



On the occasion of the 7th Asia-Pacific Regional Centres of Expertise Annual Meeting

**INTERNATIONAL SYMPOSIUM:  
"A DECADE OF REGIONAL CENTRES OF EXPERTISE  
ON EDUCATION FOR SUSTAINABLE DEVELOPMENT:  
REFLECTIONS AND ADVANCES IN ASIA-PACIFIC"**

27 AUGUST 2014  
UNIVERSITI SAINS MALAYSIA, PENANG, MALAYSIA

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## INTERNATIONAL SYMPOSIUM: “A DECADE OF REGIONAL CENTRES OF EXPERTISE ON EDUCATION FOR SUSTAINABLE DEVELOPMENT: REFLECTIONS AND ADVANCES IN ASIA-PACIFIC”

27 August 2014, Universiti Sains Malaysia, Penang, Malaysia

This document records the presentations, dialogues and discussions arising out of the International Symposium “A Decade of Regional Centres of Expertise on Education for Sustainable Development: Reflections and Advances in Asia-Pacific”, organised on the occasion of the 7th Asia-Pacific Regional Centres of Expertise (RCEs) Meeting.

The 7th Asia-Pacific Regional Centres of Expertise (RCEs) Meeting took place on 26th August 2014 and the Symposium, on 27th August 2014. Both events were held at the Universiti Sains Malaysia (USM) and organised by RCE Penang in close collaboration with the United Nations University Institute for the Advanced Study of Sustainability (UNU IAS) and RCE Penang stakeholders, including: Penang State Education Department, SEAMEO-RECSAM, Minden Height Primary School, Seberang Prai Municipal Council, Tun Syed Sheh Shahabudin Science School and the Association of Science and Mathematics Penang.

**Citation:**

RCE Penang (2014). International Symposium: “A Decade of Regional Centres of Expertise on Education for Sustainable Development: Reflections and Advances in Asia-Pacific.” Minden, Universiti Sains Malaysia.

**Editing and Coordination:**  
RCE Penang

**Design and Layout:**  
Nurul Anwar Bin Ibrahim

**Published by:**  
Universiti Sains Malaysia  
Minden Campus  
11800 – Penang  
Malaysia



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2014 is a special year for Education for Sustainable Development (ESD) policy-makers, experts and practitioners as it is marking the end of the United Nations Decade of Education for Sustainable Development (UN DESD, 2005-14) and seeing the launch of the new UNESCO Global Action Programme (GAP) on ESD. It is in this context that many stakeholders and organisations are currently reviewing progress made in ESD and developing future strategies which can accelerate the process of embedding ESD across education and learning systems.

The International Symposium "A Decade of Regional Centres of Expertise on Education for Sustainable Development: Reflections and Advances in Asia-

Pacific" took place on 27 August 2014 at the Universiti Sains Malaysia (USM), Penang, Malaysia. The Symposium sought to engage ESD stakeholders in reflecting on the achievements and challenges of implementing ESD in the Asia-Pacific region for the past 10 years. More specifically, the event provided opportunities to identify and reflect on the contributions made by Regional Centres Expertise (RCEs) in Asia-Pacific and discuss possibilities for advancing and furthering the ESD agenda beyond 2014 and post 2015.

The Symposium was organised by RCE Penang in close collaboration with the United Nations University Institute for the Advanced Study of Sustainability (UNU IAS) and RCE Penang stakeholders:

Penang State Education Department, SEAMEO-RECSAM, Minden Height Primary School, Seberang Prai Municipal Council, Tun Syed Sheh Shahabudin Science School and the Association of Science and Mathematics Penang. It counted with the participation of around 300 delegates, including: 17 RCEs from 11 countries; local government stakeholders; representatives from local associations and non-governmental organisations; school teachers and students; and, university academic staff and students. This diversity reflected one of the central tenets of the event, that the solutions to today's challenges require commitments and contributions from everyone.

### What is a Regional Centre of Expertise (RCE) on ESD?

An RCE is not a physical centre or building, but rather a network of individuals, organisations and experts who are committed to using education as a tool for building a sustainable future. Each RCE is regionally-based and RCE members bring in-depth knowledge of the challenges facing their respective regions. RCEs aspire to achieve the goals of the DESD and the GAP by building an innovative platform for multi-stakeholder and interdisciplinary information-sharing, dialogue and collaboration at local and global levels. Their networks include formal learning institutions, informal learning establishments, local governmental organisations, non-governmental organisations and media.

There are currently 129 RCEs in the world which constitute the Global Learning Space for Sustainable Development. RCEs in Asia-Pacific have a long tradition of collaboration and gather once a year at an annual meeting to share good practice and experiences as well as discuss strategies to advance ESD in the region. RCE Penang was the host of the 2014 RCE Asia-Pacific Annual Meeting and Symposium.

The RCE Global Secretariat is based at the United Nations University Institute of Advanced Studies of Sustainability (UNU IAS) in Tokyo, Japan. The Secretariat is responsible for the coordination of global and regional activities and engagement of RCEs.

