REGULAR TRAINING COURSE ON
Aspiring Geoparks: Development and Preparation

The International School for Geoscience Resources of KIGAM presents an intensive training course on Aspiring Geoparks: Development and Preparation. The course will take place at the Ara room of International School for Geoscience Resources of KIGAM in Daejeon (Korea) with field excursion to the Cheongsong National Geopark from May 19 to 28, 2016 and will include the following topics.

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<td>Module 2. Field Excursion to an Aspiring Geopark (conjunction with the 3rd CCOP-Cheongsong-KIGAM-UNESCO Symposium on Developing Geoparks within East &amp; Southeast Asia region)</td>
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<td>Prof. Patrick McKeever (UNESCO, Paris)</td>
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COURSE INFORMATION

- Agenda
  - This course aims to enhance the expertise of Geopark or Geological Heritage (site) staff, researchers, or (potential) managers especially from non-Geopark countries for developing Geoparks.
  - This course will provide an opportunity to exchange diverse and professional opinions to promote local geopark to the Global Geoparks.
  - The contents of this course mainly comprise “how to develop Geoparks” and touch 4 factors of Geoparks: science, education, geotourism, and sustainable development. Field excursion to the Cheongsong Aspiring Geopark in Korea will be of chance to on-site case study for Geopark developers.

- Course Requirements: Prerequisite
  - Understanding of Geopark
  - Basic knowledge of geology, geosite, geoheritage, geotourism, and geoeducation
  - A ppt presentation (3-5 slides with free format) should be prepared by each participating country (one ppt per country) for workshop in Day 4 of module 1, which could present difficulties or problems they are facing in the field of Geopark promotion/development. The ppt will be a starting point for brainstorming and further discussion.

- Who should Attend?
  - This course is basically designed for Geopark, Geo-heritage, or National Park-related personnel who want or need to develop Geoparks especially in non-Geopark southeast Asian countries.
  - This course is also available for geologists and Geopark, Geo-heritage, or National Park-related officers who wants to develop or to share their experience and knowledge on Geopark.
Module 1. Strategy for Global Geoparks planning and promotion

Summary of topic contents and learning objectives

- **Day 1. Strategy 1 – Understanding Science in Geopark (May 19)**

This topic gives an overview about the importance of UNESCO Global Geoparks as territories of Science. All UNESCO Global Geoparks are territories where its geodiversity and the associated geological heritage are of international relevance. Scientific works on/for Geoparks should not only be focused on Earth Sciences but also in all other disciplines of the Natural, Social and Human Sciences, which contribute for the advance of our knowledge about the Earth and its processes and about the relationship with Humanity. Looking to Agenda 2030 of UNESCO for Sustainable Development, the current new phase transitions from the Millennium Development Goals (2000–2015) to a new set of integrated Sustainable Development Goals (2015–2030) shows us that UNESCO Global Geoparks fits perfectly in this new global purpose. Therefore, it should be noted the importance of supporting the development of new Geoparks, especially in Africa, Southeast Asia and Latin America and the Caribbean, always based on the three economic, environmental and social pillars of sustainable development.

- Geodiversity, Geological Heritage and Geoconservation as a ground for the creation of a Geopark
- Geoparks and Science & Technology
- Geoparks and the Agenda 2030 of UNESCO for Sustainable Development

- **Day 2. Strategy 2 : Geotourism & Educaiton (May 20)**

The Geotourism classes provide an evolutionary historical perspective of the concept of geotourism, in order to find that today this tourism segment as a growing contributor for the environmental integrity, social justice and sustainable economic development of the territories, based on an approach and holistic promotion of these. Knowledge and information about geological heritage are often not presented in a way easily understood by the general public. Commonly this information is transmitted to the public in a very specialized language that is difficult to understand, and does not contribute for the information and attraction of the tourists. In this sense, it’s important to discuss with the students the basic principles of interpretation proposed in 1957 by Freeman Tilden in order to apply them to geological...
heritage. Analysed and discussed some examples of geotouristic activities (s.l.) developed in several UNESCO Global Geoparks will be presented.

The Geo-education classes are intended that the students acquire an overview about a set of diversified educational initiatives, which are commonly developed and promoted in UNESCO Global Geoparks. The following factors will be discussed with impact on literacy learning: i) contexts (e.g. socio-economic and cultural contexts and societal needs); ii) what to learn (e.g. content); iii) who learns (e.g. learners’ needs and profile); iv) how learning and teaching takes place (e.g. pedagogy, learning environment). In addition, UNESCO Global Geoparks must be very active in the promotion of Climate Change Education in close alignment with Disaster Risk Reduction Education, in order to contribute to safeguarding development gains and building resilience in countries vulnerable to negative impacts of climate change.

