



ISTIC
INTERNATIONAL SCIENCE, TECHNOLOGY AND
INNOVATION CENTRE FOR SOUTH-SOUTH
COOPERATION UNDER THE AUSPICES OF UNESCO



ISTIC Certified Training Programme on Science, Technology and Innovation (STI) Policy and Management for Developing Countries (ICPS)

**8th - 15th September 2014
Kuala Lumpur, MALAYSIA**

Organised by

**International Science, Technology and Innovation Centre
for South-South Cooperation under the Auspices of UNESCO (ISTIC)**

In collaboration with

**Ministry of Science, Technology and Innovation (MOSTI)
United Nations Education, Science and Cultural Organization (UNESCO)
Islamic Educational Scientific and Cultural Organization (ISESCO)**

Programme Coordinator

PRIMA Asia Pacific Consulting (PAPC)

Background

An important mandate of ISTIC is to assist UNESCO member countries develop and implement sound S&T policies. In this globalisation era of the knowledge and innovation economy, S&T has become more than ever a critical factor driving the development agenda of nations and assists South countries to develop the capacity to formulate and implement their national S&T policies. As for ISESCO, the objective of its science programme is to provide technical support to member states with a view to developing adequate research policies and programmes, in accordance with the needs of each state in term of technology. It is with this in mind that ISTIC has recently established an S&T Policy Consultative Unit to provide such assistance to member countries. ISTIC's Science, Technology and Innovation Policy Advisory Centre (ISPAC); is committed in developing professionals that will champion the development and implementation of science, technology and innovation for the developing and emerging economies

Essentials of Science, Technology and Innovation Policy – The Policy Framework Approach

In 2013, ISTIC in collaboration with CPTM, ASM and MIGHT published a primer on STI Policy authored by Emeritus Professor Tan Sri Datuk Dr Omar Abdul Rahman. This now forms the foundation of the STI Management programmes for ISTIC.

The Essentials for STI Policy- Certification of Professionals

In many developing countries, many professionals in government, in industry and serving nongovernmental organizations are challenged by the fast pace of technology change. Science and Technology is without doubt a strategic driver that contributes toward the shift from relatively lower end economic activities into high value added activities.

As such, professionals who understand the dynamics of science and technology within the context of economic and market development, are critical to help in designing blueprints and strategic implementation frameworks to lead strategic transformation within countries and organizations.

ISTIC is committed in ensuring developing countries are not left behind in the pursuit of economic advancement, impeded by the absence of a technological capability to harness new opportunities, that will generate income, jobs and revenue for government.

Objective

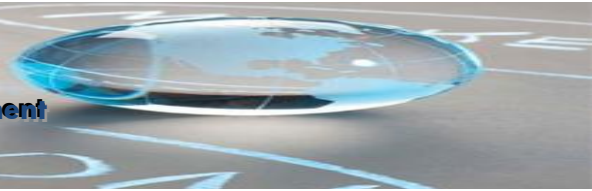
The main objective of training workshop is to provide the necessary knowledge and sharing of experience to participants in order to ensure that they are in good position to face the challenges in driving socio-economic transformation through the strategic management of science, technology and innovation.

Workshop Content

What Will A Learner Get from This Programme?

Adult learners in this programme will be actively involved in:-

- Learning key principles related to STI Policy and Management
- Get to apply Best Practices in STI Management through Projects
- Acquire key competencies in :-
 - o STI Policy and Management
 - o Development of Policy Responses
 - o Applying Technology Management Best Practices in implementing policies
 - o Developing human capital agenda in delivering the STI policies
 - o Creating Support Systems for the National Innovation System
 - o Enhancing National Capacity in STI