Website: <http://rce-network.org/portal/home>



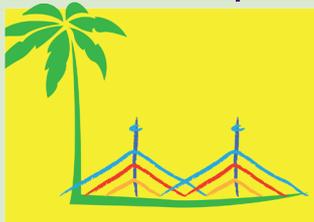
7<sup>th</sup> Asia-Pacific RCE Meeting

RCE Penang is a multi-stakeholder platform of partners which provides ESD networking and learning opportunities and promotes collaborative projects in the state of Penang (Malaysia). Through active and social learning processes, it engages a wide range of community partners including local schools, government agencies and non-governmental organisations in change for sustainability. RCE Penang flagship initiatives are the Regional Sejahtera ESD Network (RSEN) and the Sejahtera Club.

RCE Penang was one of the first RCEs in the world acknowledged by UNU IAS and the host of the 1st and 7th Asia-Pacific RCE Annual Meetings in 2007 and 2014 respectively.



Regional Centre of Expertise  
on Education for  
Sustainable Development



Website: <http://www.rce-penang.usm.my/>

### Flagship initiatives



RSEN is a dynamic network of local and regional stakeholders in Penang engaged in collaborative undertakings such as research and development in key thematic areas of ESD. RSEN was launched in May 2014 and currently counts with 35 members (educational institutions, local government agencies and non-governmental organisations).



Sejahtera Club is a co-curricular education initiative led by RCE Penang and facilitated by primary and secondary schools, which has been created with the aim of developing students' leadership capabilities in ESD. RCE Penang provides 1-1 support and guidance to schools and teachers to develop ESD projects and resources for the Clubs.





**Prof Munirah Ghazali,  
Co-ordinator, RCE Penang  
Malaysia**

Prof Munirah Ghazali thanked distinguished guests, international participants and local delegates for participating at this event and contributing to create a stimulating atmosphere for rich discussions and debates on ESD. Prof Munirah Ghazali clarified that this event was organised on the occasion of the 7th Asia-Pacific RCE Meeting which took place on the previous day and where RCE colleagues had the opportunity to discuss strategic action plans beyond 2014. She introduced to participants the dynamics and sessions of the day and announced that the outcomes of the Symposium would be taken to the 9th Global RCE Conference during 4-7 November 2014 in Okayama, Japan.



**Prof Mario Tabucanon  
Visiting Professor, UNU IAS  
Japan**

Prof Mario Tabucanon started his opening remarks by thanking RCE Penang, USM and the Conference Committee for organising the Symposium. He reminded participants that the first Asia-Pacific RCE Meeting took place in Penang in 2007. Back then, the RCE community was formed by a few RCEs. The family has considerably grown and now counts with 129 RCEs scattered across all regions in the world. Today, it continues to expand especially in Asia-Pacific, which is the home of 27 RCEs.

Prof Mario Tabucanon explained that the RCE initiative is a response to the DESD to implement its global objectives at the community level. The DESD is now ending, but UNU IAS has committed to supporting the initiative and implementing the GAP beyond 2014. He emphasised that this event was timely to discuss the new UNESCO ESD Programme and a prelude to the commemorative events taking place in November 2014 in Japan: the UNESCO World Conference on ESD, the 9th Global RCE Conference, the Higher Education for Sustainable Development Conference and the Youth Conference.





**Ms Yuko Kimura**  
**Deputy Director, Office of Environmental Education, Environmental Policy Bureau, Ministry of Environment**  
**Japan**

On behalf of the government of Japan, Ms Yuko Kimura thanked all guests and RCE Penang colleagues and stakeholders for organising the Symposium. She also thanked UNU IAS for the continuous support in promoting ESD through the Global RCE Secretariat. She emphasised the importance of regional collaboration to advance ESD. RCE is a pioneering initiative as it promotes in-country and international networking and provides opportunities for forging new partnerships.

Ms Yuko Kimura stressed that the government of Japan is highly committed to ESD and will support the implementation of the GAP as well as the work of RCEs. Its commitment is also reflected on the organisation of numerous DESD commemorative events which will take place in November 2014 in Japan. Ms Kimura ended her welcome remarks by wishing participants fruitful discussions which could serve as key inputs for the 9th Global RCE Conference and UNESCO World Conference on ESD.



**Prof Dato' Dr Omar Osman**  
**Vice-Chancellor, USM**  
**Malaysia**

Prof Dato' Dr Omar Osman thanked distinguished guests and speakers and welcomed everyone to USM. He emphasised that this event aimed to sharing experiences and good practice in ESD. International participants would be able to visit local schools in Penang and see in first-hand the work carried out in the area of ESD. Local colleagues would have the opportunity to learn from the most innovative international initiatives.

Prof Dato' Dr Omar Osman stressed that the RCE movement has the same objective worldwide, but is also diversified in its nature. That makes the RCE family very special and different from other initiatives. He thanked UNU IAS for its role in pushing this work and promoting ESD at all education levels through the RCE initiative and other international programmes. He also thanked the government of Japan for its commitment to the ESD agenda and to continue supporting the RCE initiative.



