



# INSTITUTE OF ENVIRONMENTAL AND WATER RESOURCES MANAGEMENT (IPASA)

The Institute of Environmental & Water Resource Management (translated in Bahasa Melayu as Institut Pengurusan Alam Sekitar dan Sumber Air - IPASA) was established in 1994. This Institute was previously known as the Institute of Environmental Studies (IKAS) which serves as an effort to integrate available expertise in various fields at UTM to understand and to overcome complex problems related to our environment. IPASA is an interdisciplinary center for environmental research, consultation and graduate training. This Institute also provides continuing education programs

(i.e. seminars and short courses) in environmental related areas.

Although it was officially established in 1994, most of the IPASAs' associate fellows and researchers have vast experience in environmental studies, consultancies and teaching since early 1980s. Currently, IPASA is being led by a Director and a Deputy Director who are appointed on a rotational basis, supported by research fellows and contract staff. It is one of the Centers of Excellence under the Water Research Alliance.

## OBJECTIVES

The objectives of IPASA are as follow:

- To stimulate, encourage and enhance research programs in environmental related areas;
- To establish collaboration among academics in various disciplines related to environmental studies toward enhancing the research programs;
- To establish and enhance relationship and collaboration between UTM and various agencies (private and public sectors) in environmental research and consultancy;
- To provide advisory and consultancy services to public and private agencies on environmental issues;
- To provide facilities for strengthening postgraduate courses in environmental studies offered by related faculties;
- To provide technical program in the field of environmental technology and management;
- To provide services on environmental quality testing.



With its wide range of expertise, IPASA also provides consultancy and testing services in environmental related areas. IPASA members have carried out more than 100 Environmental Impact Assessment (EIA) and related projects during the past years. Other projects include:

- River classification and pollution study
- River basin study
- Lake and reservoir studies
- Industrial wastewater treatment
- Solid and hazardous waste disposal siting
- Air pollution control
- Ecotoxicology and risk assessment
- Urban pollution discharges

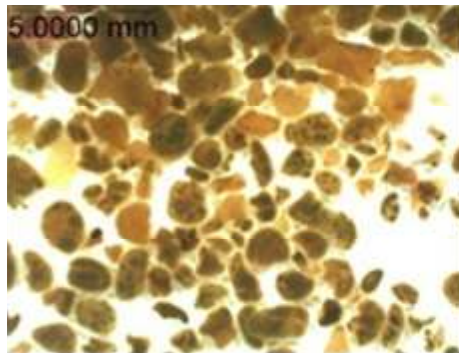
With its available sophisticated instruments and well-trained personnel, IPASA is capable of providing services for environmental quality analysis. This includes common water quality parameters testing such as pH, BOD, COD, SS, TOC, turbidity, microbiological study, oil and grease and heavy metals content. Ambient air and fuel gas content and noise level can also be tested. Various other chemical analyses can be carried out at our chemistry and environmental engineering laboratories. Table 1 shows the list of consultation projects and contract research awards in the year 2010.



**TABLE 1: CONSULTANCY AND CONTRACT  
RESEARCH (NATIONAL & INTERNATIONAL) (2010)**

BIL	PROJECT TITLE	PROJECT LEADER	CLIENT	COSTING (RM)
1	Hydrographic Surveying Course	Prof. Dr. Mohd Razali bin Mahmud, FKSG	Govt. & Private	580,273
2	Hydrographic Survey For Kumang CPP	En. Ahmad Shahlan bin Mardi, FKSG	Sime Darby Engineering Sdn. Bhd.	8,500
3	"Cybercity Pulau Pinang" Project	Prof. Dr. Zulkifli bin Yusop, FKA	Govt. Of Penang	200,000
4	Carbon Footprint Project	Dr. Zainura Zainon Noor, FKKKSA Assoc. Prof. Mohd Safie Mohd, FKSG	Advanced Technical Laminates Manufacturing Sdn. Bhd.	-
5	Reassessment of Tumpat Town Council (Kerja-kerja Penilaian Semula Majlis Daerah Tumpat)	Assoc. Prof. Mohd Safie Mohd, FKSG	Tumpat Town Council Kelantan	400,000
6	Reassessment of Tanah Merah Town Council (Kerja-kerja Penilaian Semula Majlis Daerah Tanah Merah)	Assoc. Prof. Mohd Safie Mohd, FKSG	Tanah Merah Town Council Kelantan	500,000
7	Projek "2010 UTM Hydro II Course (Category A Level)"	Prof. Dr. Mohd Razali bin Mahmud, FKSG	Royal Malaysian Navy	285,000
8	Projek "Study On Sub-Merge Vane" di Raub, Pahang	Assoc. Prof. Dr. Supiah Shamsudin	Perunding Nusajasa Sdn. Bhd.	-
9	Detailed Environmental Impact Assessment - DEIA for Tin Ore Mining at Kuala Sungai Baru Waters, District of Alor Gajah Malacca (Kajian Terpeinci Penilaian Kesan Alam Sekitar bagi Projek Perlombongan Bijih Timah di Perairan Kuala Sungai Baru, Daerah Alor Gajah Melaka)	Prof. Dr. Zulkifli Yusop	Unit Perancang Ekonomi Negeri Melaka	1,200,000
10	Desktop Study on River Buffer Zone in Malaysia : Policy by Laws and Incentives	Prof. Dr. Zulkifli Yusop	NAHRIM	52,773
11	Study on The Potential of Rainwater Utilisation in Supplementing Water Demand in Industries - In Terms of Quantity and Quality	Prof. Dr. Zulkifli Yusop	NAHRIM	236,162
12	Disposal of Sediments and Deepening of Sg. Simpang Kiri and all Related Works in the District of Batu Pahat (Projek Membuang Kelodak dan Mendalamkan Sg. Simpang Kiri serta Kerja-kerja lain yang Berkaitan di Daerah Batu Pahat)	Assoc Prof. Dr. Abdull Rahim Mohd Yusoffop	Hati Muda Sdn. Bhd.	103,194
13	Study On The Potential Of Rainwater Utilisation In Supplementing Water Demand In Industries - In Terms Of Quantity & Quality	Prof. Dr. Zulkifli Yusop	NAHRIM	236,162
14	Hydrology and Soil Erosion Study For The Proposed Construction Of The Universiti Malaysia Kelantan, Bachok Campus	Prof. Dr. Zulkifli Yusop	Alam Sekitar Malaysia Sdn Bhd (ASMA)	31,241
15	Mega Science Project From Work Study For Sustainability National Development	Prof. Dr. Zulkifli Yusop	Akademi Sains Malaysia	300,000





