



# CLEANING THE UNSEEN FOR A SUSTAINABLE FUTURE

**SUSTAINABILITY REPORT 2012-2013** 

# INDAH WATER AT A GLANCE

We are the national sewerage company entrusted with the responsibilities of developing and maintaining a modern and efficient sewerage system for all Malaysians.

We provide sewerage services to 87 Local Authorities within Peninsular Malaysia (excluding Kelantan State, Johor Bahru and Pasir Gudang Municipal Areas, DARA, KETENGAH and KEJORA areas) and Labuan.

We operate and maintain close to 6,000 public sewage treatment plants, more than 920 network pump stations and over 16,300 km sewer lines.

## **RATIONALE**

We have 19 unit offices and state offices, 56 reporting centres and 3 regional laboratories nationwide as at December 2013.

We serve close to 21 million connected population equivalent nationwide.

We provide the best services and respond promptly to our customers' enquiries. 99.6% of billing enquiries and 96.7% of operational enquiries were resolved within the required level of service in 2013.

The nature of our work is largely invisible to the public eye but the positive impact it brings is immense. In fact, our assets operate every hour and minute, providing a good sewerage system for the community. When it comes to our services, out of sight is certainly not out of mind. The nature of our operations requires that sewerage services are often forgotten by our customers because treatment is far away from our customers' premises. We treat wastewater to protect public health, preserve our water resources and conserve the environment to deliver a sustainable future for all. Our task is to ensure that current and future generations can enjoy a clean and healthy environment through a dependable sewerage system. Our definition of 'sustainable' covers the entire ecosystem, including our customers, communities, environment, employees, the public as well as the financial stability of the Company.

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# **ABOUT** THIS REPORT

This is the fifth Sustainability Report to be produced by Indah Water Konsortium Sdn. Bhd. (Indah Water), as part of the Company's efforts to communicate more effectively with its stakeholders. This report is a clear, comprehensive and transparent representation of the Company's performance in managing the economic, social and environmental aspects of its operations.

In writing this report, Indah Water has been guided by the Global Reporting Initiative (GRI), an internationally recognised standard for sustainability reporting. Consideration has also been given to relevant local and international guidelines. Four sections have been devoted to sustainability efforts in the Workplace, Marketplace, Environment and Community, as suggested by Bursa Malaysia's Corporate Social Responsibility (CSR) Guidelines.

This report features Disclosures on Management Approach (DMA) and provides information on the nature of business in each area of the GRI Guidelines. The Company's strategies, achievements and future plans for sustainability management are all aligned with these guidelines, especially in the areas of sustainable environmental management, community, social contributions, ethics and corporate culture.

Where company-wide information is not available, performance Company's progress towards achieving targets evaluated.

#### SCOPE OF REPORT

**Reporting period**: 1 January 2012 to 31 December 2013

: Indah Water Company-wide Coverage

#### REFERENCE AND GUIDELINES

#### **Principal Guidelines**

GRI-G3.1 Sustainability Reporting Framework

#### Additional Guidelines

- Bursa Malaysia's Corporate Social Responsibility (CSR)
- ACCA Malaysia Sustainable Reporting Guidelines for Malaysian Companies
- ISO 26000: Guidance on Social Responsibility

#### RELIABILITY OF INFORMATION DISCLOSED

The contents of this report have been verified by SIRIM QAS International Sdn. Bhd. Indah Water's approach to sustainability is also widely endorsed by its stakeholders, as reflected in the awards received based on independent assessments of company performance. These are listed in this report.

#### **FEEDBACK**

Communications Department

This report is available to all stakeholders in hard copy on request and can be downloaded from the corporate website www.iwk.com.my. For further information and comments, please contact:



# ABOUT

sustainable management of natural

resources and environment

Indah Water, a company owned by the Minister of Finance Incorporated, is Malaysia's national sewerage company which has been entrusted with the task of developing and maintaining a modern and efficient sewerage system for all Malaysians.

In 1994, the Federal Government awarded the Company the concession for nationwide provision of sewerage services which prior to that, was under the responsibility of local authorities (LAs).

Since then, Indah Water has taken over the sewerage services from a total of 87 LAs in all areas except the states of Kelantan, Sabah, Sarawak and the Majlis Bandaraya Johor Bahru, Majlis Perbandaran Pasir Gudang, DARA, KETENGAH and KEJORA.

National Sewerage Agenda

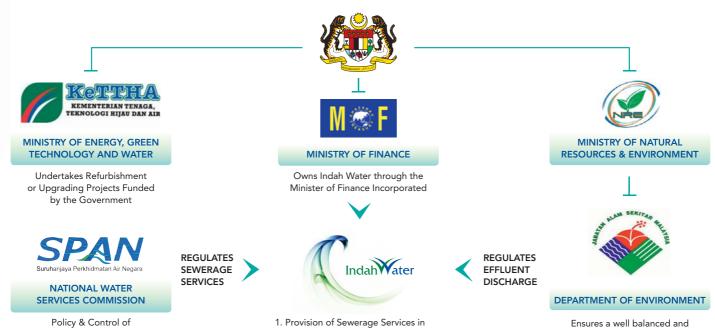
by the Government

A modern and efficient sewerage system is vital for the country to ensure that wastewater is treated before being discharged into the rivers. This will help preserve the country's water resources, protect public health and provide a cleaner and safer environment.

In June 2000, as testimony of the Government's seriousness in ensuring that a proper and efficient sewerage system will be successfully put in place and maintained, the Government, through the Minister of Finance Incorporated, took over the entire equity in Indah Water from its previous private owners.

Indah Water is now well-positioned to undertake the vital task of ensuring that Malaysians today and in the future will be able to enjoy a clean and healthy environment through a proper and well-maintained sewerage system.

#### THE REGULATORY BODIES



2. Sewerage Services Billing & Collection





# WHAT WE DO

# OPERATION AND MAINTENANCE OF PUBLIC SEWERAGE SYSTEMS

- Provide scheduled operation and maintenance of public sewers, Network Pumping Stations (NPSs) and public Sewage Treatment Plants (STPs) within our service areas
- Provide corrective and preventive maintenance of public sewers, STPs and sludge treatment facilities to meet the regulatory requirements



#### **DESLUDGING SERVICES**

- Perform scheduled desludging services for septic tanks on government premises and demand desludging for septic tank users within our service areas
- Provide responsive desludging to septic tanks users outside our service areas and to all pour flush users





- Carry out sampling, analysis and monitoring of effluent quality and sludge disposal activities
- Submit effluent compliance data to the Department of Environment (DOE) and Suruhanjaya Perkhidmatan Air Negara (SPAN), the National Water Services Commission



# SEWERAGE CAPITAL WORKS AND REFURBISHMENT MANAGEMENT

 Provide project management and monitoring of capital works for both Government (Jabatan Perkhidmatan Pembetungan (JPP) & SPAN) funded sewerage projects and Indah Water internal projects







# SEWERAGE TECHNICAL AND OPERATIONAL SKILLS TRAINING

- Deliver professional technical and non-technical training on sewerage planning strategies or master plan; engineering; environmental monitoring and analysis; operational; preventive maintenance; and Health and Safety (H&S) in sewerage systems
- Deliver local and international training on sewerage management, operations and maintenance



# RESEARCH AND DEVELOPMENT (R&D) WORK IN THE SEWERAGE SECTOR

 Perform in-house R&D work; Continuous Improvement Projects (CIPs); External Vendor Led R&D; Structured Institutional and Universities R&D; and Academia's Student Research Initiatives



# SEWERAGE PLANNING, SEWERAGE ASSET DATA MONITORING AND CERTIFYING SERVICES

- Provide planning services: development and updating of nationwide sewerage catchment strategy, sludge management strategy, sewerage project planning and sewerage asset database
- Provide certification services: evaluating, certifying and approving of sewerage facilities applications on behalf of SPAN
- Geographical Information System and mapping
- Facilitate Asset Management System throughout the Company



# SEWERAGE TECHNICAL AND ENVIRONMENTAL SERVICES / CONSULTANCY WORKS

- Undertake sewerage management, policy and public awareness consultancy
- Conduct audits of sewerage system
- Perform HAZOP studies of water and wastewater facilities



# **ACCREDITATION**



ISO 9001:2000 /

ISO 9001:2008 -

Bandar Tun Razak STP -Operation & Maintenance

Valid Until:

11 DECEMBER 2014



BS EN ISO 9001:2000 / ISO 9001:2008 -Planning and Technical Services

Valid Until: 22 MARCH 2015



ISO 9001:2000 / ISO 9001:2008 -

Bayan Baru STP Operation & Maintenance

Valid Until: 27 NOVEMBER 2014

200

2002



BS EN ISO 9001:2000 / ISO 9001:2008 -Certification Services

Valid Until: 25 JUNE 2014



MS ISO/IEC 17025:2005 -Northern Laboratory Services -Chemical Testing of Effluent

Valid Until: 13 JUNE 2016

2007

2008

MS 1722:2011 -HQ Indah Water & Langat UO -Occupational H&S **Management System** 

Valid Until: 2 MAY 2016



ISO 50001:2011 -**HQ** - Operation

ISO 14001:2004 -

Valid Until:

O&M Dept (HQ), KL UO, KLR142 STP, KLR359 STP

> Valid Until: 19 DECEMBER 2016

> > ISO 50001:2011 -Kuala Sawah STP -Operation

Valid Until: SIRIM 19 DECEMBER 2016







OHSAS 18001:2007 -HQ Indah Water & Langat UO -Occupational H&S Management System

Valid Until: 2 MAY 2016



MS ISO/IEC 17025:2005 -**Central Laboratory Services -Chemical Testing of Effluent** 

ISO 9001:2008 -

Valid Until:

24 MAY 2014

**Project Management Consultation Services** 

Valid Until: 3 DECEMBER 2015



ISO 14001:2004 -Bandar Tun Razak STP -Operation & Maintenance

Valid Until: 6 SEPTEMBER 2015







On behalf of the Board of Directors of Indah Water, I am pleased to present this Sustainability Report covering our operations and related activities from 1 January 2012 to 31 December 2013. As Malaysia's national sewerage company, we are expected and have not failed Insha Allah to run a sustainable sewerage service for the nation and community. We are highly committed to providing an efficient sewerage system that makes a sustainable environment possible. Our strong collaboration and close engagement with our customers, regulatory bodies, employees, stakeholders and the public in general has contributed enormously to assisting us in addressing industry-related issues on a timely basis.

The staff and management at Indah Water are central to the Company's existence and success. We believe in developing and retaining our own talent. Towards this end, we continuously encourage our people to increase their knowledge and skill sets. Knowledge and practice are integral to what we do and ensure the best level of service to our customers. I am proud to mention that we have launched a Management Development Programme (MDP), which is run by the Manila-based Asian Institute of Management, and an Executive Development Programme (EDP) which is run by the Malaysian Institute of Management. These programmes motivate employees to improve their knowledge and skills to meet job requirements. Career enhancement at Indah Water is prioritised and developed for continued growth. 30 employees have been selected for the MDP and 25 for EDP.

In addition to training, we also organise staff activities to boost their morale and strengthen their sense of belonging with the Company. With regards to this, Indah Water's teambuilding activity was introduced in 2012 with the objective of strengthening employee relationships. All departments are encouraged to organise their own yearly teambuilding programmes.

Sewerage work involves highly risky operations and safety measures have to be given paramount consideration. At Indah Water, safety is a value we inculcate and instil in staff and not treated merely as an issue of workplace compliance to meet regulatory requirements. We are committed to ensuring a safe and conducive work environment. All activities are conducted with full regard for safety at our facilities, sites, vehicles and equipment. This practice protects the safety and health of our employees, communities adjacent to our operations and the public. Our commitment is reflected by our success in achieving OHSAS 18001:2007 and MS 1722:2011 in May 2013. Indah Water has qualified safety and health personnel and appropriate equipment to ensure we are able to achieve and maintain our safety objectives and standards at all times. Safety is integrated into everything we do. We work constantly to set expectations, provide tools, measure progress and communicate results.

We are committed to managing a sustainable entity that creates value for Indah Water and its stakeholders. Sustainability is the driving force in our day-to-day operations. This report highlights the various innovations and milestones we have achieved. It examines all potential environmental and social impacts, potential revenue sources, cost savings measures and risk reduction efforts that have been introduced over the last two years.



WE ARE COMMITTED TO MANAGING A

SUSTAINABLE ENTITY THAT CREATES VALUE

FOR INDAH WATER AND ITS STAKEHOLDERS.

SUSTAINABILITY IS THE DRIVING FORCE IN

**OUR DAY-TO-DAY OPERATIONS.** 

I would like to take this opportunity to record my deepest gratitude to the Board of Directors, management team and employees for their dedication. Their hard work has enabled the Company to maintain its high performance and meet all the expectations that has been placed on us. I would also like to thank our valued stakeholders and customers for their continuous support and unfailing confidence in us.

Thank you.

DATO' IBRAHIM MAHALUDIN PUTEH

Chairman

# A MESSAGE FROM OUR CEO



Welcome to the Indah Water Sustainability Report 2013. In this report, we pen our commitment to the duties bestowed on us by the Government and our stakeholders in serving more than 20 million Malaysians. To us, sustainability is not just a responsibility but is imbued into everything we do. As the Chief Executive Officer, I am proud that each and every employee is committed to working responsibly, innovatively, creatively and sustainably.

We recognise our responsibility of upholding the quality of sewerage services to protect public health while preserving water resources and the environment. A strategic objective in our 2013-2015 Business Plan is maintaining an effective and efficient sewerage service through a high level of service availability; improved efficiency and reliability; and optimised operating resources.

Every day, Indah Water ensures that its plant equipment operates efficiently. Routine maintenance work is carried out at all treatment plants. This critical work prevents sewage from contaminating the waterways and environment. The plants' performance is monitored regularly to check the treated effluent can be safely released into the receiving waterway. Effluent from our plants is frequently sampled and tested to ensure it complies with EQ(S)R 2009 standards. The results are regularly reported to the regulators, Suruhanjaya Perkhidmatan Air Negara (SPAN) and Department of Environment (DOE) on a timely basis.



TO US, SUSTAINABILITY IS

**NOT JUST A RESPONSIBILITY BUT** 

IS IMBUED INTO EVERYTHING

WE DO.

To us, sustainability is not just a responsibility but is imbued into everything we do. Indah Water's Research & Development (R&D) Programme develops environmentally-sustainable initiatives that focus on sewage treatment by-products and operational efficiencies. In 2011, our R&D team was established to tap the vast opportunities in wastewater treatment technology. We look forward to developing strong local expertise to meet challenges and demands in the years ahead. Indah Water has undertaken and facilitated more than 100 research projects. A major part of our R&D involves the by-products generated from wastewater treatment process. Ideally, feasible technology would be employed to convert these by-products into value added, sustainable and reusable products. With increasing environmental awareness, a green technology approach is deployed to harness this potential resource from the wastewater treatment process. Currently, the main waste by-products are bioeffluent, biosolids and biogas which are discharged, disposed of or flared off respectively. We promote a greener alternative to convert these by-products into energy, fertiliser and recycled water (for non-potable use) thus reducing our carbon footprint.

MZ Clear is the maiden product developed solely by our R&D team led by our in-house scientist in 2012. This ingenious product solves odour and clogging problems prevalent in our Sewage Treatment Plants (STPs). The product separates solids from wastewater and reduces the volume of sludge produced. MZ Clear is currently being used in our STPs throughout the country. We are in the process of patenting this product.

This culture of innovation is not limited to R&D and is encouraged throughout operations. Continuous Improvement Projects (CIPs) have been an annual event for the past few years. I am encouraged by the large and increased participation over the years. This shows that our employees are truly innovative and there are many talented and creative individuals among the operations staff. These individuals support management's aim of reducing operating costs and improving operational efficiency. CIPs have proved successful in generating relevant, useful ideas and products that can facilitate operations. CIP's main goal is to create and inspire innovation, creation and continuous improvement across our entire workforce at all levels, especially those at our Unit Offices (UOs). This will encourage efficiency in our daily work activities, which leads to improved and cost-effective STP performance.

In 2012, Indah Water and Universiti Tenaga Nasional (UNITEN) signed a Memorandum of Agreement to undertake an R&D project. This collaboration involved researching and implementing a biogas and micro hydro power plant at Pantai Regional STP. The project is funded by Akaun Amanah Industri Bekalan Elektrik (AAIBE) or Malaysian Electricity Supply Industries Trust Account. The fund contributors are power generating companies across Peninsular Malaysia. The energy generated from this initiative will be consumed internally with an option of exporting it to the grid in the future.

## A MESSAGE FROM OUR CEO

Indah Water had a major breakthrough in its R&D green technology activities. Biosolids and bioeffluent were successfully used in actual landscaping applications. The pilot project is a joint effort between Indah Water and Majlis Perbandaran Port Dickson (MPPD). This trial application on landscape plants demonstrated the effective use of biosolids and bioeffluent compared to commercial fertilisers. Indah Water obtained the support and endorsement of the National Green Technology and Climate Change Council through Kementerian Tenaga, Teknologi Hijau dan Air (KeTTHA). These initiatives can be rolled out across Peninsular Malaysia and in WP Labuan starting with a pilot project in a Local Authority in each state. This innovative initiative has now been added to the national level agenda. Every Local Authority will initiate similar projects for the sustainable management of waste resources from STPs.





While innovations and improvements are important to us, a major part of our success is customer service excellence. Customer service management is prioritised to deliver high quality service and a timely response to customers. Significant improvements have been achieved by strategic changes in processes and the innovative use of technology. Response times for customer, technical and administrative requests were reduced. Transparent communication channels for customers were also provided. In 2013, a customer satisfaction survey showed the overall household Customer Satisfaction Index was 71.68. This result is a marked improvement from 68 in 2011. All satisfaction dimensions have attained a relatively good score of more than 70.

We continue to broaden our horizons and replicate our expertise in other countries. On 17 May 2013, we signed a Memorandum of Understanding (MoU) with Water Sanitation for Africa (WSA), a pan-African inter-governmental agency to provide technical expertise and sewerage management consultancy services in African countries. We are well known for green technology and innovation in microbiology, biotechnology and nanotechnology. This led to WSA selecting Indah Water to be represented on a technical committee formed by the Bill and Melinda Gates Foundation. We will propose immediate, medium- and longterm solutions for sanitation services in WSA member countries. We hope to assist these countries improve their sewerage management to keep abreast with their fast growing urban population.

#### **MOVING FORWARD**

Our focus for 2014 will be increasing stakeholders' value as we believe this is an integral part of our operations and can greatly affect the Company's success. Our efforts emphasise operational efficiencies while providing value added services, risk management, community development and talent management. It is our aspiration that Indah Water will continue meeting its stakeholders' expectations through these initiatives. I believe our work in sustainable activities and innovation has equal potential to shape our legacy. The challenges we face are huge, but the opportunities are even greater if we act now and cement our commitment to sustainable innovation.

The Company has come through some difficult times. It is well positioned and employees are excited about future prospects. We are on course to continue being the most efficient and environment caring sewerage company. Building the right culture is critical for sustaining our operations. Our people must act in a way that is consistent with our values. In 2014 and moving forward, we will stick to our strategy with continuing emphasis on clarity, alignment and execution of our goals.

Indah Water is driven by a simple yet clear strategy. We will transform from a utility to a resource based entity focussing on long-term sustainability. We face a low tariff structure and a lack of financial resources especially for our CAPEX. Despite these constraints, the untiring efforts of our workforce and close teamwork are beginning to produce positive results that will push us forward. While challenges and uncertainties persist, we have clearly demonstrated that we are truly resilient, integrated and focused. Our stance is to maximise both knowledge and opportunities and this is essential in the way we respond to challenges.





#### **ACKNOWLEDGEMENTS**

I would like to take the opportunity to extend my gratitude to all our stakeholders who support us with their feedback, opinions and encouragement as we continue to grow in Malaysia and perhaps beyond national boundaries. On behalf of the Board, I would like to express my deepest appreciation to the management and employees for their continuous dedication and commitment. As always, we hope you find our report useful and informative. We appreciate your feedback, which is vital for us in developing our future.



# OUR CORE VALUES

The acronym, Indah Water, stands for the 10 values below. 'INDAH' is beautiful in Malay; 'WATER' is our core business to 'beautify' wastewater. Indah Water adds value and improves water quality by reducing pollutants to meet regulatory standards while improving public health and environmental concerns.