## “10 Years of ESD: Best Practice, Reflections and Future Sejahtera Endeavours”



Prof Dato' Dr Omar Osman  
Vice-Chancellor, USM  
Malaysia

Prof Dato' Omar Osman summarised the sustainability journey of USM during the past ten years, stressing how the University has moved from having pockets of sustainability initiatives to embedding sustainability as an institutional strategic priority.

A higher education institution needs to face the challenge of sustainable human development through its education, research and social services, and ensuring quality and relevance to the needs of its surrounding community. This is not an easy task, but more than a decade ago, USM decided that ESD would be the process by which the University would make its contribution to a more sustainable future and society.

In 2007, USM applied for the Accelerated Programme for Excellence (APEX), which is one of the most ambitious funding programmes aimed at transforming higher education systems in Malaysia. USM was one of the few institutions selected, based on its state of readiness, transformation plans and preparedness for change, and with the ambition of becoming a sustainability-led University. With APEX, USM defined its new vision of transforming higher education for a sustainable tomorrow and its mission of becoming a pioneering, transdisciplinary research intense university that empowers future talent and enables bottom billion to transform their socio-economic well-being. A sustainability roadmap for USM-APEX was developed in order to embed sustainability in all University activities and processes, including teaching

and research, outreach/partnerships, campus sustainability engagement and corporate greening. A University Sustainability Council was also created as an authoritative group on matters related to sustainability at the University. Council members are responsible for discussing sustainability policy matters and ensuring policy implementation in this area.

USM also counts with numerous centres which support the transformation agenda in the area of sustainability. Some examples include:

- Centre for Global Sustainability Studies (CGSS): an academic center that delivers specific sustainability under- and postgraduate programmes and engages in policy research, scientific assessment and capacity-building in the area of ESD.
- Campus Recreational Park: a USM strategic effort to preserve part of the institution's land as a green lung and protect its biodiversity for learning and research purposes.
- Kampus Sejahtera: an initiative led by young professionals and students to promote peace, healthy lifestyles and wellbeing in the campus. Through using available internal resources and expertise and promoting student volunteerism, cooperation and team work, the Kampus Sejahtera involves the university community to make the campus a healthy and sustainable place.
- Eco Hub: a centre at USM that documents, protects, restores, enriches and monitors campus ecology. The eco hub is a reference research centre in Malaysia in areas such as medical and

exotic plants.

- Centre for Education and Training in Renewable Energy, Energy Efficiency and Green Technology (CETREE): a centre that provides capacity development training in the area of sustainable energy to primary and secondary schools, government agencies and higher education institutions.
- RCE Penang: the community/public engagement sustainability arm of the University. It is the host of the Regional Sejahtera ESD Network (RSEN) that is composed of 35 community stakeholders engaged in sustainability. It is also the host of the Sejahtera Club initiative that aims at developing school students' ESD leadership capabilities.

USM is also the secretariat for various international networks related to sustainability: Asia-Pacific University Community Engagement Network (APUCEN); South East Asia Sustainability Network (SEASN); Global Higher Education Network (GHEN); and, Asean Local Knowledge Network (ALKN).

Prof Dato' Dr Omar Osman concluded that many positive outcomes have been achieved, but that there are still many efforts to be made. USM ambitions is to becoming a sustainability benchmark for universities in Malaysia in three years, in Asia in five years, and globally in 10 years.



## The Global Action Programme (GAP) of ESD



Prof. Mario Tabucanon  
Visiting Professor,  
UNU IAS  
Japan

Prof Mario Tabucanon, as facilitator of this session, presented the GAP on ESD and asked panellists to focus on one of its priority areas. The overall goal of the GAP is to generate and scale up action in all levels and areas of education and learning to accelerate progress towards sustainable development. The objectives are to:

- Re-orient education and learning so that everyone has the opportunity to acquire the knowledge, skills, values and attitudes that empower them to contribute to sustainable development; and,
- Strengthen education and learning in all agendas, programmes and activities that promote sustainable development.

The GAP on ESD focuses on the following priority action areas, which are built on successes, challenges and “unfinished business” of the DESD:

- Integrate ESD into international and national policies in education and sustainable development.
- Promote whole-institution approaches to ESD at all levels and in all settings.
- Strengthen the capacity of educators, trainers and other change agents to become learning facilitators for ESD.
- Support youth in their role as change agents for sustainable development through ESD.
- Accelerate the search for sustainable development solutions at the local level through ESD.

## Policy support in mobilising education and learning for sustainable development and the scaling up of ESD action



Tn. Hj. Juhaimi Hj Jusoh  
UNESCO-International Hydrological Programme (IHP)  
Malaysia

Malaysia started to engage in sustainable development back in 1992 with the Rio Summit in Brazil. Since then, Agenda 21 has been embedded in government policy and implemented locally. Later, it further engaged in key strategic international dialogues and agendas such as the Millennium Development Goals (MDGs) in 2000, the Johannesburg Summit in 2002 and the DESD from 2005 onwards. Sustainable development has been included in national resource management policies such as water, climate change, biodiversity and forestry; and sustainability education has been promoted through policies such as the National Water Resource Policy, which includes one special chapter on capacity building and raising awareness.