Expected Outcome	<p>The outcomes of the training workshop are:</p> <ol style="list-style-type: none">All participants will gain the necessary knowledge and experience on how to formulate STI Policy for their countries.The establishment of networking among and between participants from the various countries in the Developing Countries.Participants trained from the workshop can provide training and leadership on STI Policy formulation to other participants from their own countries.
Participants	<p>About 40 participants from G77 member countries will participate in this training workshop. 30 participants will be from developing countries, ISESCO member countries and 10 participants will be from Malaysia. The combination of participants from developing countries, ISESCO member countries and Malaysia will allow for exchange of knowledge, ideas and experiences as well as opportunities for networking and collaboration.</p>
Workshop Duration and Venue	<p>The training workshop will be held in duration of 8 days and will be held in Kuala Lumpur, Malaysia from 8 to 15 September 2014</p>
Criteria for Participants	<p>The participants should possess the following criteria:</p> <ul style="list-style-type: none">Those who have Bachelor's Degree, Master or PhD in science or related to Policy are preferred.Have experience or have been involved in the development and implementation of STI policy in their home countries.Participants who perform management functions in the middle and upper level of a government organization are preferred.Participants must have good command of English, both in verbal and writing.Participants must be in good health.
Resource Persons	<p>Resource persons will include experts from industry, as well as other local experts from universities and research institutions.</p>
Modes of Delivery	<p>The training workshop will be delivered by using the combinations of the following methods:</p> <ul style="list-style-type: none">Series of lectures.Group discussions and presentations.Case Studies.Study visits to selected local institutions and companies.
Medium of Instruction	<p>The training workshop will be conducted in English.</p>

Certificates

ISTIC Certified Training Programme in STI Policy and Management (ICPS) will be awarded to participants upon successful completion of the course.

Application and Closing Date

All applicants are required to complete the application form as attached in this brochure and submit as early as possible but at the latest by **15 August 2014** to the following address:

International Science, Technology and Innovation Centre
for South-South Cooperation under the Auspices of UNESCO (ISTIC)
c/o Academy of Sciences Malaysia
902- 4, Jalan Tun Ismail
50480 Kuala Lumpur
Malaysia
(Attn: Mr Abdul A'dzim Bin Abd Rashid, Science Officer)

Tel: +603-2694 9898
Fax: +603-2698 4549
Email: adzim@istic-unesco.org

ISTIC will inform the successful applicants to the training workshop not later than **20 August 2014**. Application form also can be downloaded from Website: <http://www.istic-unesco.org>

**ISTIC Certified Training Programme on
Science, Technology and Innovation (STI) Policy and Management
for Developing Countries (ICPS)**

Programme ICPS

Date/ Time	8.30 am – 9.00 am	9.00 am – 10.00 am	10.15 am – 11.15 am	11.15am – 12.15 pm	12.15 pm – 1.00 pm	1.00 pm – 2.00 pm	2.00 pm – 3.00 pm	3.00 pm – 4.00 pm	4.15 pm – 5.00 pm	5.00 pm – 6.00 pm
8 SEP (Mon)	Registration	Opening - Welcome Address by ISTIC Chairman (10 mins) - Welcome Address by ISESCO Representative (10 mins) - Official Opening & Address by Secretary General, MOSTI on Latest Development in STI Policy in Malaysia (40 mins)	Introduction to the Essentials of STI Policy and the Programme Overview – Tan Sri Datuk Dr Omar Abdul Rahman, Coordinator STI Policy, ISTIC	Rise and Fall of Nations and the Role of STI – Prof. Calestous Juma, University of Harvard	Group Activity 1		STI and National Development – The Role of Policy and Management in Developing Countries - Prof. Mohamed H.A. Hassan, Co-Chair, InterAcademy Panel	Group Activity 2	The Six Components of STI Policy and Responses– Tan Sri Datuk Dr Omar Abd Rahman	
9 SEP (Tue)		Briefing on Certification Process by UTM – Prof. Zamri Mohamed, Dean, Perdana School, Universiti Teknologi Malaysia	Human Capital Development – The Malaysian Education Blueprint – Datuk Dr Khair Bin Mohamad Yusof, Director General, Ministry of Education	The Six Components of STI Policy and Responses – Issues and Recommendation – Group Activity 3			Developing Human Capital for a New Industry : Learning from the Biomass Industry Experience – Ms. R. Puvaneswari, CEO, MyBiomass Sdn Bhd	STI Human Capital Pyramid and Group Activity 4		
10 SEP (Wed)	Holistic Human Capital Development Model – Group Activity 5		Technology Management Best Practice (TMBP) Framework – Tan Sri Datuk Dr Omar Abd Rahman	Delivering Innovation, the Last Mile – Tan Sri Datuk Dr Omar Abd Rahman	Applying The Technology Manageme nt Best Practice Framework – Group Activity 6		Applying The Technology Management Best Practice Framework – Group Activity 6	Applying The Technology Management Best Practice Framework for Impact Assessment – Group Activity 7		
11 SEP (Thu)	Assemble at Hotel Lobby	Visit to Ministry of Energy, Green Technology and Water – Creating A New Economy : The Green Economy		Visit to Malaysian Green Technology Corporation – Green Technology in Action		LUNCH	Visit to Malaysian Debt Ventures– Funding for Green Technology	Back to Hotel		
12 SEP (Fri)		A National Innovation System : The Singapore Example – Mr Tan Kai Hoe, Chief Executive, SPRING Singapore	Commercialisation of University Research: The Universiti Putra Malaysia Experience – Dato’ Prof. Mohd Sharif Mohd Din, UPM	Commercialisation in Action: Assessing Funds and Service Providers – Group Activity 8	Bridging the Gap Between Invention, Prenoation and Innovation: Players and Activities – Group Activity 9					
13 SEP (Sat)		The Total National Capacity Concept – Tan Sri Datuk Dr Omar Abd Rahman	National STI Transformation through the Science to Action (S2A) Initiative – Dr Mohd Yusoff Sulaiman, President / CEO, MiGHT	Determining the National Capacity Readiness in STI using the Total National Capacity Framework – Group Activity 10	Free and Easy					
14 SEP (Sun)	Group Project Preparation Part 1 – The Six Components of STI Policy and Responses Part 2 – The TMBP Framework Part 3 – The STI Human Resource Pyramid Part 4 – The Support System for Innovation Part 5 – The Total National Capacity for STI Framework						Continue Group Project Preparation Part 1 – The Six Components of STI Policy and Responses Part 2 – The TMBP Framework Part 3 – The STI Human Resource Pyramid Part 4 – The Support System for Innovation Part 5 – The Total National Capacity for STI Framework			
15 SEP (Mon)		Group Presentation (40 mins)					Group Presentation (40 mins)	Closing Ceremony		