Uphold professional responsibilities and accountabilities in a trustworthy manner

## NURTURE

Provide diverse training programmes and hands on training facilities for the workforce and the overall sewerage industries

### **D**EDICATION

Committed at all times to deliver quality sewerage services and output

#### **A**STUTE

Apply knowledge, practical experience, holistic overview and effective decision making to ensure sustainable sewerage development and environment protection

#### HOLISTIC

Holistic approach and management of sewerage development and environment protection

### **W**ISDOM

Provide timely appropriate recommendation and problem solving actions/output

#### AUTHENTIC

Ethical and devoted to enlighten sewerage activities for safety, health and environmental protection

#### TEAMWORK

A corporate effort of many expertise and support with one mind

## **E**NDEAVOUR

Act by available means and resource to upkeep sustainable sewerage development and environment awareness to all stakeholders

#### RESOURCEFUL

Systematic planning, development, implementation and monitoring to ensure stakeholders satisfaction Indah Water's 2013 – 2015 Business Plan outlines five Key Focus Areas (KFAs) to fulfil its role in the provision of sewerage services. These areas safeguard public health, preserve water resources and conserve the environment in order to deliver a sustainable future for all.

# OUR SUSTAINABILITY PLANS



# SOUND FINANCIAL PERFORMANCE

Support and sustain effective operations and achieve service excellence while working towards financial sustainability and viability of the business through:

- A tariff review proposal
- The collection rate
- Revenue and expenses
- Improved financial performance

# CUSTOMER SERVICE EXCELLENCE

Maintain existing
high levels of
customer service while
providing cost-efficient
solutions that meet
the requirements of
changing circumstances
and new obligations
through:

- Customer service responsiveness
- Customer complaints
- Awareness and branding
- Proactive measures

# OPERATIONAL EXCELLENCE

Ensure management of sewerage operations are based on the best available technical, experience and management knowhow to achieve efficiency and effectiveness through:

- Effluent compliance
- An asset management system
- Energy management
- Certifying Agency performance
- Project management consultant services
- Enterprise resource planning

# STAFF MOTIVATION & DEVELOPMENT

Encourage, support and recognise staff performance, and ensure the availability of skilled and motivated staff for the future development and operation of Indah Water through:

- Capacity building for sewerage workforce
- Benchmarking productivity
- Staff satisfaction

# CAPTURING NEW OPPORTUNITIES

Anticipate and respond to new needs and opportunities and promote commercial services to achieve long-term sustainability of sewerage services through:

- Green technology
- Operational improvements
- Development of non-core business

# INDAH WATER'S ACHIEVEMENTS AND CHALLENGES

#### **ACHIEVEMENTS**

#### **Economic**

- Collection rates of 82% in 2012 and 85% in 2013
- Company-wide cost savings in 2013 totalling RM28 million
- In 2013, other income increased by 18% compared to 2012

#### **CHALLENGES**

- Working towards achieving a high collection rate despite ineffective punitive measures to deter non-payment
- Running efficient and effective operations coupled with a low tariff and escalating costs
- Continuing cost saving and driving down operating cost despite taking over more plants without compromising performance and quality
- Promoting standard STPs to reduce the number of plant types
- Plant rationalisation to reduce proliferation of small plants which are more expensive to operate and maintain
- Becoming self-sufficient in the long term

#### Social

- Continued customer participation in the 'Eye Programme' to reduce the risk of theft, vandalism and trespassing on public plants
- Continued providing responsive desludging services for Individual Septic Tanks (ISTs), Communal Septic Tanks (CSTs) and pour flush systems to help the Government improve the environment
- Further reducing theft, vandalism, illegal discharge and illegal connections which disrupt the sewerage system
- Reducing overflows and sewer blockages that may become a public nuisance
- Advocating the enforcement of prohibited discharges such as fats, oil, grease and other harmful wastes that are illegally discharged into the sewers and flow to the STPs

#### Community

- Free sewerage services for all nonprofitable, tax exempt, and charitable organisations such as religious centres and welfare homes
- Customer Satisfaction Index improved from 68 in 2011 to 72 in 2013
- Educational, outreach and awareness programmes have been implemented
- Educating the public on the importance of sewage treatment
- Educating the public on the importance of keeping rubbish away from the sewers
- Educating customers to pay their sewerage bills
- Improving processes to prevent the reoccurrence of complaints

# Health and Safety (H&S)

- Obtained OHSAS 18001:2007 and MS 1722:2011 H&S certifications in May 2013
- Contractor site inspection and compliance checks by H&S to ensure contractor management was strictly followed
- H&S training and surveillance, fire drill rehearsals and office safety training
- Eliminating trespassing on STP compounds which endangers public safety
- Eliminating H&S incidents at our sites

#### **ACHIEVEMENTS**

#### **Service Quality**

- Over 95% of public sewer blockage complaints were resolved within 24 hours Level of Service (LoS) in the last three years
- Over 94% of the total public complaints such as odour (above 97%), noise (above 97%), aesthetics (above 94%) and effluents (above 95%) were resolved within 24 hours LoS in the last three years
- Over 96% of billing complaints were resolved within the LoS according to the respective complaint type in the last three years

#### **CHALLENGES**

- Achieving the optimal balance between LoS and the costs involved
- Enhancing sewerage facilities through refurbishment,
   STP upgrades and increased sludge treatment facilities

#### **Environment**

- Over 94% of the final effluent discharged from public STPs complied with the Environmental Quality (Sewage) Regulations 2009 standard in the last three years
- The pollution loading for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids, Ammonical Nitrogen (NH3-N) and Oil and Grease (O&G) from our plants is consistently below the allowable load for Standard A and Standard B catchments
- Improving compliance levels by increasing sampling frequency, plant maintenance frequency and preventive maintenance
- Practising the Reduce, Reuse and Recycle (3R) concept throughout operations
- Ensuring no waterway pollution from plant operations

#### Workplace

- Management Development Programme and Executive Development Programme were introduced as part of succession planning
- Employee Engagement / Satisfaction Survey 2013 was conducted
- Increasing productivity along with the efficient use of resources and skills
- Retaining experienced employees
- Meeting the demand for higher remuneration for union members to help with rising living costs

# OUR ENVIRONMENTAL AND SUSTAINABILITY COST HIGHLIGHTS

		TOTAL COST (RM MILLION)		
SUSTAINABILITY EFFORTS	ACTIVITIES	2011	2012	2013
Operation & Maintenance (O&M)	<ul> <li>Operation Planning</li> <li>Treatment Plants O&amp;M</li> <li>Sewer maintenance</li> <li>Desludging</li> <li>Laboratory Services</li> <li>Biosolid Treatment &amp; Disposal</li> <li>Electricity (O&amp;M Department Only)</li> </ul>	313.41  168.3	347.01 179.30	397.90 187.44
Planning & Engineering (R&D, Design, Certification, etc.)	<ul> <li>Planning Services</li> <li>Developer Services</li> <li>Land Services</li> <li>Quality &amp; Capacity</li> <li>Development Services</li> <li>Engineering &amp; Environment Services</li> </ul>	18.25	20.91	22.25
Project Management (Capital Works & Refurbishment)	<ul> <li>Project Management &amp; Administration</li> <li>Quality Assurance &amp; Document Control</li> <li>Special Project</li> </ul>	7.11	7.93	10.42
Training & Development, Health & Safety, Employees Welfare, Corporate Social Responsibilities and	<ul><li>Training &amp; Development</li><li>Health &amp; Safety</li><li>Employees Welfare</li><li>Media &amp; Events</li></ul>	5.71 6.23	6.31  8.57	7.02  9.91
Corporate Governance	Charity Sewerage Services     Internal Audit	1.43 0.59	1.63 0.68	1.72 0.65
Risk Management	<ul> <li>Risk Management activities, including Insurance, Asset Risk Management</li> </ul>	0.75	0.85	0.82
Investment in Sewerage Related Assets & Vehicles	<ul> <li>Plants, machinery and motor vehicles</li> </ul>	29.99	33.12	25.44

# LISTENING TO OUR STAKEHOLDERS



#### **STAKEHOLDER GROUP**

#### Regulatory Bodies including:

National Water Services Commission (SPAN)
Department of Environment (DOE)
Sewerage Services Department (JPP)
Department of Safety & Health (DOSH)
Ministry of Energy, Green Technology
and Water (KeTTHA)
National Audit Department
Land Offices
Local Authorities (LAs)
Other government agencies

#### **ENGAGEMENT HIGHLIGHTS**

Engagement activities held with regulatory bodies:

- Headquarters (HQ) and regional meetings with regulator
- Quadripartite meetings between DOE, SPAN, KeTTHA and Indah Water
- SPAN STP audits
- Joint samplings of final effluent with DOE
- Project progress meetings with JPP on Greater Kuala Lumpur (GKL)
- Meetings with the Land Office on related matters
- Represent SPAN for all One Stop Centre meetings
- DOSH H&S plant inspections

# LISTENING TO OUR STAKEHOLDERS

STAKEHOLDER GROUP	ENGAGEMENT HIGHLIGHTS
Shareholder: MoF	<ul> <li>Quarterly corporate KPI updates to the MoF</li> <li>Presentations to the MoF</li> <li>Quarterly financial reports to the MoF</li> <li>Answers to parliamentary questions</li> <li>Engaged MoF on restructuring of GSL</li> </ul>
Suppliers, Consultants and Contractors	<ul> <li>Tender briefings, tender clarification and price negotiation if required</li> <li>Meetings with insurance brokers to clarify coverage and claims</li> <li>New product briefings</li> <li>Visits to suppliers' sites and factories</li> <li>Suppliers' e-Procurement training</li> <li>Tool box talks for contractors</li> <li>Project progress discussions with consultants</li> </ul>
Community: Customers Public Media	<ul> <li>IST Desludging Campaign</li> <li>Dialogues</li> <li>Community briefings</li> <li>Briefings to school children and National Service Training Programme participants</li> <li>Observation tours</li> <li>Exhibitions</li> <li>Community events</li> <li>STP open days</li> </ul>
Employees	<ul> <li>Departmental meetings</li> <li>Annual performance appraisals</li> <li>Activities organised by Kelab Indah Water (KIW)</li> <li>Health talks</li> <li>Teambuilding</li> <li>Safety and toolbox talks</li> <li>H&amp;S activities</li> <li>Informal social gatherings</li> </ul>
Non-Governmental Organisations (NGOs): Environmental Management and Research Association Malaysia (ENSEARCH) Malaysian Water Association (MWA) International Water Association (IWA) Malaysian Water Partnership (MyWP)	<ul> <li>Conferences and exhibitions</li> <li>Paper presentations at seminars, conferences, etc.</li> <li>Holding various positions as committee members in NGOs</li> </ul>
Developers	<ul> <li>Meetings with SPAN and the Real Estate and Housing Developers' Association (REHDA)</li> <li>Standard STP developer briefings</li> <li>Certifying Agency (CA) Open Day</li> </ul>

#### **MATERIALITY ANALYSIS**

Stakeholders may raise concerns, issues, recommendations or suggestions through various engagement activities, emails, written letters and the telephone. This feedback formed part of the materiality analysis and is included in this report. It is also used in our ongoing sustainability strategic planning.

Materiality analysis allows the examination of sustainability issues that are of the highest concern to our stakeholders and affect the Company's ability to execute its business strategy. A materiality matrix was developed to map these issues against the level of importance to the business and stakeholders. The salient points of this mapping exercise are presented below.

	HIGH			<ul><li>Tariff review</li><li>Government subsidy</li><li>Assets reliability and risk</li></ul>
IMPORTANCE TO STAKEHOLDERS	MEDIUM	Price increase for pour flush desludging service in 2013	<ul> <li>Unsatisfactory and repetitive written comments on sewerage applications</li> <li>Testing of products, systems, equipment and new innovative technology</li> </ul>	<ul> <li>Lack of fund to upgrade existing plants and rationalise old plants</li> <li>Health &amp; safety of staff exposed to sewage and sludge on site</li> <li>More stringent H&amp;S requirements to prevent public or contractor incidents during construction work</li> </ul>
	LOW	<ul> <li>Group Hospital &amp; Surgery (GHS) entitlement</li> <li>Participate in and contribute to events organised by NGOs</li> </ul>	<ul><li>Desludging of IST</li><li>Rising cost of living</li></ul>	<ul> <li>Quality of plants taken over</li> <li>Theft and vandalism at plants</li> <li>Loss of experienced staff</li> <li>License to Contravene ("LTC") application</li> </ul>
		LOW	MEDIUM	HIGH

# LISTENING TO OUR STAKEHOLDERS



CONCERNS/ISSUES/ FEEDBACK RAISED IN 2012-2013	INDAH WATER'S RESPONSE	IMPORTANCE TO STAKEHOLDERS	IMPORTANCE TO BUSINESS PROCESS
Tariff review	Immediately review and gradually increase the tariff towards full cost recovery. Subsequently, to remove the Government subsidy.	High	High
Government subsidy	Government subsidy to meet the shortfall of the low tariff until tariff review towards full cost recovery is implemented.	High	High
Assets reliability and risk	Indah Water is currently using an asset management system. Government-funded CAPEX is required to refurbish and upgrade assets.	High	High
Lack of existing plants upgrades and old plant rationalisation	Special fund is required from the Government.	Medium	High
Quality of plants taken over	Adherence to Malaysia Sewerage Industry Guidelines. Promote standard STPs with SPAN.	Low	High
Theft and vandalism at plants	Installation of Electronic Security System (ESS) and Early Warning System (EWS) at the plants and placing security guards at larger plants.	Low	High
Loss of experienced staff	Succession planning and career development programmes are being implemented.	Low	High
Health & safety of staff exposed to sewage and sludge on site	Introduced critical allowance effective 1 June 2013.	Medium	High
Desludging of IST	The majority of IST users are unaware of this standard practice of the desludging schedule as per the Water Services Industrial Act 2008. There is a lack of awareness from IST users and enforcement by the regulators.	Low	Medium
Price increase for pour flush desludging service in 2013	There have been no pour flush desludging price increase for 17 years despite major increases in operating costs especially electricity and fuel. Therefore, Indah Water has increased the rate to remain sustainable.	Medium	Low

CONCERNS/ISSUES/ FEEDBACK RAISED IN 2012-2013	INDAH WATER'S RESPONSE	IMPORTANCE TO STAKEHOLDERS	IMPORTANCE TO BUSINESS PROCESS
Unsatisfactory and repetitive written comments on sewerage applications by Certifying Agency (CA)	Briefing sessions on the new Planning, Design and Construction of Sewerage System and Septic Tanks Rule 2013 have been delivered to all CA offices nationwide. New procedures and a CA fee structure were introduced.	Medium	Medium
Rising cost of living	Extended payment of temporary relief allowances to manager level and below until 31 December 2013.	Low	Medium
Group Hospital & Surgery (GHS) entitlement – annual limit, and room and board entitlement	<ol> <li>Increased GHS coverage, entitlement and annual limit for all staff levels.</li> <li>Increased room and board entitlement for Grade 7-13 from RM80-100 to RM120.</li> </ol>	Low	Low
Participate in and contribute to NGOs events	<ol> <li>Presented papers at NGO conferences to share sewerage management information with the wider public.</li> <li>Sought strategic consultation at NGO workshops to help draft strategic water resources management plans for the Government.</li> </ol>	Low	Low
More stringent H&S requirements prevent oublic or contractor ncidents during construction work	H&S has been incorporated in Indah Water's contracts through its Bill of Quantity, Standard Operating Procedure (SOP), Instruction to Tenderer and H&S requirements to meet legislation.	Medium	High
Suppliers requested the testing of products, systems, equipment and new innovative technologies for the Malaysian sewerage ndustry	Provided test bed services for suppliers to conduct pilot projects and test sewerage products, equipment and systems.	Medium	Medium
Applied for License to Contravene (LTC) primarily for non-compliance with Oil & Grease (O&G) parameter (approximately 99% of the LTC amount) An exemption was sought for older plants not complying with the EQ(S)R 2009 standard	O&G discharge is beyond Indah Water's control and must be tackled at source by the relevant authorities. Upstream O&G compliance must be enforced by the Government.	Low	High

# CORPORATE GOVERNANCE

Corporate governance remains an underlying value in every aspect of Indah Water. The Board of Directors (Board) upholds the importance of corporate governance and strives to instil an effective structure into the core of the Company. The Financial Authority Limits, 2013-2015 Business Plan and the annual budget are the main guiding references. The Board is mandated to perform its role effectively. Remuneration matters are forwarded to the MoF for approval.

# THE ROLE OF THE BOARD, COMMITTEE MEMBERSHIP AND AREAS OF EXPERTISE

Indah Water's Board consists of eight members: seven nonexecutive directors and one executive director. The Board provides a wide range of management skills and a wealth of experience. This ensures the adoption and implementation of sound business policies, decisions and directions.



#### Composition, roles and experience of the Board

	ROLE OF THE	AREA OF EXPERTISE / PROFESSION /	STATUS BOARD ATTENDA			DANCE
NAME	BOARD	EXPERIENCE	2012	2013	2012	2013
Dato' Ibrahim Mahaludin Bin Puteh	Chairman, Non-Executive Director	Business Management	Active	Active	7/7	9/9
Dato' Othman Bin Abdullah	Non-Executive Director	Banking, Accounting & Finance	Active	Active	7/7	9/9
Datuk Suboh Bin Mohd Yassin	Non-Executive Director	Business Management	Active	Active	5/7	6/9
Dato' Hj. Kamil Khalid Ariff	Non-Executive Director	Business Management	Active	Active	7/7	9/9
Datuk Nor Azmal Bin Mohd Nazir	Non-Executive Director	Public Administration	Active	Active	7/7	9/9
Tuan Syed Nasir Bin Syed Ahmad	Non-Executive Director	Business Administration (International Business)	Resigned on 2 July 2012	-	0/3	-
Puan Nik Roslini Raja Ismail	Non-Executive Director	Business Administration (International Business)	Active (Appointed on 3 July 2012)	Resigned on 4 October 2013	2/3	9/9
Dato' Khadijah Idris	Non-Executive Director	Legal	Active (Appointed on 12 April 2012)	Active	5/5	9/9
Puan Zarina Zakaria	Non-Executive Director	International Economics	-	Active (Appointed on 10 October 2013)	-	1/2
Datuk Ir. Abdul Kadir Bin Mohd Din	Executive Director	Civil Engineering	Active	Active	7/7	9/9

## **CORPORATE GOVERNANCE**

















Dato' Ibrahim Mahaludin Bin Puteh Chairman Non-Executive Director

> Dato' Othman Bin Abdullah Non-Executive Director

Datuk Suboh Bin Mohd Yassin Non-Executive Director

Dato' Hj. Kamil Khalid Ariff Non-Executive Director

Datuk Nor Azmal Bin Mohd Nazir Non-Executive Director

Tuan Syed Nasir Bin Syed Ahmad Non-Executive Director

Puan Nik Roslini Raja Ismail Non-Executive Director

> Dato' Khadijah Idris Non-Executive Director

> Puan Zarina Zakaria Non-Executive Director

Datuk Ir. Abdul Kadir Bin Mohd Din **Executive Director** 













#### Roles and Responsibilities of the Board

The Board assumes six core responsibilities defined by The Malaysian Code on Corporate Governance:

- 1. Reviewing and adopting a strategic plan for the Company
- Overseeing the conduct of the Company's business to ensure it is properly managed
- Succession planning including appointing, training and determining senior management remuneration
- 4. Communicating the Company's performance to the shareholders
- Reviewing the adequacy and the integrity of the Company's internal control system and management information systems
- 6. Identifying and managing principal risks

#### Independence of Members of the Board

The roles of chairman and CEO are separate, clearly defined and divided to ensure a transparent and proper balance of authority. The chairman is responsible for the integrity and effectiveness of the Board. He ensures all information required for decision making is available to all Board members in a timely manner. The CEO is responsible for the Company's operational efficiency and effectiveness including implementing Board-approved policies, strategies and decisions. The CEO also acts as the intermediary between the Board and management team.

# Indah Water Board of Directors meetings held during 2012 and 2013

Board meetings are held regularly to familiarise members with ongoing company activities. Board papers and a detailed agenda are provided one week before each meeting. Board members have access to all company information, whether collectively or in each individual's capacity, for discharging his or her own duties. Board decisions are based on majority consensus. Five regular and three special Board meetings were held in 2012; five regular and four special meetings in 2013.