UNESCO IHP promotes international scientific cooperation in water research; supports water resources assessment and management to achieve environment sustainability; provides policy advice on issues related to hydrological science; and promotes education and capacity building for sustainable development. UNESCO educational programme in Malaysia includes technical talks on water and the environment; student camps; research and development activities; development of awareness raising publications; and celebration of the World Day for Water.



## Whole-institution approaches to ESD at all levels and in all settings



**Prof. Tan Sri Dato' Dzulkifli Abdul Razak**  
President, International Association of Universities (IAU)  
France

The Union of Conservation Scientists (IUCN), the United Nations Environment Programme (UNEP) and the World Wide Fund for Nature (WWF) agree that sustainability is about improving the quality of human life while living within the carrying capacity of the Earth supporting eco-systems. According to Prof Tan Sri Dato' Dzulkifli Abdul Razak, there are several policy shifts which need to happen in order to fully support and promote sustainability. These include a move from "here and now" to future-oriented approaches; from consumerism to conservation and preservation; from 4 Ws (waste, waste, waste, waste!) to 4 Rs (refuse, reuse, reduce, recycle) approaches; from maintaining the status quo to challenging it; from incremental-linear to transformational processes; from individual legacy to community focus; and, from learning to unlearning and re-learning.

Prof Tan Sri Dato' Dzulkifli Abdul Razak continued by explaining a diagram which explains how a whole-institution approach can be promoted. First, it is important to work towards these three goals: facilitating the shift, enhancing the shift and sustaining the shift. At the same time there are three main levels of practice and actions: leadership, capacity building and ownership ("walk the talk").

Collective, risk taking and people oriented leadership is needed in order to facilitate organisational change. Capacity building of staff and students is required to enhance it. This processes should be dealt in a way that they are across the board, team oriented, consistent and create a new mindset. To sustain the shift, ownership that is participative, open minded, competency based and translational is crucial.

The next steps are providing flexibility and an adaptive, co-creative and relevant context; measuring the progress and impact through evaluation systems in place; and, provide incentives and recognition.

## Strengthening the capacity of educators and trainers



**Dr. Masnah binti Ali Muda**  
Director, Curriculum Development Division,  
Ministry of Education  
Malaysia

Dr Masnah binti Ali Muda stressed that the Ministry of Education takes sustainability very seriously and has embedded it across the early childhood, primary and secondary education curriculum, co-curriculum and Continuous Professional Development (CPS) for educators. The current education plan stresses the need to support whole institutional approaches so that sustainability is practiced at all levels: the macro planning and the micro implementation.

The 2015 Strategy sets out Malaysia's aspirations related to education. The key ambition is that every child completes the school system, has acquired the required knowledge, can speak a minimum of 2 languages and has the ability to grasp a third one, and has acquired third order skills. To achieve this goal, there is an emphasis on re-orienting the curriculum towards sustainability and supporting interdisciplinary approaches. A key priority for the Ministry is to move from the provision of specific environmental courses for certain engaged groups of trainers to CPD programmes that include sustainability as a core principle.

### Youth and their role as change agents for sustainable development



Ms Ragini Kumar  
Research Associate, RCE New Delhi  
India

Youth comprise nearly 30% of the world's population. Their potential as change agents, therefore, is huge. One of the priorities from RCE Delhi is to actively work with youth (school and university students) and engage them in outreach activities, specific sustainability training sessions, leadership development programmes and action oriented on-ground campaigns. The RCE projects carried out with youth are focused on issues such as energy, water and waste. But, more importantly, they seek to ignite creative sparks in youth to foster innovative outcomes.

Ms Ragini Kumar stressed out that RCEs have a great role to play in engaging young people in sustainability. As examples, RCEs could create youth platforms in RCE partner schools and colleges or guide and facilitate the creation of larger youth brigades under the identified RCE domains of work. RCE Delhi, for example, has organised the YUVA Meet – Youth Unite for Voluntary Action, which is a special event of the Delhi Sustainable Development Summit for young people to raise their voices and contribute to the outcomes of the Conference. Other examples include the organisation of inter-university competitions and a Leadership Programme. The latter includes training and seed money for young people to implement their entrepreneurship projects.

Ms Ragini Kumar ended her presentation by stressing the importance of using online and virtual mediums to engage young people more meaningfully as well as to providing exchange opportunities and seed funding for youth-led projects.