Module	About The Module
Introduction to Essentials of STI	<p>Understanding science, technology and innovation (STI) policy and management and applying it in an effective and efficient manner is essential to all professionals involved in STI. In this module, participants will be introduced to the Five Templates for STI Policy and Management. It is a set of templates that have been developed to help professionals in this area to assess the readiness of organizations and programmes in delivering the anticipated objectives for the stakeholders. Among key elements within this module:</p> <ul style="list-style-type: none"> ▪ Economic Growth and Technology ▪ Growth, Development and STI Management ▪ Policy and STI ▪ The Essentials of STI Policy
The Six Components of STI Policy and the Policy Responses	<p>There are various ways of articulating an STI policy. It can be very academic and analytical in approached or concise and practical leading to a set of clear implementation strategies. However an STI policy which is an integral part, or supportive of a national socio-economic programme, then Policy Development for STI can be developed along these six components. They are:</p> <ul style="list-style-type: none"> ▪ STI Development Responses ▪ STI for Policy and the appropriate Responses ▪ Policy for STI and the appropriate Responses ▪ STI and the Private Sector and the appropriate Responses ▪ STI and the Community and the appropriate Responses ▪ International Collaboration in STI and the appropriate Responses ▪ STI and Governance and the appropriate Responses <p>Participants will utilise the above six components to develop policy responses in addressing issues related to areas for the policy formulation.</p>
Technology Management Best Practice Framework	<p>Technology Management (TM) as defined by CPTM in 1997 is “The mechanism, processes and infrastructure needed to foster, promote, manage and sustain the development of scientific knowledge and technological innovation and related skills and expertise for the attainment and sustainability of the overall national development objectives”. Ten components that make up the Technology Management (TM) Framework as defined above, are identified as follows:</p> <ul style="list-style-type: none"> ▪ Political Commitment ▪ Policy Integration ▪ STI Advisory System ▪ STI Policy Development Planning, Implementation, Coordination, Monitoring and Coordination ▪ Infrastructure for STI Development, Acquisition and Dissemination ▪ Funding & Management of R&D ▪ Mechanism for Commercialisation of Research and Technology ▪ Integrated Human Resource Development ▪ Mechanism for S&T Enculturation ▪ Smart Partnership and Science Ethics Principles and Practices <p>In this module, participants will utilise this framework to strengthen the delivery of the policy responses in the relevant areas.</p>



The STI Human Resource Pyramid and the Holistic Human Capital Development Model

In order to move the STI agenda, a total complement of people is needed. This can be referred to as the STI human resource pyramid, comprising champions at the top, down to the practitioners and implementers at the base. The pyramid comprises:

- Champions
- Advisors
- Popularisers
- Planners
- Managers
- Educators
- Practitioners and Implementers

The workforce for the innovation economy which is the key factor underpinning the five templates described earlier is the knowledge worker. Educating and training the knowledge worker so defined would require the holistic human capital (HHC) development approach which comprises six elements:

- Intellectual Capital
- Skills Capital
- Social capital
- Entrepreneurial capital
- Psychological capital
- Spiritual Capital

In this module, the participants will look at the readiness of the nation for a given area by assessing the readiness of the human capital based on the HC Pyramid and examine the depth of the human capital with reference to the HHC framework.