#### **Board Effectiveness Assessment**

The Board Nomination and Remuneration Committee examined the contributions of each individual director and the Board as a whole. Board performance evaluation criteria have not currently been formalised but normally include Key Performance Indicators (KPIs), Board meeting attendance and training.

The ongoing effective Board meetings held throughout 2012 and 2013 show the quality of the Board's strategic contribution. The Board engages with influential stakeholders such as regulatory authorities, giving attention to customers and managing shareholders. The Board also focuses on the external environment such as the competitive landscape.

# CORPORATE GOVERNANCE

#### Board and Senior Management Team Visit and Study Tour

A study tour to Australia, from 8 to 13 September 2013, was attended by seven Board members and top management. The study tour provided opportunities for Indah Water to benchmark its management efficiencies and best practices while learning sewerage services improvement strategies. The following seven organisations were visited:

- Sinclair Knight Merz
- Victorian Industry Water Association
- Smart Water Fund
- Essential Service Commission
- South East Water Corporations
- City West Water
- Yarra Valley Water







#### Areas of Learning:

- Long-term partnerships through an alliance outsourcing concept have proven effective and can be adapted to fit Indah Water's requirements for effective operational strategy.
- Enterprise Resource Management systems have been used effectively with a mobile workforce. A Geographic Information System (GIS), Supervisory Control and Data Acquisition (SCADA) and other technologies are widely used in intelligent systems to optimise the provision of effective services.
- Asset management has underpinned business strategies allowing for a strong basis for decision making.
- An on-the-job cadet training programme to develop manpower for the sector.
- Sewer mining and water reuse schemes demonstrate the potential of wastewater effluent reuse.
- Innovative customer service approaches including a self-service portal and an iPhone application.
- ECO system using pressure sewers with telemetry controls.
- The regulatory framework in Melbourne, which is based on a pure economic model, demonstrates how to prepare Indah Water for this economic regime in the future.



INDAH WATER KONSORTIUM SDN. BHD. (211763-P)



Indah Water has introduced a Code of Conduct that defines its expectations for conducting business. It reiterates the commitments to the Company, the management, each other and customers. The Code of Conduct is a useful tool for aligning business conduct with management's expectations. It serves as a guide for making sound judgements on daily on-the-job behaviour. The Code of Conduct also serves to:

- Inculcate a high level of personal integrity and professionalism in employees;
- Standardise a comprehensive general Code of Conduct to shape the expected business conduct and behaviour of employees;
- Inculcate public trust and confidence in its business;
- Bridge and build good relations between the Company and its customers; and
- Improve the Company's image as a responsible corporate entity.

#### **CONFLICT OF INTEREST**

Employees must not engage in any other occupation or business, or have an interest in any business or activity that conflicts with their positions. This covers capacities of an employee, agent, consultant, director, advisor, shareholder, partner or any other position. Employees are required to give their full and undivided loyalty and report any conflicts to the management. Private matters should not conflict with employees' duties or the business interests of Indah Water.

Employees should not derive any profit or advantage in the course of discharging their duties. They are forbidden from competing or becoming rivals to the business interests of the Company. They are also prevented from being associated with any organisation that competes with the business interests of Indah Water.

#### CORPORATE RISK MANAGEMENT

Indah Water's proposed corporate risk management and compliance policy helps create, protect and maximise value. It assists the Board and management in maintaining a sound internal organisational control system. The framework was developed during 2013 with the guidance of a consultant. The framework will be implemented following Board approval in 2014.

#### **CORRUPTION, BRIBERY AND GIFTS**

The Code of Ethics contains measures for corruption, bribery and gift giving. Employees and their family members must not accept commissions, shares of profit, or gifts from any party doing, or seeking to do business with the Company. This may be in the form of services, favours, travel payment, benefits or advantages such as gift certificates. Material services, repairs or improvements must not be offered free of charge or at unreasonably low prices. Gifts and merchandise of more than nominal value are not permitted. Monetary gifts of any nature are strictly prohibited.

Entertainment with consultants, contractors or their representatives is not allowed. A formal lunch or dinner with clients is permitted provided the cost is reasonable. Lunches and dinners should be minimal and payment for meals should be rotated.

Gift giving is part of Malaysian local culture. Promotional gifts such as diaries or calendars, festive gifts of nominal value or customer gifts may be accepted. Gifts must be a token gesture rather than something intended to influence an employee's judgement.

# CORPORATE GOVERNANCE

#### **Corporate Integrity**

The Corporate Integrity Pledge (CIP) is a document that allows a company to make a commitment to uphold the Anti-Corruption Principles for Corporations in Malaysia. Indah Water officially took oath and signed the CIP with the Malaysian Anti-Corruption Commission (MACC) on 19 June 2012. This oath is in-line with the Company's vision of promoting a culture that is free from corruption.

Seminars were held at various nationwide locations to brief our employees on this pledge. In 2014, an Integrity Unit will be formed to:

- Create a worthy organisation with a high degree of integrity and ethics;
- Instil a culture of integrity into all levels of the organisation;
- Strengthen the assimilation of integrity by disseminating information, strategic implementation and constructive shared experience;
- Calculate integrity as a core philosophy when implementing organisational activities; and
- Ensure integrity coordination through preventive, corrective and affirmative action.

#### **CONFIDENTIAL INFORMATION**

Indah Water safeguards all private and confidential information from employees, suppliers and customers. Company trade and intellectual property information are also protected.

# MECHANISM FOR EMPLOYEES TO PROVIDE RECOMMENDATIONS

#### Employee Relations Visits to Unit Offices (UOs)

Our Industrial Relations Section conducts periodic employee relations visits to UOs. Industrial relations issues that may be occurring are identified during these visits. Employee suggestions and recommendations for further improvements are encouraged.

#### Union Meetings

Meetings between management and the Union are held to remedy or clarify any issues at UOs relating to its members.

#### • Employee Satisfaction Survey

A Job Satisfaction Survey is conducted at Indah Water. In 2013, the questions were revised and the survey title was renamed. The Employee Engagement/Satisfaction Survey obtained employees' opinions on various issues of concern related to their jobs and the organisation. Concerns from this survey were used in an improvement plan, which commenced in 2013. The survey was conducted in April 2013 and its findings were presented to the management in July 2013. Action plans to address the findings commenced in 2013.

#### • Customer Satisfaction Survey (by Department)

All the departments in Indah Water HQ were encouraged to use customer satisfaction surveys to gauge satisfaction levels of their internal customers for the services provided to other departments. Recommendations and suggestions were sought for further improvement.

#### **REMUNERATION**

Indah Water practices performance-linked compensation that rewards employees for meeting their KPIs. Bonuses and increments are variable and the quantum is dependent upon company and individual performance.



#### MEMBERSHIP IN ASSOCIATIONS

Indah Water stays connected with its industry peers and relevant organisations through memberships. Participating in various organisations have benefited the Company in many ways including a special rate for attending training programmes, free publications, branding, networking opportunities and access to local and international expertise.

Indah Water is a member of the bodies listed below.

























The Institute of Asset Management (IAM) was first established in the United Kingdom in 2004. IAM is a professional body involved in acquisition, operation and care of physical assets – especially critical infrastructure. On 6 November 2013, IAM Malaysia was launched at Pullman Putrajaya Hotel. Indah Water is proud to announce its IAM corporate membership. Five employees were selected to represent Indah Water. One of them, Ir. Dorai Narayana, has been selected to represent the Company as an executive committee member of IAM - Malaysia Chapter. The Company's membership and participation in IAM Malaysia is expected to encourage greater interaction and networking with asset management practitioners in Malaysia and overseas.

## **OUR CORPORATE STRUCTURE**

#### BOARD NOMINATION & RENUMERATION COMMITTEE Jawatankuasa Lembaga Pencalonan & Imbuhan

Datuk Suboh Mohd Yassin Dato' Hj. Kamil Khalid Ariff Dato' Othman Adbullah Datuk Hj. Nor Azmal Mohd Nazir Puan Zarina Zakaria

#### **BOARD PROCUREMENT COMMITTEE** Jawatankuasa Lembaga Perolehan

Dato' Hj. Kamil Khalid Ariff Datuk Hj. Nor Azmal Mohd Nazir Datuk Khadijah Idris Datuk Suboh Mohd Yassin



#### **BOARD OF DIRECTORS** Lembaga Pengarah

Dato' Ibrahim Mahaludin Puteh Datuk Ir. Abdul Kadir Mohd Din Dato' Othman Abdullah Datuk Suboh Mohd Yassin

Dato' Hj. Kamil Khalid Ariff Datuk Hj. Nor Azmal Mohd Nazir Dato' Khadijah Idris Puan Zarina Zakaria



CHIEF EXECUTIVE OFFICER Ketua Pegawai Eksekutif Datuk Ir. Abdul Kadir Mohd Din



CHIEF OPERATING OFFICER Ketua Pegawai Operasi Ir. Mohd Haniffa Abdul Hamid



**OPERATIONS & MAINTENANCE** Operasi & Penyelenggaraan Ir. Chua Bing Guan



**CUSTOMER RELATIONS** Perhubungan Pelanggan Jothesvaran Nadarajah



**CAPITAL WORKS** Kerja-kerja Kapital Ir. Mohd Zuki Muda



**PLANNING & ENGINEERING** Perancangan & Kejuruteraan Ir. Dorai Narayana



**NORTHERN REGION** Wilayah Utara Ir. Din Sariaat

#### 7 UNIT OFFICES

Alor Setar, Taiping, Langkawi, Manjung, Pulau Pinang, Ipoh and Seberang Perai



**CENTRAL REGION** Wilayah Tengah Mohd Zainal Zakaria

# **6 UNIT OFFICES**

Gombak, Klang, Labuan, Kuala Lumpur, Langat and Shah Alam



SOUTHERN REGION Wilayah Selatan Md. Don Dali

# **4 UNIT OFFICES**

Kluang, Melaka, Seremban and Skudai

2 STATE OFFICES Pahang and Terengganu



AUDIT COMMITTEE Jawatankuasa Audit Dato' Othman Abdullah Dato' Hj. Kamil Khalid Ariff

Datuk Hj. Nor Azmal Mohd Nazir Dato' Khadijah Idris

Puan Zarina Zakaria



CORPORATE PLANNING Perancangan Korporat Vacant



**FINANCE** Kewangan Zahrin Zakaria



**PROCUREMENT** Perolehan Zainudin Mat Salleh



LEGAL SERVICES Perkhidmatan Perundangan Datin Zaheeda Banu Mohd Ariff



**HUMAN CAPITAL & ADMINISTRATION** Modal Insan & Pentadbiran Rozi Baharudin



COMMUNICATIONS Komunikasi Azzatullina Pawanchik



INFORMATION TECHNOLOGY Teknologi Maklumat Ravindran Karupiah



PROJECT MANAGEMENT Pengurusan Projek Azmi Idris



**INTERNAL AUDIT** Audit Dalaman Chua Tiong Leong

# AWARDS AND RECOGNITION



Malaysia Water Award for Management







2010



Asia's 2010 WaterLinks Award



Shortlisted ACCA MaSRA 2010



Shortlisted ACCA MaSRA 2009





Shortlisted ACCA MaSRA 2011







2013



Water Inno Awards for Greening the Environment by Water Malaysia Recognition for supporting Baliwag Water District – Septage Management Program



Honour Award for Sanitation & Wastewater (Software) by International Water Association

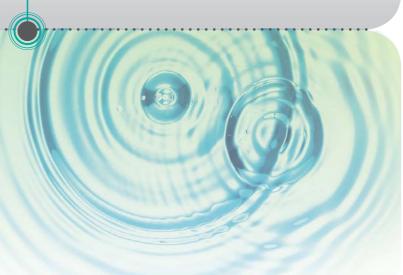


Shortlisted ACCA MaSRA 2013

Recognition by the Bill & Melinda Gates Foundation for Indah Water's expertise in Septage & Sewerage Management, the Company's contributions to the sanitation sector and its cooperation with the Foundation's active partners in Asia and Africa

Recognition for Indah Water's services nationwide by the Kedah Royal Family





SUSTAINABILITY IN OUR WORKPLACE

# GROWING TOGETHER WITH OUR EMPLOYEES

Indah Water values its employees and understands that success depends on the commitment to their jobs. The Company helps them develop their careers while embracing a culture of diverse backgrounds and experiences. Employees are provided with a safe workplace and are encouraged to pursue healthy lifestyles. They are rewarded with competitive benefits that acknowledge experience and individual skill sets together with proven performance.



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Employees are an important stakeholder group and instrumental in business operations. Employee relations are fair, built on trust and surpass ethical and legal obligations. They are the main prerequisite for the successful management of business activities.

An effective human resources policy monitors employees' rights and needs along with their talents and qualifications. It defines the framework for an efficient deployment of personnel. Optimal performance of employees is achieved through their motivation and job satisfaction.

Indah Water's human resources strategy is firmly anchored in its group-wide sustainability strategy. Important topics consist of a competitive workforce, future-oriented management expertise, high employer attractiveness and a professional organisation. Focus areas derived from these strategic target dimensions are:

- Diversity and equal opportunity
- Generation management and work-life balance
- Productivity increase through the efforts of a highly qualified workforce
- Career progression through a strategic development agenda

### **EMPLOYMENT AND BENEFITS**

Successful employee results are rewarded with excellent benefits and rewards. Competitive compensation is offered along with benefits that encourage employees to maintain good health. These benefits safeguard the wellness of their families while creating a positive working environment.

A range of health benefits are offered to all full-time employees. Statutory sick pay leave without hospitalisation is observed depending on the period of service: 14 days for less than two years; 18 days between two and five years; and 22 days for more than five years. A period up to 60 days is granted if hospitalisation is necessary. All field employees and employees over 40 years receive a biennial health check-up.

Types of leave include annual, medical, maternity, compassionate, paternity, marriage, Haj and exam leave. Female employees are entitled to maternity leave for 60 consecutive days for each confinement.

Time off is given on compassionate grounds such as for serious illnesses and natural disasters. Male employees are granted paternity leave: three days for executive levels and four days for non-executives. This leave is limited to five legitimate children.

Employees are given three days of leave in the unfortunate event of a bereavement of an immediate family member. This covers spouses, legal children, parents, parents-in-law, brothers, sisters and grandparents. A maximum of 10 working days for executives and 12 for non-executives may be granted per annum.

#### PROVIDING LOCAL OPPORTUNITIES

Indah Water intends to support local universities and colleges to train and develop selected students. These individuals gain experience in a working environment, which increases their own potential while catering for the industries' future needs.

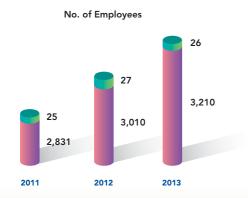
Applications from local universities and colleges for undergraduate trainee programmes and industrial training programmes are accepted. Programmes cater for technician level, engineering, finance, customer relations, communications, human resources, business development, Operation & Maintenance (O&M), information technology, procurement, contract/project management, laboratory services, legal and secretarial services. Approximately 60 students are accepted each year for this programme. Upon completion of the training, students are required to submit a report on their learning experience. This feedback is also used for future improvements.

#### **DIVERSITY IN THE WORKPLACE**

Indah Water observes a strict unwritten policy of respecting the rights of all individuals in the Company irrespective of race, gender, religion or nationality. Employees committing any acts that disrespect race or religion, or acts of sexual harassment are not tolerated.

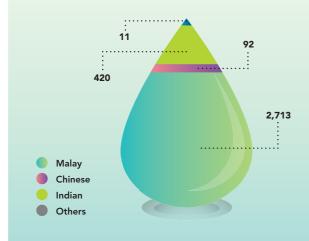
#### Workforce Breakdown by Location

Indah Water operates mainly in West Malaysia. East Malaysia operations are only in Wilayah Persekutuan Labuan. This explains the vast majority of the workforce being in West Malaysia.



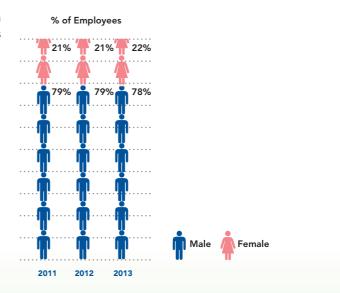


#### Workforce Breakdown by Ethnicity In 2013



#### Workforce Breakdown by Gender

Due to the nature of operations, the workforce typically consists of more male than female employees. In 2013, the ratio of female to male was 1:3.5. Indah Water continues to provide equal opportunities to all employees through various training opportunities. When vacancies open, these employees are promoted to higher levels if their education and skills meet the job requirements. One of 19 unit managers is female.



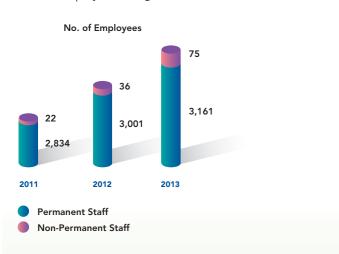
#### Workforce Breakdown by Type

The majority of employees are non-executive. This category includes field workers who are responsible for maintaining close to 6,000 Sewerage Treatment Plants (STPs) and the sewer networks nationwide.



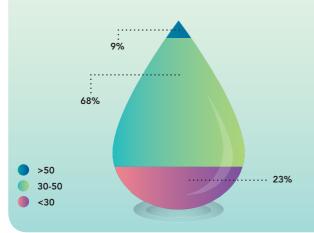
### Workforce Breakdown by Contract

Non-permanent employees increased from 0.77% in 2011 to 2.32% in 2013. This is due to Greater Kuala Lumpur (GKL) contract employees being hired from 2013.



#### Workforce Breakdown by Age Group in 2013

The majority of employees are experienced and aged between 30 and 50 years. Since 2012, Indah Water has been recruiting younger employees aged below 30 years. The percentage of this category increased from 8% in 2011 to 23% in 2013. The percentage of employees over 50 years old has been reducing since 2012. In 2011, 21% of employees were aged over 50 years compared to 9% in 2013.



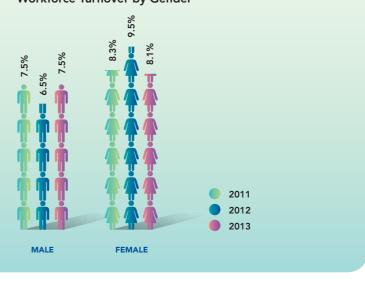
#### **WORKFORCE TURNOVER**

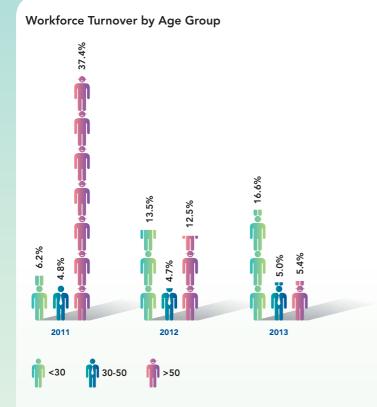
The turnover rate of female employees has been higher than male employees for the past three years. The number of employees above 50 years of age reduced from 21% in 2011 to only 9% in 2013. This is a contributing factor of the sudden reduction of turnover in this category in 2013.

#### Workforce Turnover by Region



# Workforce Turnover by Gender





#### CAREER DEVELOPMENT MANAGEMENT

Performance management is more than simply completing an annual performance assessment. Effective and meaningful performance management is carefully designed to promote ongoing communication between a supervisor and employee. Topics for discussion include setting and achieving workplace priorities. Successes and any areas for performance improvement are identified through ongoing discussions held throughout the year.

The appraisal process uses a Key Performance Indicator (KPI) scorecard to measure achievements against agreed targets. A competency matrix is employed to evaluate performance and work attitude. Areas for improvement are also highlighted. This appraisal process is available in Bahasa Malaysia and English to ensure both parties understand the discussion clearly. This process is important as it affects the employee's remuneration and career development plans.

Once the appraisal results and employee's comments have been noted, the appraiser proposes career advancement solutions to the management. Employees are promoted because of their work performance when positions become available.



#### Learning and Development

Indah Water recognises that human resource development is an integral part of the organisation's needs. People are the Company's greatest assets who tackle challenges to meet corporate goals and objectives.

Training and developing employees is one of the principal functions of the Company. It is instrumental in improving competency levels and enhancing organisational performance.