### Accelerating the search for sustainable development solutions at the local level



Ms Maimunah Mohd Sharif  
President, Seberang Perai Municipal Council  
Malaysia

Ms Maimunah Mohd Sharif pointed out that the concept of sustainable development includes the ideas of needs and limitations. The vision and mission of the Municipal Council is to provide safer, cleaner, greener and healthier urban management services that are responsive towards the needs of the community. There are various existing policies that promote this idea, especially the MSPS Strategic Plan, which expresses the need to reduce solid waste through the implementation of Agenda 21. In 2014, a new strategic implementation plan was developed together with the local community who identified various focus working areas. The Council is now focused on supporting education and participation in this area through the implementation of initiatives such as the Green School Award, promoting zero waste and composting in schools and supporting the free plastic bags campaign. It has developed various materials and leaflets such as tourist maps and heritage trails that promote healthy and green lifestyles to the local community and visitors. It has promoted urban farming in more than 10 communities and provided a car pool as a way to promote sustainable transport. The Council has also engaged in large safe city and crime prevention through environmental design projects.

Ms Maimunah Mohd Sharif ended her talk by saying that the Council has a key priority to address the sustainability challenge and they do this by using their own 4 P model which consists of: Public, Private, People, Partnerships. She stressed the need and importance to involve people in all Council's decisions.



Parallel sessions on a diverse range of topics in line with the GAP priority actions were organised during the Symposium to give an opportunity to delegates to present their good practices, projects and experiences in the area of ESD. In total, 23 participants presented their work that triggered questions and lively discussions in each of the sessions. The key points and messages from each session are summarised below.

### A. Empowering and mobilising youth

Speakers	Title of the presentation
Mohamad Haikal Imran bin Mohamed Zukini <i>USM, Malaysia</i>	Kampus Sejahtera
Ragini Kumar <i>RCE Delhi</i>	Mobilising youth for a sustainable future through YUVA Meet (Youth Unite for Voluntary Action)
Helen Angelakis <i>RCE Western Sydney, Australia</i>	Youth Leading the World (YLTW) OZGREEN
Shabana Kazi <i>RCE Goa, India</i>	Project STARS: Sustainability tracking, action and reporting in schools (2013-2016)
Osamu Koike <i>RCE Yokohama, Japan</i>	The RCE Yokohama's Youth League

#### Key Messages:

- Youth play a key role in sustainable development as they comprise nearly 30% of the world's population and are the future professionals and decision-makers.
- Promoting interesting volunteering opportunities is important to engage students and young people to take action in a pro-active way, work in teams and develop capabilities to initiate their own sustainability projects and initiatives.
- There is a need to involve young people in decision-making processes in the area of sustainability and create platforms for them to voice their views.
- Young people are interested in developing their own innovative projects and creative action plans. The focus should be on providing leadership programmes, bespoke guidance and exchange platforms, rather than traditional formal trainings on sustainability issues.
- A key challenge is to involve community partners in youth events and programmes focused on empowering youth to become change agents for sustainability in their local communities.

### B. Whole-institution approaches

Speakers	Title of the presentation
Kamarulazizi Ibrahim, Kanayathu Koshy, Nor Arizabt Azizian <i>USM, Malaysia</i>	Promoting whole-institution approaches to ESD at all levels and all settings in USM
Pham Thi Hoa <i>RCE Southern Vietnam, Vietnam</i>	Integrating sustainability into syllabus of undergraduate programmes: Starting activity of RCE Southern Vietnam
Sandra L. Morrison, Betsan Martin, Timote Vaoleti <i>RCE University of Waikato, New Zealand</i>	He piko, he taniwha, Waikato Taniwharau. Waikato of a hundred chiefs
Puji Astuti and ESD team <i>University Gadjah Mada RCE Yogyakarta, Indonesia</i>	Step towards sustainability oriented university: Actions and challenges

#### Key Messages:

- Embedding sustainability in institutional policies, strategies and course syllabus is important to ensure an effective implementation of sustainability and engagement of relevant colleagues and stakeholders.
- Policy statements that support indigenous knowledge, language and culture are critical to ensuring sustainability ongoing development and practice.
- Interesting sustainability initiatives that create strong links between educational institutions and the community have emerged in the past years, but are not common practice. Student community services / community empowerment learning approaches should be further promoted in order to challenge knowledge systems and technology.
- Facilitating change in an institution is challenging and monitoring and evaluation systems need to be established to track progress and identify where the challenges and problems are.

### C. Increasing the capacity of educators and trainers

Speakers	Title of the presentation
<u>Osman Bin Hussain</u> <i>Penang State Education Department, Malaysia</i>	Promoting the capacity of educators and trainers in ESD
<u>Jamaludin bin Yaacob, Tan Khan Aun, Tun Syed Sheh Shahabudin</u> <i>Science Secondary School Penang, Malaysia</i>	Enculturation of education for sustainable development through co-curricular activities in a Boarding School
<u>Anita Suganthi a/p Kollandasamy</u> <i>Raja Perempuan School, Malaysia</i>	Go green project in Raja Perempuan School, Ipoh
<u>Annie A. Manzano</u> <i>RCE Cebu, Philippines</i>	Psychological first aid education for disaster victims: Sharing RCE-Cebu's training programme
<u>Melissa Leung Hiu Tuen</u> <i>RCE Tongyeong, Republic of Korea</i>	Collaborative teachers' training projects of RCE Tongyeong Eco-park & Sejahtera Centre

#### Key Messages:

- There is a need to move from small green projects occurring in the fringes of schools, to promoting whole-institutional approaches for sustainability. This means involving all the school community and stakeholders to embed sustainability in the school management, curriculum, co-curriculum and community engagement.
- Many schools are now engaged in activities that have an impact to the community. However, this needs to be connected to the school curriculum.
- The most common professional development for educators are formal trainings and courses on sustainable development issues. There is a need to focus on building educators' competences, so that they have the skills to change their own teaching practice.