Delivering Innovation and the Last Mile

In the innovation economy, capacity to innovate and utilize innovation is the determinant of competitiveness. Delivering innovation is therefore a major goal of an STI policy. Technological or product innovation begins as an invention which results from a systematic R&D or from a trial and error tinkering. It is only when the invention is commercialized or in any other ways fully utilized that it becomes an innovation. The main components of the innovation ecosystem at the interface between prenovation and innovation include:

- Finance
- Human Capital
- Institutions
- Laws and Regulations
- Business and Innovation Enablers
- Management Systems

The participants will assess the state of readiness of the innovation ecosystem based on the above components.

The Total National Capacity in STI

When appropriate policy responses, checked against the 10 technology management best practice framework as well as the complete STI human resource are in place then a nation can be said to have a Total National Capacity (TNC) in STI. The TNC comprises:

- Committed Government
- Capable Scientific Community
- Innovative Private Sector
- Science Literate Society
- Efficient Governance System

Participants will be involved in determining the total national capacity of a country

The training workshop is jointly organized by the following organizations:

Co-Organizers

- International Science, Technology and Innovation Centre (ISTIC)

In Collaboration with

- Ministry of Science, Technology and Innovation (MOSTI)
- United Nations Education, Science and Cultural Organization (UNESCO)
- Islamic Educational Scientific and Cultural Organization (ISESCO)

Programme Coordinator

- PRIMA Asia Pacific Consulting (PAPC)



The creation of the International Science, Technology and Innovation, centre for South - South Cooperation under the auspices of UNESCO (ISTIC) is a follow up of the Doha Plan of Action which has been adopted by the head of States and Government of the Group of 77 and China, during the meeting in Doha, Qatar, from 12 to 16 June 2005 on the occasion of the Second South Summit of the Group of 77. The Summit urged UNESCO to develop and implement a programme for South - South cooperation in science and technology with the objective of facilitating the integration of a developmental approach into national science and technology and innovation policies, capacity building in science and technology through providing policy advice and exchange of experience and best practices, and creating a problem solving network of centres of excellence in developing countries as well as supporting the exchange of students, researchers, scientists and technologists among developing countries. ISTIC will act as an international platform for South-South cooperation in science, technology and innovation and make use of the network of the G77 plus China and the Organization of the Islamic Conference (OIC). The overall goal of ISTIC is to increase the capacity for management of science, technology and innovation throughout developing countries. ISTIC Secretariat is hosted by the Academy of Sciences Malaysia (ASM) for five years before making ISTIC an autonomous organization. Details on ISTIC is available at www.istic-unesco.org



UNESCO was founded on 16 November 1945. UNESCO functions as a laboratory of ideas and a standard-setter to forge universal agreements on emerging ethical issues. The Organization also serves as a clearinghouse – for the dissemination and sharing of information and knowledge – while helping Member States to build their human and institutional capacities in diverse fields. In short, UNESCO promotes international co-operation among its 193 Member States and six Associate Members in the fields of education, science, culture and communication. UNESCO is working to create the conditions for genuine dialogue based upon respect for shared values and the dignity of each civilization and culture. This role is critical, particularly in the face of terrorism, which constitutes an attack against humanity. The world urgently requires global visions of sustainable development based upon observance of human rights, mutual respect and the alleviation of poverty, all of which lie at the heart of UNESCO's mission and activities. Details on UNESCO is available at www.unesco.org