The main role of the Human Resource Capital & Administration Department's Training & Development (T&D) Section is providing employees with relevant training, development, support and education. This education improves employees' abilities, knowledge and skills in their jobs. Training helps individuals reach their full potential and contribute to the success of Indah Water. Training and development activities are well planned and carefully coordinated so that they improve employees' skills, morale and productivity. Management depth is built and profitability increased. It is also a form of personal development for employees.

Training and development is a continuous process and contributes to the success of Indah Water by helping employees:

- Improve their job performance, which in turn improves the Company's performance.
- Be promoted and follow their chosen career paths.
- Acquire professional or additional educational qualifications.
- Improve their work quality.
- Achieve job satisfaction and gain self-esteem.

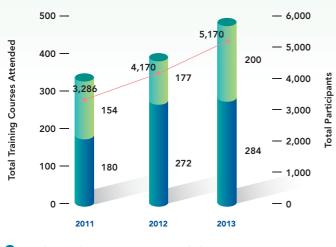
All levels of employees are trained and developed so they possess the necessary knowledge, skills and attitude to perform their current jobs effectively. This policy also allows employees to perform their duties with wider responsibilities when required in support of the Company's business plans and objectives. Techniques employed include on-the-job coaching, counselling, job rotation, cross training and assignments to understudy higher level positions. These are in addition to formal in-house and external training courses that are available to all employees.

All new employees must attend an induction programme as an initial requirement. The objective is to equip individual employees with sufficient knowledge and basic information about the Company, its activities and policies.

The Training and Development Section maintains the training records of all employees. Individual departments and UOs also retain their staff training records. These documents support the annual performance appraisals and any succession planning programmes. The Department of Safety & Health (DOSH) also inspects these records during its visits.

#### **Employees Training**

A total of 5,170 participants attended Indah Water's training courses in 2013, which was an increase of 24% compared to 2012. RM5.29 million was spent on training in these two years.



Total Internal Training Courses Attended
Total External Training Courses Attended
Total Participants



Total External Training Cost
 Total Internal Training Cost
 Total Training Cost per Participant

The majority of the training courses improved employees' technical knowledge and skills as presented in the chart below. All field personnel and technical employees are encouraged to attend these purpose-built courses.

#### **Employee Training Hours**





The average training hours per year per employee increased from 23.73 in 2012 to 26.70 in 2013. In 2013, departmental KPIs were set to ensure each employee attended at least one training course each year.

AVERAGE TRAINING HOURS	2011	2012	2013
Total Training Hours	61,524	70,020	82,776
Total Number of Employees	2,586	2,951	3,100

#### Average Training Hours Per Year Per Employee



#### Managers' Conference

A managers' conference was held at Awana Genting from 18 to 21 April 2012. The conference was attended by 138 managers. The objectives were to communicate Indah Water's future plans and brainstorm ways to resolve critical issues. Topics discussed included:

- Streamlining procurement practices to drive value.
- Improving billing and collections to maximise revenue.
- Optimising operations to improve sustainability.
- An enhanced and improved performance management system.
- Human capital management.
- Pursuing new revenue growth opportunities non-regulated businesses and tariff rebalancing.

#### **Succession Planning**

Career development and succession planning form part of Indah Water's human capital development strategic plan. The employees' career development plans are in tandem with the organisational goals. Indah Water provides the Executive Development Programme (EDP) and Management Development Programme (MDP) but succession planning responsibilities rest largely with senior management and the individuals themselves. They ensure that there are replacements for each important position in the organisation.

Eligible candidates have their respective talents and future leadership skills reviewed. Assessment and profiling tools are employed to profile the employee for an effective job-person match.



Various steps are being taken to ensure that each employee can develop his or her career including:

- Posting all jobs internally.
- Providing space on appraisal forms to note employees' career preferences and training needs.
- A tracking system to ensure employees' career goals are reviewed by the employees' supervisors and the management.

#### MDP and the EDP

The MDP and EDP were launched on 21 June 2013 at Indah Water Training Centre (IWTC). Representatives from the Asian Institute of Management and the Malaysian Institute of Management attended as they were selected to run the MDP and EDP respectively.

These two programmes form part of a succession planning programme. They motivate and engage employees by setting a career path for their continued growth and development. 30 employees were selected for MDP and 25 for EDP.

#### Teambuilding at Indah Water

Teambuilding at Indah Water has been run since 2012 to strengthen employee relationships and encourage job ownership. These elements are important to achieve the Company's vision and mission. In 2012 and 2013, 219 and 630 employees attended teambuilding respectively at a cost of RM319,000 in 2012 and RM582,000 in 2013. All departments are encouraged to organise their own yearly teambuilding programmes.



#### RECOGNISING ACHIEVEMENTS

#### Employee of the Year Award (EOYA)

The EOYA was established by the CEO in 2010 to honour and reward employees for exemplary behaviour, hard-work, exceptional performance and serving as positive role models. The selection criteria for the award consist of:

- Strong work performance and productivity
- Being a supportive team player
- Having a high commitment to quality
- Personal initiative
- Dependability
- Good cooperation with others
- Excellent interpersonal relations
- Specific projects in which the employees went above and beyond their call of duty

One executive level and one non-executive level employee are chosen each year. Three consolation prizes are presented to executive level employees and above and five to non-executive level employees. Details of the winning and consolation prizes are as follows:

#### **WINNING PRIZES**

- RM1,000 in cash
- A wrist watch worth RM500
- Three full days EOYA leave in addition to annual entitlements
- Recognition in the company and on its website
   newsletter and on its website
   Framed personalised
- Framed personalised certificate of commendation from the Company and a copy in the employee's personal file
- Engraved plaque to be displayed at the Company HQ

#### **CONSOLATIONS PRIZES**

- RM200 cash award each
- Two full day EOYA leave (additional annual leave)
- Recognition published in Indah Water newsletter and on its website
- Framed personalised certificate of commendation from the Company and a copy in the employee's personal file

The winner for category 'Executive Level and Above' for the EOYA 2012 was Pn. Azian binti Ahmad while En. Hussin bin Mustakim won for the 'Non-Executive level category'.

Azian has been working with Indah Water for almost 10 years. She was then the Acting Senior Executive in the Treatment Section based at the Kuala Lumpur UO. She is a dedicated employee who has been instrumental in improving the plant efficiency at Bandar Tun Razak. She has initiated and completed the first STP to be awarded with ISO 14001:2004 certification.

Hussin has been working with Indah Water for 18 years and is the leading hand at the Skudai UO. Hussin is a team player who always goes the extra mile to resolve customer complaints even after working hours. He also volunteered to be a relief driver when his colleague suffered a stroke and actively participates in company activities.







#### **Promotion**

Promotion is at the sole discretion of the management and is dependent upon the employee's performance and ability. It is also subject to the availability of positions, business requirements and other criteria set by the Company.

An employee must have served for at least two years to be considered for promotion, except for extraordinary performance. To be considered for promotion, the employee must:

- Have had no disciplinary action against him for the last three consecutive years
- Achieve at least two consecutive years of performance rating of 3.5 or 70% and above

#### OCCUPATIONAL HEALTH AND SAFETY (H&S)

Safety is a corporate value and not merely a compliance activity. Indah Water is committed to providing a safe and conducive work environment. Its policy is to ensure that activities are conducted with full concern for the safety of its employees. It is also to protect the H&S of communities adjacent to operations and the general public. Indah Water's commitment is reflected in its attainment of OHSAS 18001:2007 and MS 1722:2011 in May 2013 for HQ, Langat Unit Office (UO) and Taman Suria STP.

Indah Water provides qualified H&S personnel and appropriate equipment. Safety is integrated into everything the Company does as it works constantly to set high expectations, provide tools, measure progress and communicate results. Typical H&S incidents consist of traffic accidents, lifting related incidents, slips and falls.

#### Indah Water H&S Committee

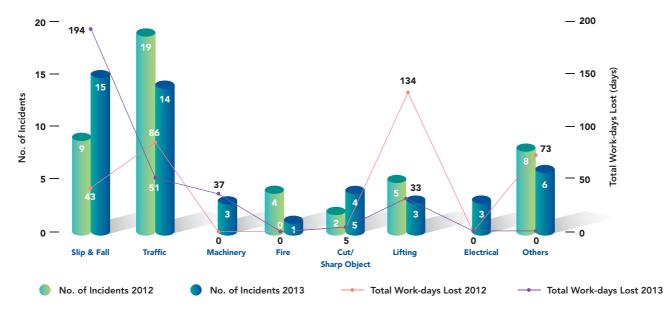


#### **H&S Statistic Involving Our Employees**



Indah Water is pleased to report that there were NO OCCUPATIONAL FATALITIES from 2011 to 2013.

#### Employee Incident and Work-days Lost in 2012 and 2013



There was an increase in severity and incidents rates in 2012 compared with previous years. The highest two work-days lost accidents in 2012 resulted from lifting and traffic accidents with 134 and 86 work-days lost respectively. However, the work-days lost due to these two accidents reduced to 33 days and 51 days respectively in 2013. Several awareness programmes were introduced such as an H&S quiz, *Buku Panduan Keselamatan Kesihatan Pekerja (KKP)*, H&S campaign in 2012 and a defensive driving training for vehicle drivers.

The highest occurrence of work-days lost accidents were slips and falls in 2013. The total work-days lost as a result of these accidents increased from 43 days in 2012 to 194 days in 2013. Basic safety awareness was reemphasised through "Safety Through Observation and Prevention (STOP)" at our toolbox talk briefing sessions to minimise the risk of future reoccurrence.

# Total Incidents Involving our Contractors and the Public from 2011 to 2013

	2011	2012	2013
Contractor	3	5	14
Public	1	1	0

Incidents occurring in 2013 involving contractors were more than double that of the previous year. Most incidents were slips, falls and traffic incidents. We continue to reemphasis "Safe Working by Contractors" operational instruction and frequently perform H&S workplace inspection of contractors to minimise incidents from reoccurring.

#### **H&S Awareness Campaign 2012**

A H&S based skill competition themed *Kemalangan Sifar Teras Perkhidmatan Cemerlang* was held from 3 to 4 December 2012 at IWTC in Bukit Jalil. The competition created H&S awareness and promoted it in the workplace. A team of staff from 18 UOs and HQ competed in the following six categories:

- H&S sketch
- Confined space entry
- First aid competition
- Ergonomics in pump lifting
- Hazard Identification, Risk Assessment and Risk Control (HIRARC) competition
- Best of the Best Quiz

Employees' H&S knowledge and ability to execute relevant tasks correctly and safely were assessed. The competition benchmarked skill levels, competency and knowledge in the UOs.

#### H&S Programmes Status at Indah Water HQ and Langat UO as at 31 December 2013

H&S OBJECTIVES	PROGRAMME	STATUS
Zero Incidents	H&S Spot Investigation	Completed
	H&S Plan	Completed
	H&S Induction Training	Completed
100% Legal Compliance	Initial Noise Exposure	Completed
	Chemical Management Procedure	In progress
	Health Surveillance	Completed
	KLHO Building Fire Certificate	In progress
	PMA for Lift	In progress
	Registration at IWTC as CS Training Provider	In progress
	Chemical Management by Cleaners (HQ)	Completed
H&S Awareness for Every Employee	Office Safety Training	Completed
	Enterprise Resource Planning (ERP) Training	Completed
	H&S Related Training	Completed
Zero Internal Non-conformance	Review HIRADC by Process	In progress
	Prepare Work Instruction for "Memotong, Mencanai & Kimpalan"	In progress
	Implementation of New Vendor Evaluation	In progress
Improve H&S Committee Effectiveness	Competition between H&S Committee	Completed

# Hazard Identification, Risk Assessment and Determining Controls

Indah Water maintains procedures for products, services and activities that are a safety risk. The hazard and risk assessment as well as the implementation of necessary control measures cover:

- Routine and non-routine activities for OHSAS 18001 and MS 1722.
- Allowing all personnel access to workplaces or workstations including contractors and visitors.
- Infrastructure, equipment and materials in the workplace.
- Human behaviour, capabilities and other human factors.
- Identifying hazards originating from outside the workplace that may adversely affect the H&S of persons in the workplace that are under the control of the organisation.
- Hazards created in the vicinity of the workplace by workrelated activities under the control of the organisation.
- Actual or proposed changes in the organisation, its activities or materials.
- Amendments to the Health and Safety Management System including temporary changes and their impacts on operations, processes and activities.

- Any applicable legal obligation relating to risk assessment and the implementation of necessary controls.
- The design of work area processes including installation, machinery, equipment, operating procedures and work organisation, and their adaptation to human capabilities.

#### **Accident Investigations**

Accident investigations are conducted following every incident to determine its true cause so that effective preventive action can be taken. 'Lessons learned' can be identified, implemented and shared with other operations that face similar risks. The accident investigation objectives are to:

- Determine the actual cause of the accident in order to prevent reoccurrence.
- Identify weaknesses in operational procedures and conditions.
- Develop control measures to prevent recurrence.
- Uncover new hazards and device control measures for them.
- Record facts for future reference and analysis.

#### **ENGAGEMENT WITH OUR EMPLOYEES**

Indah Water engages with employees in regular departmental meetings. Regular informal meetings, teambuilding and recreational activities strengthen the spirit of solidarity between employees and the management team. The notice board serves as the main method of communication. Monthly KPIs, H&S, information, news and other announcements are posted here.

Indah Water's internal bulletins continue to be an active communication mechanism for internal stakeholders. The bulletin can be downloaded from the intranet. A suggestion box is also placed in each department and UO to encourage employee feedback. Employees can also email their concerns directly to the CEO. The corporate website is the main communication channel with internal and external stakeholders.

### Engagement Activities Hosted by the HQ

#### Annual Dinner

Kelab Indah Water (KIW) organised an annual dinner for all employees on 28 June 2013 at the PJ Hilton Hotel. The theme was "Hollywood Nite" and guests were entertained by Amy Mastura and Dato' Leonard Tan. Members of the Board of Directors, Heads of Department and Indah Water employees were among the honourable guests.







#### Hari Raya Celebration

KIW organised an Eid celebration on 28 August 2013. The event was open to all HQ staff, Indah Water Pandan Indah and the Technical Training Centre in Bukit Jalil. Activities included a Karaoke Competition, a Sampin Wearing Competition and Weaving Ketupat. There were also dance and song performances by popular artists.



#### Chinese New Year Celebration

A Chinese New Year celebration was organised by the KIW at Indah Water's HQ on 19 February 2013. Embracing Chinese culture, a lion dance was performed in the office to bring good luck to the Company. Indah Water respects all cultures in Malaysia and embraces important cultural celebrations.

#### Deepavali Celebration

On 26 November 2013, KIW organised a Deepavali celebration at Indah Water's HQ. Families of employees were also invited to this event. VIPs attending the event included our CEO, COO and Heads of Department. The celebration began with a cake cutting ceremony led by our Head of Customer Relations, Mr. Jothesvaran Nadarajah and the Head of Planning and Engineering, Mr. Dorai Narayana.

#### **Engagement Activities by the UOs**

UOs are encouraged to engage actively with employees to strengthen workforce relationships. Various engagement activities were held.

#### Family Day at Indah Water Pahang State Office

A Family Day was hosted by Indah Water Pahang State Office for employees and their families. The event was held at the Sanctuary Resort, Cherating on 9 and 10 November 2013. It is hoped that this Family Day strengthened relationships between employees and their families. A colouring competition for children, dinner and karaoke competition were held.



### Family Day at Indah Water Shah Alam UO

Indah Water Shah Alam UO held the seventh Family Day on 10 November 2013 at the Desa Water Park Kuala Lumpur. This was a great platform for employees to engage with each other outside work. It was also a way for the Company to show its appreciation for its employees' hard work. The event was attended by the Shah Alam Unit Manager, Mr Lawrence Dominic Nice and Heads of Section. Activities included a Tug of War, Go Fishing, Scoop Like a Duck and Fire Brigade.



#### KIW Gombak Deepavali Evening 2013

KIW Gombak held a Deepavali evening on 13 November 2013 at Kompleks Lincah Mahaguru Omar Din in Taman Industri Bolton, Batu Caves. The event was attended by 300 people including Pendekar Negara Malaysia and the Founder of Seni Silat Lincah Malaysia. The celebration promoted the spirit of 1Malaysia and strengthened relationships between our employees and the local community. During the celebration, Indah Water donated RM1,000 to the Sweet Care Charity Organisation. Employees also donated school materials to the charity organisation.





# Hari Raya at Indah Water Gombak UO

Hari Raya Aidilfitri was celebrated by our Gombak UO and children from the underprivileged and orphanage of Baitu Saidati Khadijah. This celebration was held at the Gombak UO on 20 August 2013. Representatives from the local communities attended. The celebration was officiated with opening remarks from Gombak UO Manager, Mr Suriya Narhayhanen, followed by a dinner with the orphans. Indah Water contributed RM1,000 to this home.

#### Thaipusam Charity Event

Gombak UO, in collaboration with the Communications Department, organised a charity drive during Thaipusam on 26 January 2013. Bas Kembara Indah Water was used to showcase Indah Water's service at this event. Free drinks were supplied to all Hindu devotees at Batu Caves.



#### **KELAB INDAH WATER (KIW)**

KIW was established to encourage two-way communications and promote employee inclusivity in the workplace. It is hoped that employees will feel a greater sense of control and belonging to the Company. KIW had 2,021 members on 31 December 2013, an increase of 4% from the previous year. Activities held each year comprise community services, sports activities, technical visits, seminars, motivation talks, festive celebrations and recreational events. RM1.2 million was spent on KIW activities in 2012 and 2013.

# WORKPLACE ETHICS

#### **Grievance Procedure**

Grievances are concerns, problems or complaints raised by an employee. Employees should try to resolve complaints informally if possible before using the grievance procedure. Formal complaints must be made in writing once informal methods have failed or progress is too slow.

Due to operational exigencies, both parties are advised not to take any action during the grievance procedure process. Employees should perform their duties as normal.

The grievance is deemed as resolved if the matter is not referred to the highest authority or both the employee and his union representatives fail to attend any of the meetings that have been arranged at every stage.

# 4<sup>th</sup> Stage



If unresolved within seven working days, the employee can submit his grievance to the Head of Department and HCAD, who will convene a meeting with all parties involved. Management and union representatives hopefully reach an amicable solution with as many meetings as required. The meetings are minuted and signed by all parties.

#### **Grievance Procedure Stages**





Employee submits written grievance to immediate superior and Unit Manager.







If unresolved within seven working days, non-executives are advised to use Form of Article 11 of the Collective Agreement. Executives can submit a formal letter to the Unit Manager or Head of Section, who will try to resolve the matter through party dialogue.

3rd Stage



If unresolved after seven working days, the employee submits the form or letter to the Head of Department/ Regional Manager, who aims to resolve the matter through discussions with all parties concerned.







If the issue is unresolved after 30 working days, it can be referred to the Industrial Relations Department, Ministry of Human Resources. Both parties can request an extension of time.

#### Sexual Harassment

Indah Water promotes a work environment that is free from discrimination and harassment based on race, colour, sex, religion, age, disability or other legally protected status. Sexual harassment is not tolerated whether involving our employees, vendors or customers.

Employees must not engage in any unwanted sexual conduct that has the effect of verbal, non-verbal, visual, psychological or physical harassment that might on reasonable grounds be perceived by the recipient as:

- Placing a condition of a sexual nature on his or her employment;
   or
- An offense or humiliation, or a threat to his or her wellbeing, but has no direct link to employment.

Sexual harassment encompasses both sexual coercion and sexual annoyance. Sexual coercion is sexual harassment that results in some direct consequences to the victim's employment; and sexual annoyance is sexually-related conduct that is offensive, hostile or intimidating to the recipient. However, this annoying conduct creates a bothersome working environment, which the recipient should not have to tolerate in order to continue working.

Sexual harassment may take place in the workplace; at work-related social functions; in the course of work assignments outside the workplace; during work-related travel; over the phone; and through computer devices, hand phones or electronic media.

#### **HUMAN RIGHTS**

Indah Water recognises its responsibility to protect employees' human rights. Relevant procedures are respected, implemented and executed throughout all operations. These include policies and procedures for non-discrimination, freedom of association, ethical behaviour and employee grievances.