## D. Community-based ESD programmes (i)

Speakers	Title of the presentation
Masaaki Nagareo <i>RCE Okayama, Japan</i>	The Decade of ESD of RCE Okayama and its new project concept and plan for post-2014
Dr. Quilicot Gordiano <i>RCE- Bohol, Philippines</i>	Empowering local community for climate change adaptation: The green village programme in <i>Sitio Lagiqliw</i>
Chie Kosuga <i>RCE Sabah (RCE Observer), Malaysia</i>	Sabah, Malaysia: Potential for a new RCE
Sheila Shanmuganathan, Chang Fui Seng <i>Penang Matriculation College and USM, Malaysia</i>	Green Chemistry experiences in the Matriculation College as an approach to address ESD
Kang Bunae <i>RCE Tongyeong, Republic of Korea</i>	Civil Education Committee ESD projects

### Key Messages:

- Sustainable development is not only a concern of scientists and environmentalists anymore, but also of people from local communities. In the past years, there has been a raise on sustainability partnerships between community stakeholders, educational institutions, and business sector and government agencies. These multi-stakeholder and community-based approaches have proved to have major impacts in improving people's safety and well-being and providing quality learning opportunities for all.
- In certain locations, civil education networks and task forces have been established to re-orient informal learning programmes towards sustainability. These are really important to ensure that sustainability learning opportunities exist for those who are outside the formal education system.



## E. Community-based ESD programmes (ii)

Speakers	Title of the presentation
<u>Wong Chow Jeng</u> <i>USM, Malaysia</i>	Sustainable healthy community
<u>Areeporn Sittiyapaiboon</u> <i>RCE Cha-am, Thailand</i>	Promotion of Thai local wisdom on community-based ESD: A collaborative project between RCE Cha-am, local community, and Government Agency (DEQP of Thailand)
<u>Prof Mohd Aatur Rahman</u> RCE <i>Greater Dhaka, Bangladesh</i>	Traditional practices for solid waste recycling in rural homes: A lesson for ESD
<u>Reita Furusawa</u> <i>RCE Chubu, Japan</i>	The Bio-region based ESD Model in <u>Ise-Mikawa</u> in Chubu Area, Japan

### Key Messages:

- Various initiatives based on multi-stakeholder partnerships, mutual learning and social learning approaches were presented at the session. Evidence was provided on the impact that they can have in making change happen.
- There is a need to further understand, disseminate and promote the role of local wisdom and traditional knowledge in sustainability and embed this into all types of learning. Further research is needed on the mechanisms of integrating traditional and modern/technological knowledge in learning and education.



After the lunch break, delegates were taken to Minden School where they had the opportunity to meet school staff and students and participate in the different workshops organised by a wide variety of local and international organisations. Participants were involved in hand-on activities such as composting and recycling, performed lab experiments using recycled tools and non-chemical products, and engaged in theories of informal science learning.

### Recycling and Go Green Projects

Facilitator: Sopiah bt Said  
Seri Nibong Secondary School,  
Malaysia

Participants of this workshop had the opportunity to learn about the different "Go Green" projects implemented by the Menengah Kebangsaan Seri Nibong School. This school is looking at issues related to the food waste generated in the school canteen and dining hall. The food waste is used in several projects such as the Compost Fertiliser, Waste Enzyme and compost from dried leaves/green plants waste by using rice waste known as MOL. The school is also engaged in the Mud Ball project to improve water quality.

### Whole-school Approach

Facilitator: Ragini Kumar  
RCE Delhi, India

Commitment to change is required from all stakeholders, from grassroots activists to educators to policymakers. The whole-school approach advocates a holistic and integrated approach to practice ESD in the formal education system. The workshop highlighted the importance of calling for the entire school, including students, educators and administrators, to be actively engaged in working towards a sustainable school with ESD fully integrated into the curriculum as the driving factor.

### Incorporating Multiple Intelligence Theory into Informal Science Learning

Facilitators: Maznah Ali, Nooraida Yakob and Mohd and Ali Samsudin  
USM, Malaysia

Delegates participating in this workshop learned about the theories of multiple intelligent and informal science learning. Three specific activities were introduced to participants: the "Carrot Pam", "Red Cabbage Indicator" and "Iron in Cereal". The aim of using both theories is to enhance childrens' learning experience and provide them with self-experiences that may challenge attitudes and behaviours towards science.