The Developed Biogranules



Synthetic wastewater (a) before and (b) after treatment

### Continuing Education

IPASA also conduct courses and in-service training for public and private sectors. Among the courses and training conducted includes:

- Advanced wastewater treatment
- Industrial air pollution control
- Clean technology for industrial applications
- Medical waste management
- Sludge management
- Environmental risk assessment
- Solid and hazardous waste management
- Environmental instrument analysis
- Membrane technology for environmental control
- Water quality laboratory practices
- Sewer:- Physical, chemical and biological reactor
- Cleaner production practices



In 2010, IPASA also have conducted a series of workshops and promotional activities as shown in Table 2. Besides that, IPASA have received a number of visiting Professors from Japan, Sweden, Singapore, Indonesia and Saudi Arabia. The lists of the visiting Professors are shown in Table 3.



**TABLE 2: WORKSHOP / PROMOTION ACTIVITIES (2010)**

NO	NAME OF PROGRAMME	DATE	VENUE
1	Automation of Water and Wastewater System	4 March 2010	Best Western Seri Pacific, Kuala Lumpur
2	Workshop on "How to Write Journal Paper?" for Water Research Alliance	5 - 9 March 2010	Pusat Latihan UTM, Kolej 17
3	Strategic Planning and Team Building IPASA 2010	22 - 24 Dec 2010	A'Famosa Resort Melaka
4	Join as Exhibitor during Merdeka Award Lecture Series	9 February 2010	UTM International Campus
5	Road Tour to Japan during Global Outreach Program	9 - 14 May 2010	Nagoya Institute of Technology (NIT) & Osaka Sangyo University
6	As Invited Exhibitor during "Pesta Sungai Melaka"	22 June 2010	Dataran Sungai Melaka
7	As Invited Exhibitor at "National Conference on Hydrology and Environmental 2010 (HIDRAS 2010)"	23 - 24 June 2010	UTHM, Batu Pahat, Johor
8	Road Tour to Bandung and Jakarta during Global Outreach Program	25 - 31 July 2010	Institut Teknologi Bandung & Universiti Indonesia
9	As Invited Exhibitor at "Water Awareness Programme in Conjunction with Varsity Boat Race 2010"	4 - 10 October 2010	Tasik Putrajaya

**TABLE 3: VISITING PROFESSOR IPASA (2010)**

NO	NAME OF VISITTING PROFESSOR	DATE	UNIVERSITY
1	Prof. Dr. Gustaf Olsson	18 February - 13 March 2010	Lund University, Sweden
2	Assoc. Prof. Dr. Karin Jonsson	19 February - 11 March 2010	Lund University, Sweden
3	Prof. Dr. David Stuckey	1- 4 March 2010	Imperial College, London
4	Prof. Dr. Yoshihisa Shimizu	14 - 16 March 2010	Kyoto University, Japan
5	Prof. Habib Rahman (U.S) and Dr. Aouda Al Johani	25 May 2010	Taibah University
6	Prof. Dr. Masao Tamada	8 June 2010	Japan Atomic Energy Agency, Japan
7	Dr. Mas Agus Mardiyanto	20 June - 10 July 2010	Institut Teknologi Sepuluh Nopember (ITS)
8	Dr. Mustafa M. Bob	10 - 24 July 2010	University of Taibah, Saudi Arabia
9	Prof. Dr. Norio Tase	20 - 26 September 2010	University of Tsukuba, Japan
10	Assoc. Dr. Alan D. Ziegler	19 October 2010	University National Singapore
11	Professor Brian Shutes	28 - 31 Dec 2010	University of London, UK



## AWARDS AND CONFERENCES

Apart from workshops, IPASA has also organized local and international seminars. One international Seminar titled "The 1<sup>st</sup> IWA Young Water Professional Conference 2010" was successfully joint organized with the IWA which was held at PWTC on 2-4<sup>th</sup> March. Regarding awards, IPASA managed to obtain gold and a silver medal in MTE competition. These awards were won by Prof Dr. Ani Idris. At the University level, IPASA managed to secure silver and a bronze medal. The list of seminars organized by IPASA and awards received by the members are shown in Table 4 and Table 5.