Human rights have been included in our Human Resources practices and also form part of our supplier screening process. This policy is clearly stated in our employee handbook, which is distributed to all new recruits, including security personnel. Indah Water operations are structured by the Malaysian Employment Act 1955, which prohibits exploitative labour practices. The Company also adheres to the Children and Young Persons (Employment) Act 1966, which prohibits the employment of children under the age of 14, and other applicable international agreements preventing child labour.

The Company is pleased to report that there have been no incidents of discrimination or risk to freedom of association and collective bargaining. There have been no reported incidents of risks of child, forced or compulsory labour. There were no violations of human rights involving the rights of indigenous people at any time in the Company's history.

# COLLECTIVE BARGAINING AND FREEDOM OF ASSOCIATION

Freedom of association and the right to collective bargaining are part of the four core labour standards recognised by the International Labour Organization (ILO) and the Universal Declaration of Human Rights. Indah Water works closely and enjoys good relations with the unions. Transparency and openness are encouraged in the workplace. Employees' rights to be informed, monitor and contribute to the decision-making process are respected. This arrangement provides a greater sense of work ownership while safeguarding employees' rights and interests.

Open employee and management discussions are held regularly on any work-related issues. Since 1997, Indah Water management representatives have actively engaged with inhouse employees over issues raised by union members. The management has improved the harmonious working relationship with the members. The employees covered in our Collective Agreement are listed below.

	DECEMBER 2012	DECEMBER 2013
Total number of non-executive employees who are union members	1,511	1,317
Percentage of employees who are union members	50%	41%
Percentage of employees covered by Collective Agreements	73%	72%

## **EMPLOYEE ENGAGEMENT EVENTS**

**FEB 2012** 

Sambutan Maulidur-Rasul Skudai Unit Office



**JUL 2012** 

Indah Water National Sports Carnival 2012, Penang



**AUG 2012** 

Interdepartmental *Aildilfitri*Decoration Competition
Headquarters



**SEP 2012** 

Hari Raya Celebration Headquarters



**JAN 2013** 

**Thaipusam Charity Event**Gombak Unit Office



**FEB 2013** 

Chinese New Year Celebration Headquarters



JUN 2013 Indah Water Annual Dinner, Kuala Lumpur



AUG 2013
Hari Raya Celebration
Headquarters



AUG 2013
Hari Raya Celebration
Gombak Unit Office



NOV 2013 Deepavali Celebration Headquarters



NOV 2013
Family Day
Pahang State Office



NOV 2013

Family Day
Shah Alam Unit Office



SUSTAINABILITY IN OUR MARKETPLACE

PRACTICING ETHICAL BUSINESS PRACTICES

Indah Water has implemented guidelines and criteria that integrate sustainability throughout the entire value chain. A sustainable marketplace is one that ensures positive impacts on customers, suppliers and the environment whilst maintaining an economic and viable value chain for all those involved. Sustainable businesses know that today's customers have higher expectations of operational business transparency especially in decisions that directly affect customers. The marketplace contains a host of interested stakeholders who expect responsible and transparent behaviour.

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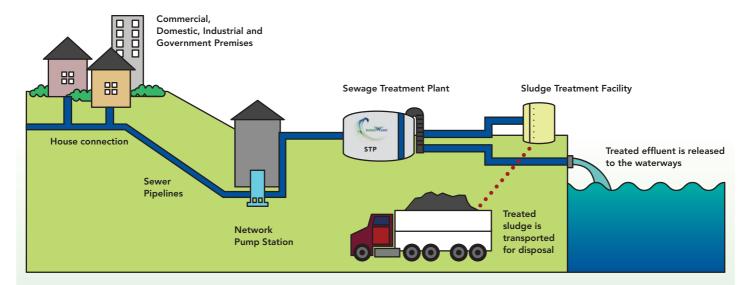




# **MARKETPLACE**

Indah Water provides a modern sewerage system so customers need not worry what happens after using the toilet, bathroom, laundry or kitchen. Every day sewage and wastewater from the premises are treated before being safely released back into the waterways. This approach safeguards public health, preserves water resources and conserves the environment for a sustainable future for all.

Sewage from premises flows through the underground sewer pipelines into the public STPs for treatment before the effluent is released back into the waterways or drains.



Indah Water ensures the underground sewer pipelines are well maintained and free from blockages caused by rubbish or solids. 16,328 km of sewer pipelines are maintained by Indah Water. This is approximately 21 times the distance from Johor Bahru to Alor Setar.

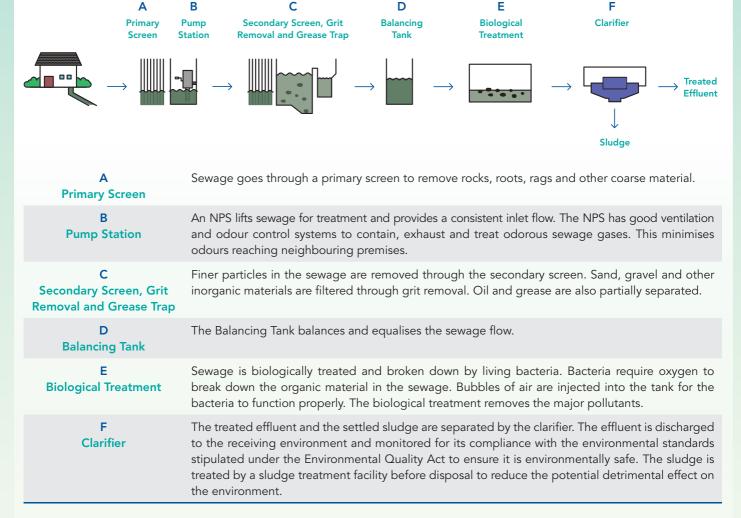
Network Pump Stations (NPSs) pump sewage from low lying areas so it can flow to the Sewage Treatment Plants (STPs). 926 NPSs nationwide are maintained and operated by Indah Water.

Equipment at the public STPs, particularly the mechanised plants, is maintained so it can operate daily. Without proper maintenance, the treatment process may be disrupted resulting in unpleasant odours and polluted waterways. As of 2013, Indah Water has 5,997 STPs of various types of sewerage treatment systems.

The sewage treatment processes generally produce three by-products: treated effluent, sewage sludge and methane gas. Currently, treated effluent is released back to the waterways. The settled sludge received additional treatment to minimise the effect on the environment, while the methane gas is released or flared. However, these by-products can be converted to value added, renewable products. Indah Water is researching ways to use these by-products.

#### SEWAGE TREATMENT PROCESS AT THE STPs

Raw sewage flows from the premises through the sewer pipelines and is pumped by the NPSs to the public STPs for treatment. There are various sewage treatment processes. STPs are designed to produce effluent that conforms to the compliance standards under the provision of the Environmental Quality Act. The diagram below shows a typical sewage treatment process.



Effluent from all public STPs is sampled regularly and undergoes laboratory testing to check that it meets the required standards. The two most important parameters measured are Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS).

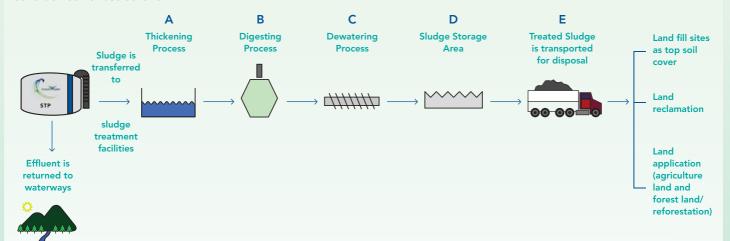
BOD is a measure of the amount of oxygen that sewage consumes over a given time. High BOD is significant as sewage will rapidly consume all the naturally-dissolved oxygen in streams, rivers and lakes. This kills aquatic life, rendering the water septic and foul-smelling.

TSS are a measure of the undissolved material in sewage. High suspended solids lead to sludge deposits in the waterway that adversely affect the natural environment.

# **MARKETPLACE**

#### **SLUDGE TREATMENT PROCESS**

All sewage treatment processes, whether from the basic plants or the most sophisticated mechanical plants, can produce significant amounts of sludge that require further treatment. Sludge comprises essentially inert and organic matter, that is biodegradable and non-biodegradable, which can rapidly turn septic if left untreated. Untreated sludge is a significant environmental and public health hazard. It contaminates groundwater and surface water, produces unpleasant odours and impairs the aesthetics of the surroundings. Sludge must be treated before being disposed of in an environmentally safe manner. Treated stabilised sludge is inert and safe to condition soil or use as landfill.



The settled sludge at the bottom of the clarifier of an STP receives additional treatment at the sludge treatment facilities.

Α	During the thickening process, the:
Thickener Sludge Holding Tank	• Gravity thickener uses gravity to thicken the primary sludge from the primary clarifier. The thickened sludge is stabilised in the anaerobic digester.
<b>3</b> ·	<ul> <li>Mechanical thickener uses a polymer to thicken the secondary sludge before being stabilised in the anaerobic digester.</li> </ul>
B Digester	The anaerobic digester further stabilises the thickened sludge. The gas produced from this process is collected and flared.
C Dewatering Unit	The stabilised sludge is dewatered in a screw press. A polymer is added to further dry the sludge cake.
D Sludge Storage Area	The treated sludge is temporarily stored in the sludge hopper or yard before disposal.
E Disposal of Sludge	The treated sludge is used for land reclamation and in agricultural and reforestation. It may also be used as top soil cover at land fill sites.

#### IMPACTS IDENTIFIED FROM OUR LIFE-CYCLE PROCESS

The life-cycles of the sewerage treatment and sludge treatment systems contain various process stages. The impact of each life-cycle stage is summarised below.

### **HEALTH AND SAFETY IMPACT**

- 1. Ergonomic changes at plants
- 2. Required handrails at plants
- 3. Proper equipment used for maintenance to prevent accidents
- 4. Fire-fighting equipment at plants
- 5. Protection equipment such as footwear, hard hats and life jackets to be worn
- 6. Sufficient instrumentation equipment when handling hazardous treatment processes
- 7. Installation of electronic security system at selected plants

#### **ENVIRONMENTAL IMPACT**

- Incoming wastewater treated in compliance with regulatory standards before being released into the waterways
- 2. Rubbish collected at the screening process, in the sewers and in the plant is disposed of properly
- 3. Water conserved by reusing bioeffluent for the plant's housekeeping
- 4. Sludge completely treated before disposal
- Leachate and water removed from the sludge are diverted back to the STP for treatment
- 6. The sludge is stored properly onsite without polluting the surrounding environment
- 7. Treated sludge is reused
- 8. Limited reuse of methane gas for power generation

#### **SOCIETAL IMPACT**

- 1. Sanitation is improved
- 2. Odours are minimised
- 3. Public health is protected
- 4. Environmental cleanliness is maintained through proper sludge storage and sludge transportation
- 5. Water borne disease is controlled by the proper handling of sludge
- 6. Noise nuisance to public is reduced
- 7. The structure of the plant blends with its surrounding aesthetically

# **MARKETPLACE**

#### **RESPONSIBLE OPERATIONS**

As the national sewerage services provider, Indah Water recognises its responsibility of upholding the quality of sewerage services to protect public health, preserve water resources and the environment.

One of the strategic objectives in our 2013-2015 Business Plan is maintaining an effective and efficient sewerage service. This will be achieved by maintaining high levels of service availability; improving efficiency and reliability; and optimising operating resources.

#### i. STP Operations and Maintenance

Indah Water ensures that its plant equipment operates efficiently each day. Conducting routine maintenance work at these STPs is extremely important to prevent sewage from polluting the waterways.

Plant visits, known as plant maintenance frequency (PMF), are regularly conducted to ensure that the plants function at all times. When malfunctions are detected, service and maintenance work is performed immediately. PMF is based on the plant Population Equivalent (PE) as stated in the Operating Procedure Instruction (OPI).

$$PMF (\%) = \frac{Actual \ visits}{Required \ visits}$$

#### Percentage of Plant Maintenance Frequency



The PMF has remained above 93% over the last three years.

#### ii. Sampling of STPs

Our plants' performance is monitored regularly to ensure the treated effluent can be safely released into the receiving waterway. Effluent from our plants is sampled and tested regularly to ensure it meets the EQ(S)R 2009 compliance standards. The final effluent is sampled and tested for regulatory and operational requirements. The regulatory sampling and testing of final effluent is defined in the EQ(S) R 2009; the operational aspects are for Indah Water's own plant performance monitoring. The quality of final effluent of our plants based on regulatory sampling and testing is reported to the Regulators, Suruhanjaya Perkhidmatan Air Negara (SPAN) and the Department of Environment (DOE), regularly. The sampling frequency of a plant is based on the plant PE as stated in the regulations.

Currently, Indah Water has three laboratories to test sampled effluent. A new laboratory at Bukit Tinggi, Klang is scheduled for completion in the second half of 2014. The sampling and testing of the plants' effluent is expected to increase with this new laboratory.

#### **Number of Final Effluent Samples Tested**



Note: The above table excludes two privately maintained plants.

The regulatory sampling and testing of final effluent was performed more regularly over the year to comply with the sampling frequency requirement of EQ(S)R 2009.

#### iii. Sewer Inspection and Maintenance

Indah Water operates and maintains approximately 16,328 km of sewers with more than 324,700 manhole covers throughout Malaysia. The ages of the sewers and manholes range from new to over 50 years. Indah Water faces problems from sewer overflows, sewer blockages, sewer collapses and defective sewers. A continuous sewer maintenance and inspection programme is essential to prevent sewer failures that are expensive to repair. Between 7% and 10% of total sewer lines are cleaned annually; every sewer line is cleaned at least once every 10 to 15 years. Up to 2013, three Unit Offices (UOs) have been equipped with motorised crawler CCTV for sewer maintenance and inspection. More UOs will be gradually equipped with this technology.

#### iv. Operational Procedures and Guides

The O&M of plants are guided by formal policies and procedures to consistently conform to technical and quality systems requirements. The O&M Department policies and procedures are classified into three categories:

- Operating Procedure Instruction (OPI)
   An OPI is a directive that must be strictly complied with to avoid major impacts on financial, law, operations, safety and health.
- Standard Operating Procedures (SOP)
   SOPs are tools for standardising and documenting routine or common activities and tasks performed by the organisation's personnel.
- Standard Operating Guide (SOG)
  Standard Operating Guides are reference documents containing good practices that are not necessarily consistently used.

Currently, 18 OPIs and 15 SOPs have been implemented. In December 2013, the O&M Department developed a strategy to outline the development of additional procedures; review existing OPIs, SOPs and methodology; and disseminate the procedures and guides to employees.

#### v. Refurbishment and upgrading of existing STPs

Some plants taken over by Indah Water are old and dilapidated, especially in their first three years. They were not designed to meet the Environmental Quality Act effluent standards. Under Indah Water's Refurbishment Programme, these old plants are renovated. The programme enhances the functionality, effectiveness and efficiency of sewage treatment. It also improves the H&S and aesthetics of the plants.

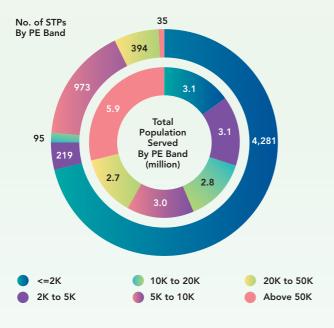
CATEGORY OF REFURBISHMENT WORKS Category 2 & 5	NO. OF PLANTS UNDER REFURBISHMENT PROGRAMME	NO. OF PLANTS REFURBISHED 2,306	COST OF REFURBISHMENT WORKS (RM MILLION)	% OF PLANTS REFURBISHED 61%
(Safety, Security, Cleanliness and Aesthetics)	0,, 00	2,000	22	0176
Category 2 to 5 (Safety, Security, Cleanliness, Aesthetics, Mechanical and Electrical (M&E) and Serviceability)	2,484	1,491	373.30	60%
Major Treatment Performance - Biosoil (Total Upgrading / Replacement of Plants)	56	54	100.32	96%
Total	6,308	3,851	497.74	61%

Indah Water has proposed the National Sewerage Development Plan (NSDP) to the Government to upgrade the sewerage systems so that all plants meet the required EQ(S)R 2009 standards. This comprehensive CAPEX plan requires government funding.

# **MARKETPLACE**

#### vi. Rationalisation of Plants

Rationalisation refers to redirecting wastewater from many smaller STPs to larger ones.



Indah Water has taken over 4,281 small plants (less than 2,000 Population Equivalent (PE) band) that serve 3.1 million PE by 2013. Indah Water has 35 large plants (50,000 PE band) serving 5.9 million PE.

One large plant is more cost efficient than several small plants due to economies of scale. Large plant performance is constantly monitored through a Supervisory Control & Data Acquisition System (SCADA) and an Early Warning System (EWS).

In the NSDP, the regionalisation of STPs is planned to enhance environmental and operational efficiency.

#### vii. Equipment standardisation

More than 20 different plant types are operated and maintained by Indah Water. Each type utilises different equipment and brands. Indah Water has been standardising critical equipment such as pumps, blowers, aerators, filter presses and clarifiers. This standardisation optimises resources and improves the efficiency and effectiveness of the plants' O&M.

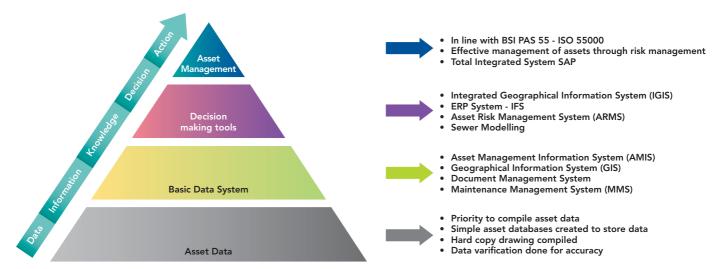
Equipment standardisation results in fewer equipment types. Fewer spare parts can be procured and stocked resulting in better inventory management. Operators are more specialised in their work and undergo less unnecessary training on different types of equipment, parts and systems. This leads to better productivity and efficiency. Standardisation also makes bulk purchasing possible, which provide additional savings. O&M expenses are optimised leading to reduced operating costs.

#### viii. Improving our Logistics

Indah Water purchased 121 vehicles of various types at a cost of approximately RM26.81 million over a two-year period. These vehicles enhance our fast and efficient services to customers nationwide.

#### ix. Asset Management

Indah Water's Asset Management System has adopted the British Standards Publicly Available Specification 55 (BSI PAS 55). The Asset Management Policy, Strategy and Plans, and an Asset Risk Management Framework have been developed to manage Indah Water's assets and related risks.



The Asset Management Strategy and Plan guides the management of the business. An optimal combination of life cycle activities is applied across the diverse portfolio of asset systems and assets in accordance with their criticalities, conditions, performance and risk profile.

In 2013, the Asset Management Plans and Strategies were introduced. The effectiveness will be apparent as the strategies are finalised. Based on the current available data, benchmarks to balance CAPEX, OPEX costs, risk profile reduction and business outcomes have been developed.

The Asset Risk Management System (ARMS) has been introduced to all Operational Units. Risks are identified and managed through the ARMS. Quarterly Unit Risk Management Committee (URMC) meetings reviewed and qualified all identified risks. The selected risk control was reviewed so the risks can be managed and a risk treatment plan devised.

The Asset Management Conference 2013 was held in London from 27 to 28 November 2013. A joint paper by Indah Water and Arup Consulting was presented by Mr. Trevor Taylor from Arup. The topic of the paper was "Asset Management Improvement Initiatives Indah Water Konsortium". This paper gave Indah Water international recognition as a leading practitioner of Asset Management in line with the BSI PAS 55 Asset Management quidelines.

# **MARKETPLACE**

#### x. Cost Saving Initiatives

In February 2013, a nationwide cost saving initiative was launched to identify potential cost saving areas and business opportunities. The initiative covered most departments including O&M, Planning & Engineering, Customer Relations, Human Capital & Administration, Project Management and Certifying Agency. In 2013, the initiative saved approximately RM1.4 million.

Indah Water is continuing this initiative in the coming years together with e-Procurement to reduce costs. The total cost savings and stretch targets for 2014 are RM18 million and RM19 million respectively.

#### xi. Improving Efficiency and Effectiveness

In 2013, Indah Water employed a consultant to conduct a detailed productivity study of the Company to:

- Assess the suitability, effectiveness and efficiency of its current practises, policies, procedures, processes and resource utilisation strategies.
- Measure the teams' productivity undertaking specific activities or services: desludging, network blockage clearance, network scheduled cleaning, treatment Operation & Maintenance (O&M), treatment supervision, M&E inspection and maintenance.
- Report areas where productivity can be improved including how it can be measured or monitored and standards for best practice, as well as what data must be captured to facilitate this.