### Integration of Microscience Activities in Schools to Promote Science and Technology for Future Generations

Facilitator: Norita Mohamed  
USM, Malaysia

The workshop began with a presentation on the latest development of microscale chemistry activities (implementation in schools) in Malaysia and throughout the world. This was followed by a hands-on lab session where the participants performed experiments in pairs/individually using the microscale approach. This approach encourages students to conduct many experiments apart from other benefits such as reduction in chemical wastes produced, chemical costs, time spent and greater safety.

### Vermicomposting: Ecological Thinking

Facilitator: Sellam a/p Paramanathan  
Raja Perempuan Secondary School,  
Malaysia

Participants of this workshop had the opportunity to learn about the vermicomposting and ecological thinking initiative at the Raja Perempuan Secondary School. This school was concerned about the amount of waste material from papers and canteen waste such as fruit skin and green vegetables in school and realised that the reason behind this could be the lack of ecological thinking among students. To solve the problem, school teachers introduced vermicomposting and setup themed gardens to teach on ecological thinking. This project was started in collaboration with USM.

### Domestic Water Management Workshop: Creating Change Agents for Households and Community

Facilitators: Nabsiah Abdul Wahid, Ismail Abustan, Muhammad Salleh Abustan, Mohd Taib Muhamad, Muhamed Nizam Kamil and Ahmad Ghazali Ismail  
USM, Malaysia.

This workshop exposed and trained participants on simple and do-able methods on how they can manage domestic water. Workshop participants could learn how to save and manage water by avoiding wastage caused by dripping pipes and leakage at home. They were made aware of their potential as 'change agents' within their household and community. The content of the workshop was based on previous trainings carried out by the 'River for All' team on Domestic Water Management as part of World Water Day Celebration for 2011 and 2012 organised by UNESCO-IHP Malaysia.



### Using Recycled Material to Teach the Concept of 'Earth as a Sphere'

Facilitators: Tan Khan Aun, Tun Syed Sheh Shahabudin  
Science Secondary School, Malaysia

Students usually struggle to understand the concepts of latitude and longitude. Part of the problem might be that students study these concepts using 2 dimensional figures of the Earth as illustrated in the textbooks or exam papers. Thus, students should be taught the concept of the Earth with the help of 3-D models. In this workshop, participants used recycle materials to create a customised model of Earth for classroom learning. It was a 'Learning by Doing' workshop where teachers and students could work together in creating the model and at the same time engage in interactive teaching and learning process.

### Traditional Composting

Facilitator: Loh Poh Chen  
Taman Pandan, Malaysia

This workshop aimed at introducing to participants the method of making compost of kitchen and garden waste. The method presented was the "Aerobic composting system" in which organic matters can be decomposed by microorganisms in the presence of oxygen. The facilitator of this session counted with a large experience of delivering this workshop to the community, schools, factories and through the radio.

### How to Start Composting at Home

Facilitator: Don Theseira and Mylene Ooi  
Green Crusaders, Malaysia

GreenCrusaders.com belongs to two recycling enthusiasts, Don Theseira and Mylene Ooi, who started their household waste recycling project in 1996. Participants of this workshop had the opportunity to meet this retired couple based in Bukit Mertajam, Penang. The couple has travelled across Malaysia to deliver this workshop to various organisations, corporations and residents' associations on the need to recycle household waste. They also teach the art of composting household scraps, using a method which Don has perfected over the years. They have been awarded the title "Everyday Heroes" by Readers' Digest in 2002 for their tireless efforts in helping the environment.

### Practicing Sustainability among Students in SMK Dato Onn: Recycle Shoes

Facilitator: Fasya bt Abdul Hamid  
Dato Onn Secondary School, Malaysia

This workshop introduced one of the sustainability activities that has been implemented at the Dato Onn Secondary School, which consists of planting plants in old shoes. Recycle shoes is good as a pot replacement as it has the characteristic of good absorption. The objective of this study and activities is to create school environments that emphasise preservation and conservation of the environment in the school management and the curriculum.

## CLOSING

Prof Munirah Ghazali, Mr Ilias Tajudin and Prof Mario Tubacanon closed the Symposium at Minden School where the afternoon workshops had taken place. Delegates were thanked for their active participation in all the sessions planned during the event and special thank you notes went for the Symposium's Committee and RCE stakeholders. Prof Munirah Ghazali reminded participants that the outcomes of the event would be taken to the 9th Global RCE Global Conference during 4-7 November 2014 in Okayama, Japan.