- Geotourism concept – historical approach
- Geotourism and territorial interpretation
- Geotourism and Geoparks
- Geoparks and Education for Sustainable Development
- Literacy and non-formal education in Geoparks
- Geoparks and Climate Change education

Day 3. Strategy 3: Geopark management systems/models (May 23)

This topic introduces various Geopark management systems and models so that students can compare those examples with their own situation. Lecturer discusses with students management strategies type-"bottom-up" and "top-down", and discusses the advantages and disadvantages associated with each one and the reasons why UNESCO give a clear preference to territorial management type-"bottom-up. There will also be shared with the students some methods commonly used in the preparation of a territorial master plan, using examples of regions with different political and socio-economic realities. In addition, some examples of Global Geopark application dossiers will be scrutinized in order to figure out important points for the application.

- Application dossier preparation
- Geopark promotions in Africa and South America
Day 4. Strategy 4 : Sustainable development (May 24)

A territory to be considered UNESCO Global Geopark is not enough to have world-famous geological heritage of outstanding universal value only. As important as this is the need to have a territorial master plan for the sustainable development of the area. In this sense, the UNESCO Global Geoparks besides being areas where we can learn about multiple chapters of Earth’s history are mainly territories where are preserved and promoted the culture of local communities. For this reason, a territory can only be named UNESCO Global Geopark if count on the support of local communities, respecting their traditional way of life in an approach that empowers them and respects their human rights and dignity.

Finally, talk about sustainable regional development always involves the need to speak about economic values to demonstrate the real impact on the economy of the region. In this sense, will be examined the reports about the economic studies promoted by the National Commissions for UNESCO of United Kingdom and Portugal, concerning the real economic value of the UNESCO label in these countries. It will be given prominence to the analysis of the economic impacts produced by the UNESCO Global Geoparks in these two European countries.

Plenary discussion session/workshop is prepared for brainstorming and discussion on “difficulties and problems among Geopark-developing countries” to clarify each participating country’s problems and further to find out potential solution.

- Geoparks and sustainable development for society
- Building a Geopark Management Structure and Management Plan
- Economic impact of Geoparks: case studies from UK and Portugal
- Difficulties and problems among Geopark-developing countries

Module 2. Excursion to an Aspiring Geopark with seminars and in-site discussion (conjunct with The Symposium on Developing Geoparks within East & Southeast Asia region)
Summary of topic contents and learning objectives

Day 1. UNESCO Global Geopark (May 25)
On November 17th of 2015, the plenary session of the UNESCO General Conference ratified the statutes of the new International Geoscience and Geoparks Program. In doing so, it has legally endorsed the new UNESCO label of “UNESCO Global Geopark.” Series of keynote lectures from Geopark experts (UNESCO, CCOP among others) will cover the topics listed below.

- The UNESCO Global Geoparks - the new phase
- Geoparks and geotourism - a sustainable solution
- Cheongsong Aspiring Geopark: history and effort
- Network for Capacity building for Geopark development in East & Southeast Asia
- Lessons learnt & Best practice on Geoparks/Geological Heritage/Geotourism (i.e. dossier preparation, application procedures, maintenance and development, etc.)

Day 2. Korean Aspiring Geopark - Cheongsong (May 26)
The Cheongsong Geopark was endorsed as a National Geopark in 2014 and it applied for a Global Geopark in 2015. Visiting representative geosites and cultural sites and on-site discussions with Geopark experts of the world will provide an opportunity to clarify participants’ own problems and issues in developing Geoparks.

- Jubang Valley Geotrail
- Jusan Pond and Mt. Juwang sightseeing spots
- Cheongsong Scholar's stones & Flower stones museum, White porcelains museum, Simsugwan ceramics museum
- Dalgi Mineral Spring Site
- Natural Dyeing Center, Deokcheon Folk Village

Day 3. Field excursion & Strategical plan for development & promotion of Global Geoparks (May 27)
After the field excursion extended to this morning, participants can share current status of Geopark development of their countries from country’s report workshop. A plenary...
discussion will deal with issues that could help work out strategies for development & promotion of Global Geoparks and enhance networking and cooperation among participating countries.