The consultant visited each selected site office at least once. Interviews and direct observations were performed and documented as part of the visits. The consultant submitted more than 58 recommendations to improve the Company's productivity in the areas of desludging, blockage clearance, preventive maintenance and treatment. Five of these recommendations have been approved and implementation will commence in 2014:

- Priority Key Performance Indicator (KPI) measurements for line functions level.
- Review the Standard Operating Procedures (SOPs) and Manpower Policies.
- Create customer referring system for pour flush desludging customers.
- Allow jettors to use effluent water to refill vehicle storage tanks.
- Review frequency of visits to plants or (PMF) especially those that are under-capacity.

#### CONTINUOUS IMPROVEMENT PROJECT (CIP)

The CIP Programme was initiated in 2009 and employs Plan Do Check Act Methodology. This methodology promotes an innovative and continuous improvement mind set in the workforce, especially at our UOs. Employees are encouraged to suggest and implement innovative ideas in their daily work processes to improve the plants' reliability, efficiency, effectiveness and cost. Some of the completed projects led to the establishment of SOPs. Some innovative tools and equipment were also invented to improve operational activities and efficiency. Currently, Indah Water is exploring options to patent these innovations.







### Minimising Replacement Cost of Valve Repair at Skudai UO Using Mini Mobile Workshop (MMW) Concept

Skudai UO frequently experienced a malfunctioning valve that was expensive to repair. The Unit Officer initiated a CIP to recycle old valves to minimise replacements and repair costs using the MMW concept.

Analysis and research showed that repairing the valve took the highest proportion of the budget. The team developed a way to minimise repair costs by using approved recycled valves that were safe to use. Faulty valves can cause backflow and process plant disruptions.

Before this initiative, contractors were fixing the valve which affected quality, time and cost. The contractors did not issue a repair warranty. Indah Water did not want to depend on outside parties to portray a good corporate image.

Salvaging used valves reduces costs and shortens repair times. There is now minimal downtime due to faulty valves. Also, this initiative reduces the disposal of broken parts.

All broken valves are stored before the team checks each to determine if it can be recycled. After analysing all information, the team inspects and repairs the damaged valves. Throughout the project, damaged valves are replaced with recycled components.

The improvement results of this CIP are as follows:

- This project is a guide for recycling processes.
- The money saved from this cost reduction can be used for other repairs.
- Implementing the MMW provides good returns to the Company, increases maintenance effectiveness and improves plant efficiency.
- The MMW demonstrates employees' commitment to reducing operating costs.
- The dependence on external parties is minimised to protect the Company's image.
- The MMW can form the basis of problem solving for many plant maintenance problems.

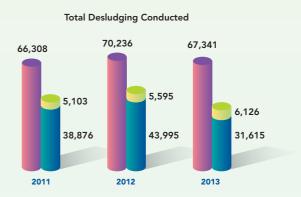
# **MARKETPLACE**

#### **DESLUDGING SERVICES**

Indah Water recognises the importance of regular desludging to prevent water pollution. Without it, untreated sewage and sludge solids are released into rivers which could kill aquatic life. Public health may be threatened by deadly diseases such as cholera, typhoid and hepatitis A. Therefore, all septic tanks need to be desludged regularly. Septic tanks designed according to Malaysian Standards (MS 1228) must be desludged at least once every two years. Indah Water educates the public on the importance of septic tank desludging through various community events conducted throughout the year.

Section 65 of the Water Services Industry Act, 2006 concerns the owner, management, corporation or occupier of any premises with a septic tank. It states that they are responsible for maintaining it and all its accessories so it is not a nuisance or harmful to health. The septic tank must be serviced by a service licensee or permit holder. Contravening this section of the Act is an offence which carries a fine of up to RM50,000. The public can engage Indah Water or any other licenced contractor to desludge septic tanks.

Indah Water provides scheduled desludging services for all government premises with septic tanks and demand desludging services for septic tanks users within its service areas. Responsive desludging services are also provided to septic tanks users outside our service areas and to all pour flush users. The desludging work conducted from 2011 to 2013 is summarised in the following chart.







#### **EDUCATING OUR CUSTOMERS AND THE PUBLIC**



# *'Program Indah Alam'* at Taman Wira, Simpang Renggam, Johor

SPAN, Simpang Renggam District Council and Indah Water jointly organised *Program Indah Alam* at Taman Wira, Simpang Renggam, Johor on 20 January 2013. This awareness programme focused on the importance of desludging Individual Septic Tanks (IST). The event was officiated by Y.B. Encik Liang Teck Meng, Member of Parliament for Simpang Renggam. Honourable guests included Y.B Dato' Ismail Kassim, Chairman, SPAN; Encik Ridhuan Ismail, Executive Director, SPAN; and Encik Chua Bing Guan, Head of O&M Department, Indah Water. Activities included a briefing on the importance of desludging, a colouring contest, a cooking competition, floral arrangements, lucky draws, exhibition booths and Explorace Jiran Muda.







#### Briefing to Members of the Media

Indah Water briefed media representatives in Central, Southern, Northern and Labuan regions in 2013. The briefings were held at the Regional STPs. Media representatives from The Star, The Malay Mail, NST, Berita Harian, Utusan Malaysia, Bernama, Kosmo, Sinar Harian, Harian Metro, Nanyang Siang Pau, China Press, Sin Chew Daily, Oriental Daily and Guang Ming Daily attended. The event provided an overview and awareness of the importance of sewerage services. These representatives also toured the STPs to gain a better understanding of wastewater processes.



#### Seminar on GKL Project at Taman Tasik Titiwangsa

A briefing session was held at Masjid Ibnu Sina compound, Taman Tasik Titiwangsa, Kuala Lumpur on 20 January 2013. Information on rectification works on the existing public sewer networks at Taman Tasik Titiwangsa was shared. The Rehabilitation of the Public Sewer Network Package G08 in Kuala Lumpur and Selangor, is a GKL project. JPP is the project developer and Indah Water provides project management consultation.



#### Indah Water Gives Tips on Disposal of Cooking Oil

This programme was conducted from 6 to 8 December 2013 at 1 Utama. The event was officiated by Exco member of Selangor. This programme educated the public on the proper disposal of used cooking oil. It discouraged the public from discharging used oil into the public sewers and waterways.

Restaurant owners and shopping centre managers were the main targets for this programme. Exhibitions on cooking oil waste pollution helped improve public awareness of conserving water resources, rivers and coastal waters.

In general, waste cooking oil can clog drains and cause overflowing and other problems. Discharges of untreated waste water also pollute rivers and can cause waterborne diseases. Participants were also informed that used cooking oil can be recycled into biodiesel, wax and detergents.



#### **CUSTOMER SERVICE MANAGEMENT**

#### **Customer Charter**

Indah Water's Customer Charter outlines the Company's commitment in providing sewerage services and ensuring the standard of customer service that each customer can expect.

Accordingly, we will ensure efficient sewerage services by:

- ← Operating and maintaining all public sewerage systems to meet the requirements and conditions set by the National Water Services Commission;
- Frovide desludging service for septic tanks upon customers' request;
- F Conforming to environmentally sound practices in the treatment and disposal of sewerage and sludge;
- ← Using appropriate technology and applying cost effective measures in all areas of our operations.

We will ensure high standards of customer service by:

- F Being on call 24 hours a day, 7 days a week to respond to service emergencies;
- F Responding to service complaints within 24 hours;
- Framework Responding to requests for desludging of septic tanks within 48 hours;
- Freelying to all written billing and operation enquiries within three working days;
- F Answering all calls to our dedicated customer service lines within 15 seconds;
- F Keeping service appointments to within 30 minutes of agreed time and notifying customers when delays occur, if customers can be contacted.

We are accountable to our customers in complying with the above standards, which are regulated and monitored by the National Water Services Commission.





Customer service management is prioritised to deliver high quality services and a timely response to customers. Strategic process changes and the innovative use of technology have resulted in significant improvements. Response time reduction was prioritised for technical and administrative requests from customers. Transparent communication channels for customers were also provided.

All billing related calls are forwarded to our centralised contact centre at our HQ. This contact centre attends to customers promptly and efficiently. Due to voluminous inbound calls, some calls are transferred to our outsource centre. Calls are answered within 10 seconds and the abandon rate is lower than the targeted key performance. Customer service staff assist customers according to the type of enquiries defined in the Customer Care procedures manual. Calls received through these centres are recorded according to the Unit Office (UO) and enquiry type.

Customer billing enquiries, requests and complaints can be made via telephone, letter, email, SMS or in person. All replies must meet the respective Level of Service (LoS) and customers must be attended to promptly according to the Customer Care procedures manual. This approach enhances customer relationships and satisfaction. Indah Water is also committed to:

- Continuing to distribute company announcements, news releases and informative articles though print and electronic mass media.
- Organising forums and activities that educate and share information with various consumer groups.
- Liaising with the DOE, Department of Safety & Health (DOSH) and the Department of Irrigation and Drainage, to organise events and activities, and enhance working relationships.
- Commissioning an independent brand recognition research survey.
- Soliciting and gathering customer feedback on billing and operational service to monitor customer satisfaction.
- Organising on-site community events with customers at strategic locations to educate them and obtain feedback.
- Introducing educational programmes, activities and workshops with print media and Non-Governmental Organisations (NGOs).

#### Service Related Enquiries

Service related enquiries are operational enquiries such as requests for desludging services, clearing private blockages, network and STP related complaints plus premises or property damage related complaints. The operational enquiries have been categorised into 36 types and are monitored based on LoS. There are four groups of LoS: resolution of the enquiry within 12, 24, 48 and 72 hours. Resolving all service enquiries within the LoS is targeted to enhance customer satisfaction. These operational enquiries can be reported or requested through the service lines, the general line, walk-in, fax, letter, e-mail or SMS. Customers can also visit our 19 UOs in Peninsular Malaysia and Labuan.

#### **Managing Customers' Expectations**

- The Customer Service
  Representative submits
  the relevant information
  to the Unit Manager
  if he is required
  to respond to the
  customer, complainant
  or stakeholder.
- The Customer Service
  Representative
  telephones the
  customer or
  complainant and
  updates them of
  the actions taken
  for completion and
  confirms that the
  service or response
  was satisfactory.
- 8 The Customer Service Representative prepares a summary report on Unresolved and Temporary Resolved Enquiry Status Report.
  - The Work Orders are updated and submitted to the executive or supervisor who reports it in the IFS.

- 11 The Unit Manager reviews the information and actions taken and where appropriate responds to the customer or complainant.
- Complaints and requests for services are received from a variety of sources. They are all eventually channelled to a Customer Service Representative before they are attended to.
- COMPLAINT MANAGEMENT PROCESS CYCLE
- 2 The Customer Service Representative determines the nature of service enquiry and checks for enquiry or incident duplications.
  - 3 If no repetitions are noted, complaints or requests are logged by the Customer Service Representative. Work Orders are generated and Industrial Finance System (IFS) faults reported. LoS starts here.
- The Customer Service Representative forwards the complaints or requests to the supervisor or team for on-site investigations.

- Upon completion of the repairs, the Customer Service Representative and respective Heads of Section or executive are updated. LoS ends here under temporary or permanent resolution.
- The supervisor or team executes the work order according to the specific procedures required for that service code.

#### Responding to Our Customers' Service Complaints

Service complaints are categorised into 23 types and monitored based on the LoS. There are four groups of LoS: resolution of the complaint within 12, 24, 48 and 72 hours. The aim is to enhance customer satisfaction by resolving all service complaints within the LoS.

Major public service complaints resulting in environment impacts and public nuisances are grouped into odour, noise, aesthetics and sewage overflow. These complaints are easily detected by the public and must be attended to within the LoS. The root causes of each complaint are:

- Odour: Malfunction of treatment processes or equipment, surge of raw sewage and improper sludge treatment
- Noise: Noise generated by STP equipment
- Aesthetics: Overgrowth of weeds, rubbish and pests at the plant
- Overflows: Overflowing of STPs and manholes

Indah Water is committed to providing the best services to its customers and responding promptly to any issues or complaints. This is reflected in the excellent performance shown in the graph below. A minimum response rate of 94% has been maintained.

#### Major Public Service Complaints Received and Resolved Within LoS by Group 98% 96% 3.000 -96% -100%98% 97% 2,700 -90% 94% Public Complaints Resolved Within LoS No. of Public Complaints Received 2,586 2,400 -- 80% 2,100 -- 70% 1,800 -- 60% 1,500 -<del>-</del> 50% ,542 1,200 -<del>- 40%</del> 900 -<del>-</del> 30% 600 <del>-</del> 20% 300 -**—** 10% **—** о 0 — 2011 2012 2012 2013 Odour Noise Aesthetics Overflows No. Received % Responded within LoS

#### **Emergency Service Complaints**

Sewer collapse or blockage complaints are considered an emergency. Our LoS stipulates that the response time for both complaints is within 24 hours.

#### **Public Sewer Blockages**

The most common problems encountered are blockages caused by rubbish or solid waste, grease, rubble, grit and occasionally damaged pipes. The problem must be rectified within 24 hours. Depending on the nature of the blockage, a high pressure water hose, high powered vacuum and/or mechanical rodders are used.

Public sewer blockages constituted 58% of service complaints received over the last three years. Regular preventive sewer maintenance includes manhole cleaning and inspection, sewer inspection and sewer flushing.

#### **Public Blockages Attended Within LoS**



Over 95% of public sewer blockages were resolved within the LoS in the last three years.

#### Sewer Collapses Attended Within LoS

Sewer collapse is a challenge in operating and maintaining the sewer network. It can occur due to a combination of corrosion, soil movement, poor construction, root intrusion and deterioration of jointing materials. Sewer collapses may occur because of Horizontal Directional Drilling (HDD) by third parties. HDD is a trenchless method of laying cables or ducts used by utilities companies. The pipes may also deteriorate with age.

Sewer Collapses Attended Within LoS



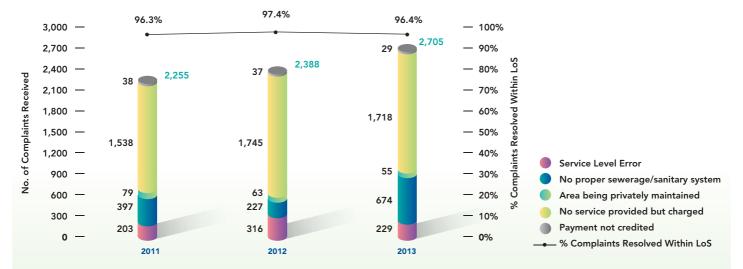
The LoS resolution of sewer collapses has deteriorated with more being reported. The low LoS performance was partly due to a delay in replacing aged sewers and difficulties in identifying the location of the collapse.

Other third party reasons for low LoS performance include a delay in obtaining a permit from LA, obstruction by other utilities and site constraint without proper access.

#### Responding to Our Customer Billing Complaints

There are five types of billing complaints namely service level error, no service provided but charged, no proper sewerage system, payment not credited and the area being privately maintained. Each billing complaint must be responded to according to the LoS stipulated in the Customer Care procedures manual.

#### **Billing Complaints Resolved Within LoS**



Although the number of billing complaints has increased over the past three years, these complaints have been resolved within the LoS. The percentage of complaints resolved has exceeded 96% for the last three years.

#### **Customer Satisfaction Survey**

Customer's satisfaction is crucial to any organisation. Indah Water places great importance on meeting its customers' expectations and addressing their concerns in a timely manner.

A customer satisfaction survey was conducted in 2013. The overall Customer Satisfaction Index in 2013 was 71.68. Billings performed the best and complaints handling received the lowest score. Nevertheless, all the satisfaction dimensions attained a relatively good index score of over 70.



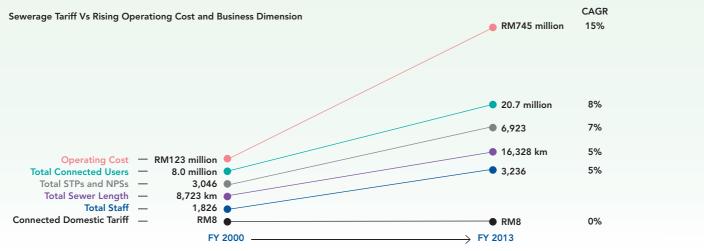
The parameters measured for each category of the customer satisfaction survey are listed in the table below.

SERVICE INDEX	PARAMETERS
Sewerage Service Quality	<ul> <li>Providing service as promised</li> <li>Maintaining the sewer network</li> <li>Performing the service right first time</li> <li>Handling service repairs promptly</li> <li>Doing a good job at the pumping stations</li> <li>Developing well-trained and knowledgeable employees</li> </ul>
Complaints Handling	<ul> <li>Dependable handling of service problems</li> <li>Developing employees that are always willing to help</li> <li>Resolving complaints in the shortest time</li> <li>Handling complaints with competent employees</li> <li>Providing accurate explanations</li> <li>Nurturing friendly and courteous employees</li> <li>Attending to complaints promptly</li> </ul>
Billings	<ul> <li>Ensuring customers are satisfied with the charges</li> <li>Paying for appropriate services</li> <li>Providing accurate billing</li> <li>Making bills easy to pay</li> <li>Charging reasonable fees</li> </ul>
Queries/Request Handling	<ul> <li>Training employees to always be ready to respond</li> <li>Providing individual attention</li> <li>Being polite and courteous at all times</li> <li>Ensuring employees display warmth</li> </ul>
Visibility	<ul> <li>Ability to understand services from Indah Water's community involvement</li> <li>Promoting visually appealing informational materials</li> <li>Presenting employees who are neat and professional</li> <li>Ability to find information on Indah Water's website</li> <li>Clearly presenting Indah Water's functions and services</li> </ul>

#### Our Pricing and Operating Overheads

Sewerage services are public goods similar to roads, street lightings and other public facilities. The tariff, which is set by the Government, has been reduced three times since 1997 despite rising operating costs. Indah Water's sewerage service charges do not cover the true cost of the service. The rising operating costs are due to:

- An incremental number of STPs being taken over annually. However, the occupation of the new premises in developments is usually low.
- Higher STPs performance expectations with shorter plant downtime and higher customer demand in terms of prompt response time and services.
- More stringent effluent standards requirements for STP to comply with.
- Electricity tariff hikes in 2006 and 2008.
- An additional 1% levy being imposed for the Feed-in-Tariff (FiT) for Renewable Energy Fund in 2011.
- Increased requirements for equipment servicing, replacements and infrastructure maintenance.
- Greater legal services and debt recovery costs due to a larger customer base.
- The takeover of highly mechanised regional plants.



Note: CAGR = Compound Annual Growth Rate

The cost of providing sewerage services rises each year but the tariff has not increased since the Company's inception. Instead, the tariff has been revised downwards three times. The graph above shows operating costs in 2013 were almost five times the cost in 2000. However, the domestic tariff for connected premises remained at RM8 throughout the same period.

Most people believe Indah Water has become too dependent on the government subsidy to cover its rising operating expenses from huge operational costs and the low tariff rate. The cost of providing sewerage services to more than 20 million people is high and as the population increases, so will the costs. The Government is clear in its purpose to provide the best sewerage services to the *Rakyat* and Indah Water is the vehicle for providing this service. If seen in a different perspective, the Government is in effect subsidising the *Rakyat* with the low tariff. Until Indah Water is allowed to introduce a sustainable tariff structure, its business will remain service oriented and not centred on profit.

#### **OUR SUPPLIERS**

#### Sustainable Procurement

Procurement is managed by the Procurement Department at Indah Water's HQ. It serves all UOs across Peninsula Malaysia. This hybrid procurement model has both centralised and decentralised procurement functions. There are currently 19 UOs and more will be established as the need arises.

Most of Indah Water procurement transactions are performed online using the eProcurement system. This covers online options, auctions and closed tenders. The main objectives are to:

- Improve process transparency with more openness and fairness.
- Encourage more competitive rates and prices.
- Reduce administration effort and manpower requirements with an automated process.