## 7th Asia-Pacific RCE Meeting

Universiti Sains Malaysia  
26 August 2014

The 7th Asia-Pacific RCE Meeting was hosted by RCE Penang on 26 August 2014. The meeting was attended by 49 participants, including 17 RCEs from 11 countries in the Asia-Pacific region. The meeting was opened by Prof Dato' Dr Omar Osman (USM), Prof Munirah Ghazali (USM-RCE Penang), Prof Mario Tabucanon (UNU IAS) and Prof Anthony Capon (UNU IIGH). It was followed by a plenary session where participants had the opportunity to review previous RCE meeting minutes, agree on the meeting agenda and discuss RCE progress and collaborative projects. The programme also included thematic parallel sessions on the areas of youth, community, schools, biodiversity and disaster risk management. Finally, delegates discussed the RCE Asia-Pacific Strategy for the GAP. This document will be presented at the 9th Global RCE Conference in Okayama. The minutes of this meeting are available upon request.



RCE delegates had the opportunity to visit George Town and learn from the work of certain RCE Penang stakeholders the day after the Symposium.

Travel to George Town – Delegates had the opportunity to walk around the beautiful streets of this famous UNESCO World Heritage city in Malaysia.



Visit to SEAMEO-RECSAM – RCE delegates had the opportunity to learn about the organisation and work developed in the area of sustainability. Lunch was served at the SEAMEO-RECSAM dining room.



Visit to the USM Museum – Participants could enjoy the collection of traditional Malaysian musical instruments, manuscripts, aboriginal as well as Baba and Nyonya pieces.



Visit to the USM Archeology Museum – Delegates learned more about archaeological sites in Malaysia and recent discoveries.



Visit to the USM Eco-Hub – Participants learned more about the conservation work undertaken at the USM Eco-hub and walked around in the garden where several medical plants are used for learning and research purposes at the University.



### RCE Penang/ School of Industrial Technology Seminar: Sustainability and Solid Waste Management

Universiti Sains Malaysia  
28th August 2014, 10.30-12.30h

Invited Speaker: Prof Osamu Koike, Yokohama National University, Japan

USM and Yokohama National University (YNU) have a long history of collaboration. On the occasion of the 7th Asia-Pacific RCE Meeting, this seminar was organised to exchange sustainable development challenges, practice and experiences from both universities and local communities. The seminar included a presentation from Prof Koike and three students from YNU as well as presentations from two USM lecturers from the School of Industrial Technology. Over 50 lecturers and students from USM attended this event which looked into areas of waste management, community engagement and zero waste.

Prof Koike started his presentation by introducing YNU and RCE Yokohama. Founded in 1949, YNU is a leading University in Japan located in Yokohama, Kanagawa Prefecture. YNU comprises 5 graduate schools and 4 undergraduate faculties and counts with over 10,000 students, including over 800 international under and postgraduates. YNU aims to establish a strong footing in academic research and education by upholding four fundamental principles: "Be Active," "Be Innovative," "Be Open" and "Be Global."

In 2006, RCE Yokohama was established in Yokohama City. With a population of 3.58 million, Yokohama is the second largest city in Japan. RCE Yokohama brings together the vigour and knowledge of its citizens, gives full play to the attractions and creativity of the Yokohama area, and takes continuous actions to create a higher-quality environment, while incorporating ESD into the city's basic plan. YNU is a key RCE partner together with other 4 Universities, Yokohama NGO network (25 NGOs), international organisations such as CITYNET) and various authorities of management of human settlement. RCE Yokohama activities include: the organisation of and participation in ESD events such as international conferences, eco-networking cafes, public forums and city eco-festivals; and, the Hamakon (environmental conservation actions) competition for university students.

A common area of work of both YNU and RCE Yokohama is waste management, one of the Yokohama's city environmental challenge. Three invited students from YNU accompanying Prof Koike presented some of these main challenges as well as identified actions taken to reduce the waste reduction. In 2003, Yokohama started to implement the G30 Plan which had an ambition of reduce solid waste by 30% by 2010. Due to successful outcome, the plan was replaced in 2010 by the 3D Plan which continues to support the reduction of waste but also recycling and separation.

The seminar continued by a presentation from a USM colleague who introduced zero waste initiatives led by USM in local communities. USM lecturers and students travelled to Pulau sibu to demonstrate how zero waste for organic waste could work at the local community. Training was provided to twenty different villages, using kitchen waste, coconut and cow waste. This community was chosen as it had an optimal context for zero waste to work: no industrialisation, no heavy transport, national marine park reserve and low population. Several biogas and vermicomposting projects implemented together with Penang villagers and USM researchers and students were also introduced.

Then, a colleague from the ECOPRO Research Group at USM presented the group's research on composting, vermicomposting and vermifiltration of agricultural waste in integrated/ecological farming situations. Ecological technology is a technology reapplied to benefit people, animals and the environment. The approach is based on basic skills; doing everything with the simplest means possible. It proposes simpler alternatives creating a way-of-life that allows people to be less dependent on modern technological systems and to enable individuals to solve their technical problems themselves, becoming more self-sufficient and ecologically responsible.





**RCE Penang Office,  
Universiti Sains Malaysia**

*Photo by  
Strategic Communications Office, USM*

# REPORT

27 AUGUST 2014

UNIVERSITI SAINS MALAYSIA, PENANG, MALAYSIA