- Country’s report on Geopark activities
- Strategical plan for development & promotion of Global Geoparks
- How to develop networks of Geopark experts & Geopark communities (national network/ regional network, role of local community, etc.)
- Cooperation framework & opportunities

- **Day 4. Wrap-up and departure of all participants (May 28)**

All the lecturers and participants will review the whole course from module 1 to module 2 and share ideas to develop this course in a forthcoming year.
About the instructor – **Prof. Artur Abreu Sá**

Associate Professor with tenure of Geodynamics at University of Trás-os-Montes e Alto Douro (Portugal), with scientific activity focused on the Stratigraphy and Paleontology of the lower Palaeozoic of the SW Europe and North Africa and also on Geological Heritage, Geoconservation and Geoparks. In the latter theme, has developed in the last decade many initiatives and research activities, focused on the holistic development associated with the territories classified as UNESCO Global Geoparks. He was responsible by the application of the Arouca UNESCO Global Geopark and co-responsible by the application of the Terras de Cavaleiros UNESCO Global. Presently he is the Scientific Coordinator of the Arouca UNESCO Global Geopark and member of the Scientific Committees of the UNESCO Global Geoparks Arouca and Terras de Cavaleiros (Portugal) and Molina y Alto Tajo (Spain) and also advisor (pro bono) of the Araripe UNESCO Global Geopark (Brazil).

He has published more than 200 scientific works among books, book chapters, peer review papers and conference proceedings.

**Currently is:**
- President of the Portuguese National Committee for the International Geoscience Programme (IGCP) of UNESCO;
- Titular Member of the Advisory and Coordination committees of the European Geoparks Network (EGN-GGN);
- Titular Member of the International Sub-Commission on the Ordovician System (ICS/IUGS);
- Member of the Pedagogical Council of the School of Life Sciences and Environment of the University of Trás-os-Montes and Alto Douro;

About the instructor – **Dr. Soo Jae Lee**

Dr. Soo Jae Lee earned his Ph.D. degree from Seoul National University in 1996, and experienced Earth environmental topics at the University of Wyoming and the Korea Institute of Geosciences and Minerals for 2 years before joining the Korea Environment Institute. He had been a principal reviewer for the Environmental Impact Statements for 10 years, and involved in the National Climate Change Adaptation Policy for 2 years.

He introduced the geopark concept into the Korean society in 2003 through his research works and conducted one of leading roles in Jeju’s chasing for the GGN. He had done a research project in the rule-making for the national regulation of geopark of Korea, which endowed him with a prime minister's citation. He also recently finished a research on the evaluation criteria for the geological heritages and geosites, which will be applied to the certification of the geopark in Korea. He is now leading the Incheon Geopark project.
He has done a research on the integrated management strategy for the multiple internationally designated areas, UNESCO Global Geopark, World Heritage site, Biosphere Reserve and Ramsar site, in Jeju Island. Policy researches on the groundwater quality management and the natural mineral water are other parts of his main research topic.

**Geopark Expert Activities:**
- Member, The Korea National Geopark Committee (Legal duty).
- Member, Committee on the International Designated Areas of Jeju Province.
- Geopark expert for the Korea Geopark Network and the National Geopark Secretariat.
- Founder of the Geological Heritage Sub-committee at the Geological Society of Korea.
- Geopark Advisor for the Ministry of Environment.

**About the instructor – Prof. Patrick McKeever**

Prof. Dr. Patrick James McKeever received his Ph.D. in Geology in 1990 with his dissertation on “Studies on the Sedimentology and Paleoecology of the Permian of Scotland.” From 1990 to 1995 he was employed by the Department of Geology, University of Manchester, United Kingdom, as Post-Doctoral Research Associate to research aspects of the diagenesis of quartz cements from hydrocarbon reservoir sandstones from the North Sea. From 1995 to 2012, he worked in the Geological Survey of Northern Ireland as Principal Geologist to encourage the wider understanding of geology and geological heritage; and to assist communities and organizations in promoting sustainable economic development by use of their geological heritage.

Since 2001, he has been working with the UNESCO-endorsed European Geoparks Network. Initially providing geological support and advice for the Marble Arch Caves Geopark (County Fermanagh, Ireland), he was elected vice-coordinator of the wider Network in 2002 and re-elected to this position in 2005, 2007 and again in 2009. He is also very active in promoting the network, advising potential new members and carrying out evaluation and revalidation missions. He was an advisor to the Division of Ecological and Earth Sciences at UNESCO for the Global Network of National Geoparks (GGN) and has undertaken many expert missions on their behalf. He has been instrumental in helping to draft the application guidelines and statutes for the GGN, is a member of the UNESCO Geoparks Experts Bureau and a key advisor on geoparks and geological heritage to UNESCO and the World Conservation Union, IUCN. During 2006, Prof. McKeever organized the Second UNESCO International Conference on Geoparks which was held in Belfast, in September 2006, and was attended by over 300 people from over 32 countries from all continents.