The eProcurement system is Indah Water's electronic platform for procuring materials and services from its vendors through online quotations, bidding and catalogue. The eProcurement system was launched in 2007 to improve and enhance the overall procurement process, facilitating competitive and transparent procurement transactions. The system reduces resources for managing quotations and tenders while improving responsiveness in meeting customer needs. The approach has further improved Indah Water's reputation as an open, transparent and fair company in all business dealings.

The eProcurement system saved RM18 million of operational costs in 2013. These savings were mainly from STP maintenance, M&E works and civil works.

#### e-Procurement transaction data

	2011	2012	2013
Volume (RM million)	137	176	197
No. of transactions	4,573	4,531	4,142
Estimated savings (RM million)	17	17	18

Currently, Indah Water uses an Industrial Financial System (IFS). The implementation of an Enterprise Resource Planning (ERP) system is scheduled for early 2014. Suppliers are registered in the IFS using a web browser.

Performance evaluations of vendors are conducted annually when a contract is due for renewal. The current IFS and eProcurement systems help the Procurement Department manage the supplier management programme more effectively. Registration details, performance and supplier transaction data are captured in the IFS. The overall cycle time, from request to settlement, has improved and allows process handling control.

Indah Water practices a central purchasing system to standardise products and equipment for the sewerage industry as well as office equipment and consumables. The system helped Indah Water maintain quality and performance targets. Bulk purchasing power resulting from this standardisation programme can reduce prices from significant economies of scale.

Term contracts have been adopted to ensure transparency and fair procurement. Term contracts refer to outsourcing O&M services at agreed rates and terms over a period of time. Term contracting expansion increased considerably from 40% of procurement volume in 2011 to 70% in 2013. With this significant growth, Indah Water gained greater benefits from consolidated volume savings and an expedited procurement process to meet customer needs.

#### **Prioritising Local Suppliers**

To enhance the business opportunities for small contractors and suppliers, Indah Water provides many opportunities for small local companies. Maintenance works such as sewerage treatment plant maintenance, grass cutting and security services do not require technical expertise. Indah Water encourages new contractors that lack sewerage experience to explore the growing sewerage industry. These contractors receive opportunities and trial contracts to learn and prove their capabilities. Guidance and on-the-job training is provided to the participants throughout the trial period. Those that demonstrate competence and a strong desire to learn are enrolled with annual contracts. For more technical works such as mechanical and electrical services. pregualification will be conducted to select new contractors. We hope that these approaches will attract local companies' participation which will eventually develop the sewerage industry.

#### OUR RESEARCH AND DEVELOPMENT (R&D)

Indah Water's R&D Programme supports the Company's vision of developing environmentally sustainable services. Current and future research initiatives focus on resource recovery through the recycling of sewage treatment by-products and operational efficiency improvements. The research projects cover green technology, biotechnology and nanotechnology. These innovations will transform the sewerage industry from a wastewater utility to a resource recovery model. Our R&D projects are initiated through:

- A structured R&D programme in collaboration with local research institutions.
- Pilot trials of new technologies with local vendors.
- In-house studies.
- Research institutions and university student research projects.



Indah Water works with Universiti Putra Malaysia, Universiti Teknologi Malaysia (UiTM), Universiti Kebangsaan Malaysia, Universiti Tenaga Nasional (UNITEN), Universiti Malaysia Pahang, Universiti Islam Antarabangsa Malaysia, Malaysian Agricultural Research and Development Institute, SIRIM Bhd, Rubber Research Institute of Malaya and other bodies on various areas of R&D related to the sewerage sector.

Up to 2013, more than 100 R&D projects have been undertaken. These include physical, chemical and biological characterisation of sewage and sludge; sewage loading and infiltration rates; sewage treatment optimisation; biochemical augmentation for sewage treatment process; methods for enhancing sludge dewatering; energy management and efficiency; and applied research results on viability of sewage sludge and treated effluent for reuse. Our key R&D projects in 2013 were:

- Biogas optimisation and renewable energy projects.
- Sludge as fuel characterisation study.
- Pilot application of bioeffluent and biosolids for landscaping at local municipalities.
- Study on pilot water reclamation technology.
- Study on rapid co-composting techniques to produce value added biofertiliser for landscaping.

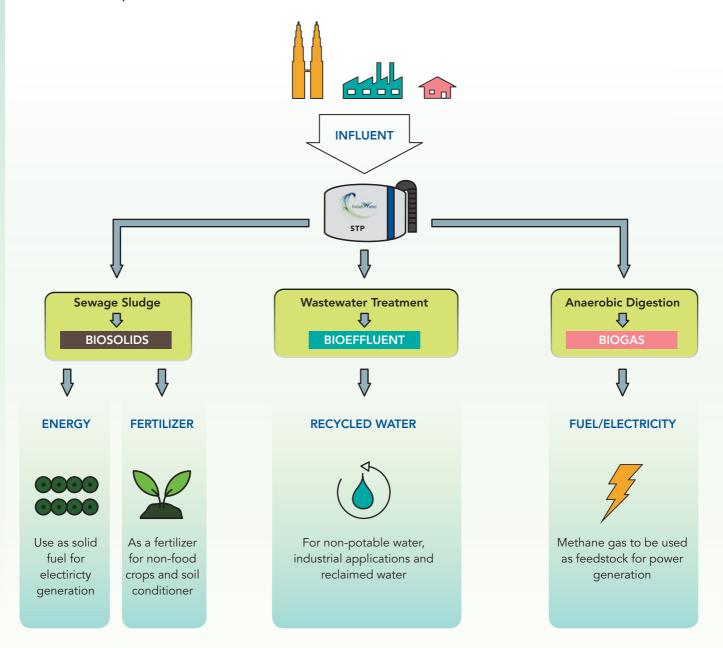
MZ Clear is a product developed solely by Indah Water's R&D team, led by an in-house scientist in 2012. MZ Clear solves problems of odour and clogging in STPs. It separates solids from wastewater and reduces the amount of sludge produced. MZ Clear is currently being used in STPs throughout the country. Indah Water is in the process of patenting this technology.

#### Our Green Technology (GT) Initiatives in R&D

Sewage treatment processes inevitably generate by-products. These by-products can be converted into value-added, renewable products for the community and industries in a sustainable and environmentally-friendly manner. Currently, sewage sludge, treated effluent and methane gas are disposed of, discharged or flared. This contributes to high carbon emissions that are hazardous to the environment.

Indah Water has been actively researching and venturing into GT applications to reuse the sewage by-products through collaborations with third party organisations. These technologies recover sewage by-products resulting in zero waste management. This is a better and greener way that will lead to a sustainable environment.

#### Sustainable Development and a Greener Environment



#### Benefits of Adopting GT for Resource Recovery in Sewerage Sector



The following R&D-GT projects with third party organisations were implemented in 2012 and 2013:

- 1. AAIBE-UNITEN-IWK Renewable Energy Project: Implementation of biogas plant for electricity generation
- 2. IWK-UTP Fuel Characterisation of Waste Sludge from STP: Reuse of biosolids as Fuel
- 3. Korean-IWK-UKM: Development of a Pre-Treatment System of Reverse Osmosis (RO) Membrane Using Serially Connected Two Stages Fibre Filter To Reuse STP Effluent
- 4. IWK-UPM Co-composting of Sewage Sludge and Green Waste into biofertiliser with applications for community benefits

Indah Water had a major breakthrough in its R&D GT activities when conducting a pilot trial with Majlis Perbandaran Port Dickson (MPPD). Biosolids and bioeffluent were applied to landscape planting around Port Dickson. This pilot demonstrated the effectiveness of biosolids reuse compared to commercial fertilisers and treated bioeffluent for non-food crop plants. This was part of MPPD's initiative for greening the municipality and moving towards becoming a low carbon city of the future. The biosolids and bioeffluent aided the growth of plants. MPPD also replaced chemical fertilisers with biosolids, whilst reducing demand on potable water for landscaping purposes.

From the positive results of the MPPD pilot trial, this initiative has now led to the replication of biosolids and bioeffluent reuse at other local Governments and municipalities to green the landscape nationwide. Indah Water, through Kementerian Tenaga, Teknologi Hijau dan Air (KeTTHA), obtained the support and endorsement of the National Green Technology and Climate Change Council to introduce initiatives to every state in Peninsular Malaysia and WP Labuan. It began with a pilot project in one Local Authority (LA) in each state. This innovative initiative forms part of the national agenda with 14 LAs being selected to participate. Each LA will initiate similar projects to green landscape areas with renewable nutrients. To date, four LAs have completed the pilot trial: MPPD, Majlis Perbandaran Kangar (MPKPs), Majlis Bandaraya Melaka Bersejarah (MBMB) and Majlis Bandaraya Ipoh (MBI).

Indah Water has sent letters of offer for biosolids and bioeffluent reuse to another 10 LAs. Initial meetings and discussions with the LAs have been held. Negotiations with the LAs are ongoing for implementing pilot trials at the LAs.

This innovative and strategic approach of biosolids and bioeffluent reuse should lower greenhouse gas (GHG) emissions by reducing landfill disposal. It should also contribute to more sustainable water efficient management for the nation.

A project paper entitled "Greening the Environment with Biosolids and Bioeffluent Applications at Landscape Plant Nationwide" about the Indah Water-MPPD project has won the following two awards:

- Malaysian Water Association's (MWA's) Water Malaysia 2013, Water Innovation Awards: Bronze Award in April 2013.
- International Water Association's 2013 Project Innovation Awards – Development: Honour Award in October 2013.



# Indah Water's Centre of Excellence for Research and Innovation in Wastewater (ICERIW)

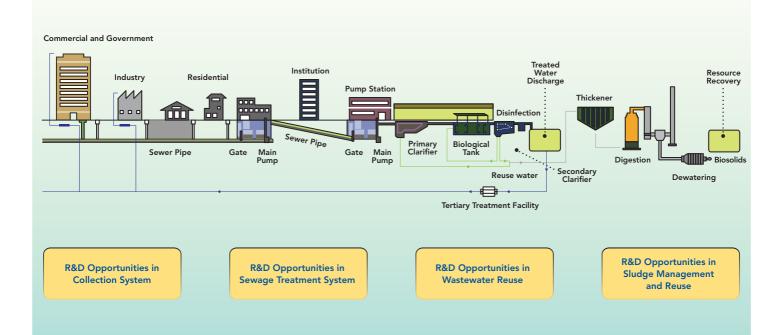
Future R&D on resource recovery via GT applications in the sewerage industry will continue. R&D is also exploring using microbiology, biochemistry and biotechnology to optimise sewage treatment processes. A laboratory dedicated to research on microbial process development for sewage treatment has been established at Bukit Tinggi Regional STP in Klang. In 2012, ICERIW was established at Bunus STP, Setapak, Kuala Lumpur.

ICERIW promotes R&D activities and sewerage industry innovations. Initiatives include studies on process improvement and the continual screening of new technologies. ICERIW supports research collaborations with universities including student internships and placements for postgraduate students to conduct research laboratory work. ICERIW reduces Indah Water's dependence on external or commercial laboratories as the centre is equipped to analyse the required parameters.



ICERIW's vision is to become the premier knowledge and innovation centre for the wastewater industry by 2020. Its mission is to establish a premier knowledge and innovation centre that provides leading edge technologies and knowledge for wastewater management treatment as well as transformation products for operational changes.

One of Indah Water's long-term R&D goals is to establish a Malaysian R&D Centre dedicated to the wastewater treatment industry. This centre will examine the vast R&D and innovation opportunities in the sewerage industry.



#### **Indah Water's Technical Training Courses**

The sewerage industry requires highly skilled professionals with knowledge of chemistry, microbiology and hydraulics. It is important that the industry has a skilful and knowledgeable workforce.

Indah Water has designed a wide range of sewerage technical training courses for its employees' capacity building. These courses are delivered at the Indah Water Training Centre at the Sg. Besi Regional STP in Bukit Jalil. Other sewerage industry practitioners may also attend. Some courses have been certified by SPAN and international accreditation from the relevant international bodies is targeted.

Our technical courses focus on three key learning objectives: executive management, product and equipment; and operations. These courses are grouped into Desludging Operator, Network Operator, Treatment Plant Operator, Executive Technical Training, Health & Safety and Certification.

In 2012 and 2013, 11 and 16 sewerage industrial training programmes were conducted for the local and international sewerage stakeholders respectively. Local sewerage stakeholders attended from local universities, Majlis Amanah Rakyat (MARA) Institut Kimia Malaysia, Politeknik Sultan Idris Shah, MINDEF, SPAN, Jabatan Kerja Raya, JPP and local private companies. International sewerage practitioners from Indonesia, Oman, Vietnam, Bhutan and the Republic of Maldives also attended the training.





#### **Broadening Horizons**

On 1 March 2013, a Memorandum of Understanding (MoU) between Indah Water and the University of Leeds, United Kingdom was signed at Indah Water HQ, Kuala Lumpur. This MoU covered a partnership in research, training and education.

On 17 May 2013, a second MoU was signed with Water Sanitation for Africa (WSA). WSA is a pan-African intergovernmental agency that provides technical know-how and sewerage management consultancy services to African countries. WSA selected Indah Water to be part of a technical committee formed by the Bill and Melinda Gates Foundation. The Company will propose immediate, medium- and long-term solutions for sanitation services in WSA member countries. Hopefully, Indah Water can assist these countries improve their sewerage management so they can keep pace with the fast growing urban population.

On a separate occasion, Senior Manager of Corporate Planning,
Ms May Lim, was a panellist at the Technical Workshop on Household
Water Security at the 2<sup>nd</sup> Asia Pacific Water Summit. The event
was held on 18 May 2013 in Chiang Mai, Thailand. Tools,
mechanisms and available data were presented that
improve access to global sanitation. The United
Nations Economic and Social Commission for
Asia and the Pacific organised the

#### INDAH WATER AS A CERTIFYING AGENCY (CA)

SPAN appointed Indah Water as the CA for sewerage works approvals effective from 1 January 2008. This is in accordance with Section 174 of Water Services Industry Act 2006 (Act 655). This appointment covers Wilayah Persekutuan Labuan in East Malaysia and all West Malaysia states, except for Kelantan. Indah Water is responsible for approving overall sewerage planning proposals for new developments. The Company also approves the proposed detailed design of sewerage systems for a particular development. The diagram below summarises the processes involved in the planning, design and construction of sewerage systems.

Planning and design approval by CA including periodical inspections during construction

Full testing and commissioning of the new sewerage system

CA issues Letter of Confirmation

The Water Services Industry Act 2006 stipulates that no development can proceed without CA approval. All sewerage works must adhere to the approved drawings.

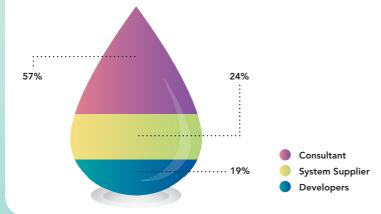
#### **Customer Satisfaction Survey for CA's Customers**

Indah Water's Developer Service Section (DSS) conducts an annual customer satisfaction survey for all CA offices. The DSS gauges customer needs and expectations, and monitors how they change over time. This survey forms a major part of the CA quality of service monitoring. It is considered a benchmark for the services provided to them.

The 2013 survey covered sewerage processes that can be reduced or are redundant, general customer service, online webpage services and additional comments. 133 responses were received in 2012 and 114 in 2013. This is more than double the 58 received in 2011.

Out of 114 respondents, consultants formed the highest proportion of respondents representing 57%. System suppliers and developers were 24% and 19% respectively. Contractors and licensed contractors have been grouped under system suppliers.





The survey findings discovered that:

- 58% of the total respondents rated the front counter representatives' service as excellent.
- 48% of respondents considered the waiting time for submissions at the CA front counter reasonable.
- 50% of the respondents considered the waiting time to meet the officer-in-charge reasonable.
- 45% of respondents reported that the written comments issued by the CA for their submission either met their expectations or were satisfied by them.

The SPAN survey results also discovered some views that could improve CA services:

- 83% of respondents agreed that the CA met the customer's objectives on the majority of occasions.
- The CA completed 67% of all SPAN's requests.
- 50% of respondents agreed that the CA had completed their requests; the remaining 50% felt it had on occasions.
- 83% of SPAN's respondents considered CA employees courteous when attending to SPAN's requests.
- 67% were satisfied with the CA's quality of service.
- 67% considered CA employees competent in delivering services to SPAN.

Several proposals and recommendations were submitted to the management based on this analysis. The proposals aim to further improve CA services and performance. In line with the implementation of new PDC Rules 2013, DSS HQ has:

- Conducted a briefing session on the new PDC Rules 2013 to all CA offices nationwide introducing a new procedure and CA fee structure.
- Delivered a two-day workshop to technical and support staff on ways to ease CA's work process and expedite the issuance of approvals.
- Implemented a Cert System enhancement to monitor delays in taking over.

# INDAH WATER AS PROJECT MANAGEMENT CONSULTANT FOR GKL SEWERAGE PROJECTS

The GKL project supports the 12 National Key Economic Areas under the Economic Transformation Programme. Its goal is to transform Kuala Lumpur into one of the top 20 most liveable metropolises and boost economic growth.

The GKL Steering Committee identified nine entry point projects to achieve GKL goals. One is the River of Life (RoL) project. RoL aims to transform the Klang River into a vibrant and liveable waterfront with high economic value. This transformation is divided into three components: river cleaning, river masterplanning & beautification and river development. Indah Water is greatly involved in river cleaning.

110 km of the Klang and Gombak rivers will have improved water quality. The target is to improve its current Class III – Class V water quality (not suitable for body-contact) to Class IIb (suitable for body-contact recreational usage) by 2020. Existing STPs, NPSs and sewer networks will be upgraded to reduce river pollution, protect water resources and conserve the environment.

Individual Septic Tanks (ISTs) are among the largest contributors to ammonia levels in river water. Improperly treated sewage and wastewater pose a risk to human health and pollute the environment. ISTs must be connected to the main sewer network, which lead to the Regional STPs.

These projects improve environmental cleanliness and public health. They also eliminate odour, buffer, noise and other aesthetic complaints from the residents near the STPs.

# INDAH WATER AS A CONSULTANT TO GOVERNMENT FOR PLANNING, TECHNICAL AND LAND MATTERS

Indah Water has been appointed by the Government, Jabatan Perkhidmatan Pembetungan (JPP), KeTTHA, since 2007 as a consultant for sewerage technical, planning and land matters. The services provided are related to catchment planning, asset data management, project planning, technical support, training land acquisition, reservation, verification, transfer, surrender, survey works and squatters removal.

The Land Services Section of Planning and Engineering Department has also been certified to ISO 9001:2000 under the scope of Land Verification, Acquisition & Reservation since 2003. Land services being provided by Indah Water include:

- Sewage planning
- Asset management
- Design of sewage system
- Formulating sewerage land policy based on current needs
- Land consultancy services to the Government (JPP)
- Developing in-house land data system for sewerage land
- Acquiring land for sewerage industry
- Advising on land matters

#### PROVISION OF TECHNICAL SERVICES

Indah Water has developed its technical skills through years of experience in STP operations. Technical services provided by Indah Water include:

- Technical input for STP projects initiated by the Government or private sector to ensure the STPs are built in accordance with the Malaysia Sewage Industry Guideline (MSIG) and other engineering best practices.
- A One Stop Centre for comprehensive technical solutions including the planning, design, construction and operation for both internal and external parties.
- Developing best engineering industry practices such as standard STPs for the adoption and adaption of the industry.
- A centre of operational expertise for sewage treatment plants that can provide technical solutions for various types of sewage treatment systems faced by both external and internal parties.
- A resource centre for information on STPs in Malaysia.
- Sewerage data for relevant government agencies and annual Malaysia Environmental Quality Reports.
- Technical input on a sub-working committee covering the National Inventory of Green House Gases for Waste Sector.
- A Hazard and Operability Study for selected wastewater treatment plants and NPSs.
- An Environmental Assessment (EA) study and monitoring of sludge disposal sites.
- Technical support and sewerage feedback on policy, procedure and regulation for relevant government agencies.

#### PROVISION OF PLANNING & ENGINEERING SERVICES

Indah Water's Planning & Engineering Services provide the basis and support for sewerage development control and long-term sewerage project planning. Its asset and planning information management activities enable the formulation, review, update and maintenance of appropriate strategies. These strategies form the basis of the long-term National Sewerage Development Plan. Indah Water assists the Government in capital investment decisions by developing sewerage infrastructure to meet the national needs. Indah Water's also helps by developing:

- Standards and guidelines
- Product and process audits
- Environment Impact Assessments (EIAs)
- Hazard & Operability Studies (HAZOPs)

This assistance helps ensure the quality development of new sewerage infrastructure by the Government and private sector.

