia and/or medical illness, personal injury (whether fatal or otherwise), or the d carelessness, negligence, omission or default, in the course of my train is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	sia and/or in respect of any name of the training institute in respect of any name of the training institute in the death of any person, by reason of my
or incurred or become payable by the Government of Malaysia and/or medical illness, personal injury (whether fatal or otherwise), or the d carelessness, negligence, omission or default, in the course of my train is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	l/or in respect of any name of the training institute ne death of any person, by reason of my
or incurred or become payable by the Government of Malaysia and/or medical illness, personal injury (whether fatal or otherwise), or the d carelessness, negligence, omission or default, in the course of my train is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	l/or in respect of any name of the training institute ne death of any person, by reason of my
medical illness, personal injury (whether fatal or otherwise), or the d carelessness, negligence, omission or default, in the course of my train is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	ne death of any person, by reason of my
carelessness, negligence, omission or default, in the course of my train s appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	
is appointed by the Government of Malaysia. Dated this day of 20 Signature of applicant) Name of applicant)	training with which
Dated this day of 20 Signature of applicant) Name of applicant)	name of the training institute
Dated this day of 20 Signature of applicant) Name of applicant)	
Signature of applicant) Name of applicant)	
Signature of applicant) Name of applicant)	
Name of applicant)	
Name of applicant)	
In the presence of	
Signature of Witness)	
Name of Witness)	
Designation of Witness)	
ID or Passport No.)	

NOTE : This application form should be duly completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in your country. Forms which are incomplete or not endorsed will not be accepted

10. TO BE COMPLETED BY THE NOMINATING GOVERNMENT

Reasons for	applicant's selection	
The post wh	nich the applicant will be required to fill upon satisfactory completion of training	
Relevance o	f the course to applicant's job	

NOTE : This application form should be duly completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in your country. Forms which are incomplete or not endorsed will not be accepted

11. TO BE COMPLETED BY THE NOMINATING GOVERNMENT

OFFICIAL DECLARATION				
		т		
On behalf of the Government of	Country	, 1	Name o	f Official
Certify that :				
 I have examined the educationa am satisfied that they are auther The applicant has attained a leve the course of study/training for v 	ntic and relate to the a el of proficiency in bot	pplicant h spoken and writter		
I nominate (Dr/Mr/Mrs/Ms*)		holding Passport	t No/ ID No.:	
for the training course.				
Name and Designation		Sigr	nature and Officia	l Stamp
				-
Name and Organisation		Country code		Office tel no.
Name and Organisation		Country code	Area code	Office tel no.
Email address		Country code	Area code	Office tel no.
	y's Ministry of Foreign	Country code	Area code	Office tel no. or Technical Assistance
Email address Endorsement by the nominating countr	-y's Ministry of Foreign	Country code	Area code	Office tel no. or Technical Assistance
Email address Endorsement by the nominating countr	ry's Ministry of Foreign	Country code	Area code	Office tel no. or Technical Assistance
Email address Endorsement by the nominating countr	ry's Ministry of Foreign	Country code	Area code	Office tel no. or Technical Assistance ess ial Stamp)
Email address Endorsement by the nominating countr	ry's Ministry of Foreign	Country code	Area code hal Focal Point fo Email Addr	Office tel no. or Technical Assistance ess ial Stamp)
Endorsement by the nominating countr Name Designation	ry's Ministry of Foreign	Country code	Area code Area code Thal Focal Point for Email Addr Ministry's Offic Name of Organ	Office tel no. or Technical Assistance ess ial Stamp)
Endorsement by the nominating countr Name Designation		Country code Affairs or the Nation (Area code Area code Email Addr Ministry's Offic Name of Orgar	 Office tel no. or Technical Assistance ess ial Stamp) hisation