Prof McKeever is a scientific evaluator for IUCN on behalf of the UNESCO World Heritage Committee. In 2006 he was invited to join the UK’s Geoconservation Committee of the Geological Society and in 2007 he was invited to become a member of the World Convention on Protected Areas. He is a member of the scientific board of the International Geoscience Program on behalf of Ireland and in October 2009 he was the official representative for the Republic of Ireland to the biannual UNESCO General
Conference. In 2008 he was invited as a visiting professor to the Institute of Environment Research (Lestari) at the National University of Malaysia.
In May 2012, Prof Mc Keeever joined UNESCO as the new Chief of Section at the Global Earth Observation Section and as Secretary of the International Geoscience Program.

About the instructor – Mr. Ramasamy Jayakumar

Dr. Jayakumar holds Master Degree in Geology, P G Diploma in Environmental Management, and earned a Doctoral degree in Hydrogeology (1993) from India. His postdoctoral research areas include conjunctive use of surface and groundwater for irrigation (under the Council of Scientific and Industrial Research of India) and remote sensing and GIS application in natural resources management (from Osaka City University, Japan). He has specialized in application of remote sensing, GIS, geo- statistical methods in hydrogeological modelling and irrigation water management.

He started his career as a hydrogeologist for a groundwater exploration agency in the southern part of India. He also served as a researcher and faculty member at Centre for Water Resources, Anna University, India, hydrogeologist in a Ford Foundation project and as consultant hydrogeologist with WS Atkins International Limited, Cambridge, UK in an Irrigation Project funded by the Commission of European Communities.

In July 1997, he joined UNESCO at its New Delhi Office, where he was in charge of IHP, Geology and CSI programmes and officiating as Regional Hydrologist for South and Central Asian Countries.

During August 2004 he transferred to the UNESCO Office Beijing, where he has been tasked to act as the Programme Specialist for Science, Technology, and Environment for East Asian cluster.

From August 2013 started as Programme Specialist and Chief of Natural Science Sector at UNESCO Bangkok tasked to develop Natural Sciences activities for Mekong Cluster Countries and to develop partnership with other regional UN entities and other International Organization in the field of Environmental Sciences.

Research Publications:
Edited and Co-edited more than 50 research publication in the field of water resources and environmental management
In edited volumes contributed 10 chapters related to Remote Sensing Applications to Earth Sciences Studies.
Published 30 Research Papers in the referred Indian and International Journals in field of Water Resources Management
Presented more than 100 Research Papers in the National and International Level Conference in field of Remote Sensing, GIS Applications to Water Resources, Groundwater Modelling.

Involved in teaching at various universities:
Adjunct Professor in Department of Geology, Anna University, Chennai, India for one year (2002-2003);
Visiting Professor at Institute of Hydrogeology and Environmental Geology, Chinese Academy of Geological Sciences, P R China from January from 2005 to till date; Guest Professor of Hydrology and Water Resources Engineering, Inner Mongolia Agricultural University, P R China from June 2010 to till date and Visiting Professor Global Studies Programme (handling Global Issues on Water Resources), University of Tsukuba from July 2014 to till date

About the instructor – Dr. Adichat Surinkum

Current Position

• Director, CCOP Technical Secretariat (1 April 2013–present)

Prior Positions

• Director of Geotechnique Division and Director of Environmental Geology and Geohazard Division, DMR, Thailand, (2003–2008).
• Project Coordinator for geothermal energy sources/ Practitioner Level Geologist, Secretary of study visit group on education to develop the mining and automotive of Deputy Ministry of Industry/ Practitioner Level Geologist, and Head of the delegation Seminar in GIS training in Australia, (1979-2003)

Degrees & Awards

• Doctor of Philosophy (PhD), Geology, Chiang Mai University, Thailand. (2002)
• Master’s Degree. (M. Sc.), Geophysics, University of Western Ontario, Canada. (1989)
• Bachelor’s Degree. (B. Sc.), Geology, Chiang Mai University, Thailand. (1979)
• Distinguished Alumnus of the Prince Royal’s Collage, Chiang Mai Thailand (2003)
• Distinguished Alumnus of the Faculty of Science, Chiang Mai University, Thailand (2013)
• Distinguished Alumnus of Chiang Mai University Alumni Association, Thailand (2014)

Expertise

• Geologist, for a period of 32 years in geophysics, geothermal, geo-environment and mineral exploration and management.
• 2 Years as the Director of CCOPTS started from April 1, 2013

Other Current Activities

• Member of Chaipattana Foundation on Landslide Mitigation Committee
• Member of Thailand Environment Impact Assessment Committee on Infrastructure Development
• Member of Thailand Research Institute on the Andaman Tsunami Mitigation Program