**MINISTRY OF SCIENCE,
TECHNOLOGY AND
INNOVATION
(MOSTI)**

The Ministry of Science, Technology and Innovation (MOSTI) was formed after the restructuring of the former Ministry of Science, Technology and Environment (MOSTE) in 2004. MOSTI's main role include harnessing Science, Technology and Innovation (STI) and human capital to value-add the agricultural and industrial sectors and to develop the new economy, particularly through information and communications technology (ICT), and biotechnology. With the introduction of National Innovation Model in 2007, MOSTI's main goal is in transforming Malaysia from the knowledge - based economy, pivoting Science & Technology to Innovation and produces the wealth creation and societal well being. Malaysia's Innovation Model can best be described as a balanced approach between technology driven innovation and market driven innovation. In a technology driven innovation model, scientists are funded for R&D, and technology will be developed organically thus eventually commercializing their ideas for the global market. Whilst in a market-driven innovation model, the market is determined before hand by knowledge entrepreneurs who will acquire the best science and technology. This will provide rapid commercialization to meet the needs of the market. The Government continues to drive organic technology development from science, with a focus on raising the yield of taking science to technology; in particular by encouraging merit-based allocation of funding among public research institutions for S&T research; Priorities on basic research to be set based on national technology needs and the need to maintain national technology security. Details on MOSTI is available at www.mosti.gov.my



**ISLAMIC EDUCATIONAL,
SCIENTIFIC AND
CULTURAL
ORGANIZATION
(ISESCO)**

ISESCO is a specialized institution under the umbrella of the Organization of Islamic Cooperation (OIC), which was set up following its Founding Conference held in Fez, Kingdom of Morocco on 3-5 May 1982. The objectives of ISESCO include strengthening cooperation among Member States in the fields of education, science, culture and communication, and promoting applied sciences and advanced technologies within the framework of the lofty and perennial Islamic values and ideals. Since its inception, ISESCO has been witnessing steady progress in discharging its civilizational mission and the duties developed upon it and in meeting its targets. At the level of prospective and strategic planning, sixteen major Strategies and their effective Implementation Mechanisms were laid down and 3 Medium-Terms Action Plans and 11 Three-Years Action Plans have been implemented. Various international, regional, and national activities have been planned and organized in cooperation with more than 200 specialized renowned institutions such as UN agencies, regional institutions and NGOs and prestigious national universities and research centres. ISESCO has lent support to young scientists and researchers in the Member States through its subsidiary institutes and centres of excellence like ISESCO Centre for Promotion of Scientific Research (ICPSR) and Islamic World Science Citation Centre (ISC), etc. The Headquarters of ISESCO is based in Rabat, the capital of the Kingdom of Morocco. Detail on ISESCO is available at www.isesco.org.ma



REGISTRATION FORM

FOR OFFICIAL USE ONLY		PLEASE AFFIX LATEST PASSPORT PHOTOGRAPH
REFERENCE NO.		
RECEIVED		
CHECKED		

Title of Course	Date, Duration & Venue of Course
ISTIC Certified Training Programme on Science, Technology and Innovation (STI) Policy and Management for Developing Countries (ICPS)	8 – 15 September 2014 Kuala Lumpur, Malaysia

PERSONAL PARTICULARS	
Family Name (Surname)	Date of Birth (Date/Month/Year)
First Name	Gender (Male/Female)
Designation : Prof. /Dr /Mr /Mrs /Ms / _____	I/C Number

COMMUNICATION & MAILING ADDRESS							
Applicant's Office Address				Applicant's Home Address			
	Country	Area	Number		Country	Area	Number
Tel				Tel			
Fax				Fax			
Mobile				Email			

Person to be Contacted, in Case of Emergency	
Name	Address
Tel. No.	



EMPLOYMENT RECORD				
Title of Post				
Employer				
Duration of Service				
Type of Organization (Please ✓ box)			Main Functions of Organization	
<input type="checkbox"/>	Government	<input type="checkbox"/>		Private
<input type="checkbox"/>	Semi-Government	<input type="checkbox"/>		NGO
Description of your current work including your responsibility (Please use supplementary pages, if necessary)				
DECLARATION				
Name:		Signature of Applicant:		
Date:				

Registration Fee: RM2,500

Mode of Payment

Payment can be made using crossed cheques or bank drafts made payable to **Akademi Sains Malaysia (ISTIC)**. For all telegraphic transfers, please notify the secretariat before effecting the transfer. All transfers should be directed to the following account:

Account Name: AKADEMI SAINS MALAYSIA (ISTIC)
 Account No.: 140 140 10139359
 Bank: Bank Islam Malaysia Berhad
 Branch: Menara Bank Islam, Tingkat Bawah, No. 22, Jalan Perak, 50450 Kuala Lumpur

Please send a copy of the transfer slip to the Secretariat. An acknowledgement will be sent on receipt of payment

**Note: 1) Substitution is allowed for registered participant, cancellation will not be entertained.
 2) Fee is NOT inclusive of accommodation.**



**International Science, Technology and Innovation Centre
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50480 Kuala Lumpur
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