**TABLE 4: AWARDS (2010)**

NO	PROJECT LEADER	DATE	UNIVERSITY	UNIVERSITY	UNIVERSITY
1	Prof. Dr. Ani Idris	MTE/ Malaysian Association of Research Scientists (MARS)	4-6 February 2010	EFBLaC	GOLD
2	Prof. Dr. Ani Idris	MTE/ Malaysian Association of Research Scientists (MARS)	4-6 February 2010	FERROPHOTO GEL - Dual-Function Photocatalyst Magnetic Beads	SILVER
3	Dr. Khalida Muda	INATEX	5-7 August 2010	Hybrid Biogranular System for Textile Wastewater Treatment	SILVER
4	Prof. Dr. Zulkifli Yusop	INATEX	5-7 August 2010	An Automated Decision Support System For Determining Optimum Rain Gauge Network	BRONZE

## CONFERENCE / SEMINAR (2010)

NO	NAME OF PROGRAMME	DATE	VENUE	PRESENTERS	ORGANISED
1	Postgraduate Seminar on WATER SUSTAINABILITY	20 January 2010	Rumah Alumni, UTM	<ul style="list-style-type: none"> <li>• Dr. Raymond Venneker (UNESCO-IHE)</li> <li>• Mr. Wong Chee Loong (UNESCO-IHE)</li> <li>• IPASA's Postgraduate Students</li> </ul>	IPASA and WATER Research Alliance UTM
2	The 1 <sup>st</sup> IWA Young Water Professional Conference 2010	2- 4 March 2010	Best Western Seri Pacific, Kuala Lumpur	International and national presenters	IPASA and WATER Research Alliance UTM
3	Fate and Movement of dioxins in the Lake Biwa Basin in Japan, and Integrated Lake Basin Management	15 March 2010	IPASA Meeting Room, Block C07, Level 2	Prof. Yoshihisa Shimizu, Kyoto University, Japan	IPASA and WATER Research Alliance UTM
4	Summer Course 2009 – Sustainable Production: Improving Eco-efficiency	31 May – 18 June 2010	FKSG, UTM	Sustainable Production In Collaboration with: Denmark Technical University, DTU	IPASA and WATER Research Alliance UTM



NO	NAME OF PROGRAMME	DATE	VENUE	PRESENTERS	ORGANISED
5	Treatment of Wastewater using Electron Beam and Radiation Grafted Ion Exchange Materials	8 June 2010	Bilik Jamuan, DSI	Prof. Dr. Masao Tamada, Japan Atomic Energy Agency, Japan	IPASA and WATER Research Alliance UTM
6	Summer Course 2010 Title: Managing Water Environment in tropical Countries	21 June – 9 July 2010	FKA, UTM	In Collaboration with: Institut Teknologi Sepuluh Nopember, ITS, Surabaya	IPASA and WATER Research Alliance UTM
7	Title: Study of Shallow Water Table Rise Problem in Al-Madinah Al-Munawwarah	21 July 2010	IPASA Meeting Room, Block C07, Level 2	Dr. Mustafa Mohamed Bob, Taibah University	IPASA and WATER Research Alliance UTM
8	Topic: The potential of Anaerobic Digestion in Future Global Energy Supply	6 August 2010	IPASA Meeting Room, Block C07, Level 2	Dr. Paul J. Sallis (New Castle University)	IPASA and WATER Research Alliance UTM
9	Water Awareness Programme in Conjunction with Varsity Boat Race 2010	4 - 10 October 2010	Tasik Putrajaya, Putrajaya	<ul style="list-style-type: none"> <li>• Prof. Dr. Zilkifli Yusop</li> <li>• Assoc. Prof. Dr. Abdull Rahim Mohd Yusoff</li> <li>• Assoc. Prof. Dr. Azmi Aris</li> <li>• Dr. Shamila Azman</li> <li>• Dr. Salmiati</li> </ul>	IPASA and WATER Research Alliance UTM
10	ITS-UTM International Conference 2010 on Sustainable Urban Environment	8 - 10 December 2010	Institut Teknologi Sepuluh Nopember, Surabaya (ITS), Indonesia	IPASA's Postgraduate Students	IPASA and WATER Research Alliance UTM
11	Integrated Urban Management	30 December 2010	IPASA Meeting Room, Block C07, Level 2	Prof. Brian Shutes, University of London, UK	IPASA and WATER Research Alliance UTM