Over the years, Indah Water has prepared sewerage and sludge catchment strategies. It has also assisted JPP formulate sewerage works guidelines and standards. Various categories of planning information have also been managed. These are essential for the development of the National Sewerage Development Plan, Capital Works Programme and sewerage development budget under the Government's five-year National Developments Plans. The services also include identifying land required for future sewerage facilities and developing relevant strategies on a catchment-by-catchment basis.

#### HAZARD AND OPERABILITY (HAZOP) STUDY

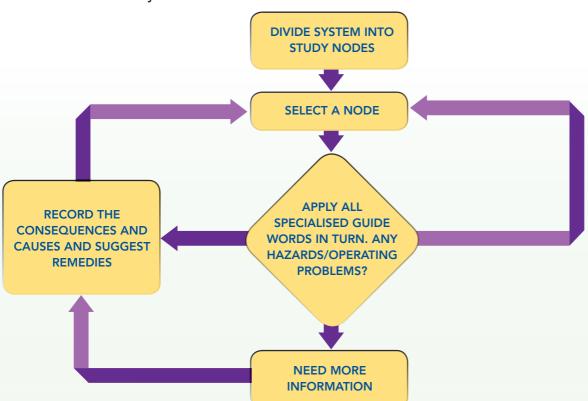
HAZOP is a procedural tool designed to discover safety and operability deficiencies in a plant's design and operation. HAZOP's importance is much more apparent under the Occupational Safety and Health Act 1994 (Act 514), Part V (Clause 20) for "General Duties of a Designers, Manufacturers and Suppliers". A HAZOP study was first introduced to the sewerage industry in 1998. It has proven beneficial in the construction of sewerage works.

Indah Water has conducted over 300 HAZOP studies on NPSs, sewer networks, wastewater and water treatment plants. The capacities range from 150 Population Equivalent (PE) to 750,000 PE for the Government, developers, wastewater and water consultancies, and construction companies. HAZOP studies employ integrated recording, reporting and analysis system software created by Lihou Technical & Software Services.

Most projects follow a typical progression of concept, design, construct, commission and operate. HAZOP can be used at any stage to ensure all hazards and operability issues are arrested during the lifecycle of the treatment works.

A typical HAZOP team comprises a manager, chairman, secretary and team member. Ideally, team members are involved in the project implementation as well as design, operations and H&S teams.

#### Indah Water HAZOP Study Model



A WORD MODEL system is used to produce a systematic HAZOP study. A series of keywords help identify deviations from the normal design. Primary and secondary keywords allow a more structured approach to questioning.

HAZOP can also be applied to existing treatment works when processes are added or modified. HAZOP studies:

- Encourage brainstorming of a team from various functions or disciplines.
- Blend input from available codes of practice or by operational experience.
- Provide an opportunity to correct errors and oversights during the design stage.
- Reduce losses from hazard and operability problems.
- Allow cost saving exercises that eliminate potential remedial and modifications.
- Ensure all legislative requirements are consistently met.

#### **ENGAGEMENT WITH STAKEHOLDERS**

# JAN 2012

Indah Water Signed a Memorandum of Understanding with Perusahaan Daerah Air Minum (PDAM) Tirtanadi, Indonesia



# FEB 2012

APEC Trade Policy-Environmental Goods in Moscow, Russia



# **FEB 2012**

Karnival 1Hijau, 1 Komuniti, Miri, Sarawak





#### **MAR 2012**

AsiaWater 2012 at KL Convention Centre



#### **MAR 2012**

Members of the Council of Regency for the Sultan of Kedah Darul Aman Visited Our STP in Kuah, Langkawi



# MAR 2012

Memorandum of Agreement Signing Ceremony between Indah Water & Majlis Perbandaran Port Dickson (MPPD)



## **MAR 2012**

Memorandum of Agreement Signing Ceremony between Indah Water & Universiti Tenaga Nasional (UNITEN)

## **MAR 2012**

Sabah State Level World Water Day Conference & Exhibition 2012



## **APR 2012**

World Water Day-Penang State Level Celebration at Penang Municipal Youth Park



# **MAY 2012**

Briefing to the Members of the Media at Indah Water HQ



## **JUN 2012**

BioJohor 2012 at Persada Johor International Convention Centre





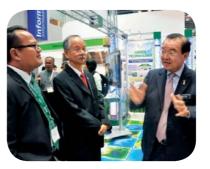
## **JUL 2012**

Karnival Amal Hari Penyayang, Alor Setar



#### **SEP 2012**

Launching of Indah Water Counter at UTC KL, Pudu Sentral



# **OCT 2012**

International Greentech & Eco Products Exhibition & Conference Malaysia (IGEM) 2012 Exibition at KL Convention Centre



## **OCT 2012**

Majlis Penerangan & Ramah Mesra Bersama Media at Grand Dorsett Subang Hotel

## **ENGAGEMENT WITH STAKEHOLDERS**

**JAN 2013** 

Briefing on GKL Project at Taman Tasik Titiwangsa, Kuala Lumpur



**JAN 2013** 

Program Indah Alam at Taman Wira, Johor



**JAN 2013** 

Launching of Indah Water Counter at Urban Transformation Centre (UTC) Perak, Ipoh





**FEB 2013** 

Karnival Karangkraf 2013



**MAR 2013** 

Anti Littering Campaign Bukit Bintang 2013



## **MAR 2013**

Memorandum of Understanding Signing Ceremony between Indah Water & the University of Leeds, United Kingdom

APR 2013
Launching of Indah
Water Counter at

**UTC** Pahang



**APR 2013** 

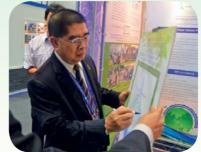
Water Malaysia 2013 Exhibition at Kuala Lumpur Convention Centre



## **MAY 2013**

Memorandum of Understanding Signing Ceremony between Indah Water and Water Sanitation for Africa





# **OCT 2013**

IGEM 2013 at Kuala Lumpur Convention Centre



# NOV 2013

YB Dato' Seri Diraja Mahdzir Khalid's Technical Working Visit & Officiation of Indah Water's Centre of Excellence for Research & Innovations in Wastewater at Bunus Regional Sewage Treatment Plant, Kuala Lumpur



# **DEC 2013**

KeTTHA Deputy Minister's Visit to Taman Dahlia Pump Station, Seremban SUSTAINABILITY IN OUR COMMUNITY

# ENGAGING WITH THE SOCIETY

Indah Water's primary role in serving the community is providing a good and clean sewerage system. The Company aims to improve public health levels in the country. Indah Water's community initiatives focus on spreading awareness of the importance of a good sewerage system through various engagement activities. The public is welcome to visit Indah Water's STPs where in-depth knowledge of operations is shared.



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# **COMMUNITY**



Some shocking facts may be startling for people who take good sanitation and clean water for granted:

# 2.5 BILLION PEOPLE





Roughly 37% of the world's population lack access to adequate sanitation and a little over

# 1 Billion

practise open defecation.



Open defecation is one of the main causes of diarrhoea, which results in the deaths of more than

# 750,000 Children

under the age of five every year.



Every

# 20 Seconds

a child dies as a result of poor sanitation.



# **80% OF DISEASES**

in developing countries are caused by unsafe water and poor sanitation, including inadequate sanitation facilities.



Access to sanitation, the practice of good hygiene and a safe water supply could save

# 1.5 Million Children

a year.



In 2006, the world's population was almost equally divided between urban and rural dwellers. Nevertheless, more than

# Seven out of 10 People

without improved sanitation were rural inhabitants.



Doing nothing is costly.

Every US \$1 spent on sanitation brings a

# **\$5.50 Return**

by keeping people healthy and productive.

#### **SOURCES:**

Fact sheet on water and sanitation, Rio+20 United Nations Conference on Sustainable Development, UN-Water Sanitation Fact Sheet, Sanitation Drive 2015 Fact Sheet.

Serving the community is the underlying nature of Indah Water's business. Community members live sustainably through a good and clean sewerage system. The Company's commitment does not stop here. It provides continuous awareness on public health, the importance of preserving water resources and ways to sustain the environment. Learning opportunities are presented as visitors are welcomed to operations. The Company works closely with the Government to solve Malaysia's sewerage issues.

#### **CHARITY SEWERAGE SERVICES**

Premises used exclusively for religious or charitable purposes are exempt from sewerage charges. Welfare homes, mosques, temples, churches and other religious centres receive desludging and connected services for free. Supporting documents such as a tax exemption certificate must be provided. In 2012 and 2013, a total of RM1.63 million and RM1.72 million in sewerage charges respectively were waived for charity and religious purposes.



#### **ACTIVE ENGAGEMENT WITH OUR STAKEHOLDERS**

#### Social Media

Indah Water enters into continuous dialogue with its stakeholders. Active communication allows better engagement with them, which sustains operations. The growing value of communicating with various stakeholders online and through social media is apparent. Indah Water has an active presence on Facebook and Twitter, which increases awareness of business and activities. The latest news is shared and queries that are posted are responded to. These platforms allow direct connectivity with customers and the Company is able to glean first-hand information from them. Since the Facebook page was launched in July 2013, more than 20,000 people have liked it. Twitter was introduced much earlier in June 2011 and is actively used by the Company and its stakeholders.

#### **Community Initiatives**

In 2012 and 2013, Indah Water conducted a number of initiatives to educate the public and create awareness of the importance of its sewerage services through traditional and electronic advertisements. Representatives appeared on the TV and spoke on the radio. A number of programmes targeting the public and schools were held such as exhibitions, observation tours and Company events. These initiatives are summarised in the table below.

#### Number of initiatives carried out by year

DESCRIPTION	2011	2012	2013
Special school programmes	17	-	-
Print advertisements	53	554	1,826
Radio and talks	2,930	3,268	5,243
TV advertisements and appearances	10	2,623	4,661
Local observation tours	52	40	65
Foreign observation tours	11	5	4
Exhibitions	33	27	12
Community events	13	27	56
Briefings and dialogues for public, schools and PLKN	83	15	16
Company events	-	12	14
Electronic advertisements	33,062	2,453,040	4,966,455

# **COMMUNITY**

#### Dialogue with the Local Community

Respecting the interests of the surrounding community is at the heart of business operations. Indah Water listens and responds to the concerns of community members, is honest in its expectations and fair in disclosing its performance. Engaging with society helps discover ways to reduce the Company's impacts, balance business efficiency with economic success while improving competition, profitability and sustainability. Concerns of the local community are summarised below. These concerns were taken seriously and the management will monitor the progress in addressing each issue.

#### **ISSUES RAISED**

#### Desludging service

3 3 ......

Price increase for pour flush desludging service in 2013

#### **OUR RESPONSE**

The majority of IST users are unaware of the desludging schedule in the Water Services Industrial Act 2008. There is a lack of awareness and enforcement by the regulators.

There has been no price increase for pour flush desludging for 17 years despite major operating cost increases especially electricity and fuel. Indah Water has no option other than to increase the pour flush desludging rate to remain sustainable.

#### **Educational Visits from UTM Students**

On 5 December 2013, 50 University Technology Malaysia (UTM) students and lecturers visited the STP in Skudai. The group was from the Faculty of Civil Engineering. The programme is an ongoing initiative to educate the public on how STPs work. The group was briefed on STP operations and aspects of environmental protection including methods of handling wastes, debris, oil and nondegradable wastes.

#### Giving Back to the Less Fortunate

On 13 December 2013, a community service programme by Kelab Indah Water (KIW) Unit Alor Setar was held in Rumah Anak Yatim dan Kaum Miskin, Baitul Ehsan, Kg. Perik, Kuala Nerang, Kedah. The programme was attended by the village head and staff of the home. The KIW committee and Indah Water representatives were also present.

Indah Water contributed an automatic washing machine, 20 bed sheets, two irons complete with ironing boards, linen, two rubber mats and a rice cooker. Employees donated garden chairs and cash.

The volunteers helped refurbish the house by laying rubber mats and changing bed sheets. Electrical equipment was inspected for safety.

# IWK welcomes UTM students at sewage plant

KULAI: Fifty Universiti Teknologi Malaysia (UTM) students and lecturers received a warm welcome from Indah Water Konsortium Bhd (IWK) Skudai at Taman Selesa, near

The group, who were from UTM's Faculty of Civil Engineering in Skudai, were on a half-day study programme to visit IWK's sewage treatment plants.

ment plants.
IWK Skudai unit operations manager Syed Mohd Yassin said the programme was an ongoing IWK initiative to educate the public on how its sewage treatment plants worked.

UTM event coordinator Normala Hashim said the university was participating in the programme to enable its students and lecturers to learn IWK's wastewater management methods.

"Upon arrival, we were briefed on the activities at the sewage treatment plant and the aspects of environmental protection," she said. "We learnt how the company han-

"We learnt how the company handled wastes, debris, oil and nondegradable wastes such as plastic packaging and bottles and dispos-



able diapers.

"All of these wastes, if not handled properly, can clog the sewer pipes and disrupt the wastewater treat-

"The group also learnt how everyone could play a role to preserve the environment, protect our water resources and safeguard public



#### Care for Victims of Fire

On 19 July 2013, a fire broke out at the home of an employee, Mr. Abdul Jalil Bin Othman, in Alor Setar at approximately 4.30 pm. The walls and roof of the upper house had been severely damaged by fire. The cost for repairs was estimated to be at least RM5,000. Indah Water initiated a fund-raising programme at its Alor Setar office and managed to collect RM769 to cover part of the home repairs.

#### **KEMBARA BUS INITIATIVES**

Kembara Indah Water Bus was unveiled on 1 June 2012 in conjunction with a desludging campaign in Kangar, Perlis. This exhibition bus has been introduced to create public awareness of Indah Water's services. This bus attends events, carnivals and school programmes across Peninsular Malaysia. The Kembara Bus contains:

- A mobile exhibition gallery that displays information on Indah Water's services.
- Payment and enquiries counters.

This initiative boosts Indah Water's corporate image as the sewerage services operator and encourages customers to pay their outstanding bills.





# COMMUNITY

#### Hari Mesra Pelanggan

A regular *Hari Mesra Pelanggan* is held to strengthen relationships between the Company and its customers. A total of 40 *Hari Mesra Pelanggan* were organised during 2012 and 2013. The main goal was disseminating information on Indah Water's activities by showcasing the Kembara and distributing pamphlets. Indah Water entertained its customers and tended to their concerns. The *Hari Mesra Pelanggan* hosted competitions, games, seminars, colouring competitions and various talks.

#### **Campaigning For Desludging Septic Tank Awareness**

Most Individual Septic Tank (IST) owners are unaware of the importance of septic tank desludging. They do not know that the septic tank is a temporary containment unit that does not fully treat the sewage. The IST must be desludged regularly in order to function properly. Desluding helps avoid a build-up of sludge solids in the tank or overflow of sewage. Otherwise the IST releases untreated sewage and sludge solids into the drain resulting in pollution of the waterways and possibly death of aquatic life.

Untreated sewage may pose a threat to public health if it contains pathogenic bacteria and viruses that cause deadly diseases such as cholera, typhoid and hepatitis. All ISTs must therefore be desludged regularly. A desludging campaign, which was initiated by KeTTHA and driven by Suruhanjaya Perkhidmatan Air Negara (SPAN), is jointly held with Indah Water. The desludging campaign's objectives are to:

- Create awareness of the importance of regularly desludging ISTs to prevent environmental pollution.
- Promote self-desludging to the public for their own benefit and preserve the rivers and oceans for future generations.
- Inform the public of the Company's services and functions in providing sewerage services.

Desludging activities have dropped significantly since the enforcement of Section 65 of the Water Services Industry Act, 2006 in 2008. Many IST maintenance concerns were reported in the country. Blocked or choked IST pipes can cause an overflow or backflow, which produce unpleasant odours. This usually alerts house owners of the need for desludging and keeping ISTs in proper working order. This desludging campaign demonstrates Indah Water's commitment to educating IST owners of the importance of desludging every two years.







In 2012 and 2013, five desludging campaigns were organised with SPAN:

- Desludging Campaign in Taman Kamunting Jaya, Taiping on 17 March 2012
- 2) Desludging Campaign & Launching of Kembara Bus in Kangar, Perlis on 1 June 2012
- Desludging Campaign in Taman Bukit Rambai, Melaka on 16 June 2012
- 4) Desludging Campaign in Yong Peng, Johor on 9 December 2012
- Desludging Campaign in Taman Wira, Simpang Renggam on 20 January 2013

#### PUBLIC POLICY DEVELOPMENT AND LOBBYING

Indah Water continues to assist the Government in areas of its expertise. Views and feedback are provided to safeguard and benefit the business either in industry working groups, public inquiries or public consultation papers.

It is a breach of company policy to make any political contributions. Indah Water works closely with the Ministry of Finance (MoF) to provide project updates, approvals and assistance.

Indah Water carries out Social Impact Assessment (SIA) studies for proposed new developments of centralised STPs. This process helps gather public feedback from residents and stakeholders that reside within 3 km of the proposed site. The SIA documents residents' and stakeholders' perceptions and concerns about the proposed new development. It suggests ways to improve projects and overcome potential adverse impacts and concerns. The SIA study focuses on group dialogues, questionnaire surveys and one-to-one unstructured interviews.

#### Anti-competition

Indah Water believes in competing fairly to ensure all parties benefit from fair, free and open markets. Competition does not apply to the national sewerage service provider. However, the Company provides a fair public service.

Indah Water also conducts open tenders for contracts valued at more than RM1 million. This ensures compliance with government policies for open competition and increases tenders' competitiveness. This approach also invites new companies that lack sewerage industry exposure to participate. Open tenders demonstrate Indah Water is an open organisation that welcomes participation by contractors and suppliers. It provides opportunities for companies to participate in the sewerage industry.

# **COMMUNITY**

# **COMMUNITY ENGAGEMENT**

#### **MAR 2012**

Desludging campaign in Taman Kamunting Jaya, Taiping





# **JUN 2012**

Karnival Kangar 2012 (Kempen Pengosongan Tangki Septik Individu)



# **JUN 2012**

Karnival Indah Alam at Taman Bukit Rambai, Melaka



Kembara Indah Water Event at Sekolah Menengah Kebangsaan Abd Rahman Talib, Kuantan



2012



## **SEP 2012**

Kembara Indah Water Event at Terminal 1 Shopping Centre, Seremban

# **OCT 2012**

Kembara Indah Water Event at Sekolah Menengah Datuk Sheikh Ahmad, Arau, Perlis





# **DEC 2012**

Program Indah Alam in Yong Peng, Johor



JAN 2013 Kempen Cegah Denggi at Plaza Tasek, Skudai



Program Indah Alam at Simpang Renggam, Johor





MAR 2013 Hari Mesra Pelanggan at Bandar Country Homes,



Sukan, Ipoh, Perak



2013

# **MAY 2013**

STP Open Day at Pangsapuri Kiambang, Seri Kembangan





JUNE 2013 STP Open Day at Jalan Tanjung Resang, Seksyen 30, Shah Alam

# **NOV 2013**

Rawang

Desludging Campaign at Bukit Rangin, Permatang Badak Baru, Pahang



SUSTAINABILITY
IN OUR
ENVIRONMENT

# GREENING THE ENVIRONMENT

Indah Water's primary responsibility is identifying, monitoring, reducing and reporting the environmental impacts from its activities. Environmental management remains a key priority for daily business operations. An Environmental Management System has been developed and implemented. This system identifies any required corrective action. It also allows current pratices to be modified for continuous improvement. A risk assessment framework helps Indah Water measure the features and impacts of its operations so that operational and management strategies can be developed to minimise any impacts.







#### **ENVIRONMENTAL POLICY FRAMEWORK**

Our company policy and working culture centre on the word "sewerage" - the business that we manage holistically for environmental excellence:



#### Sustainable Service

Indah Water is totally committed to providing total sewerage services sustainable in terms of social, environment and economic towards balances;



### **Environmental Friendly**

Indah Water provides services which are consistently carried out in an acceptable and environmental friendly manner;



#### **Wastewater Management**

Indah Water ensures all wastewater generated is managed in accordance with the regulatory requirements;



## **Engineering and Operational Excellence**

Indah Water practices good engineering and operational procedures to meet environmental goals;



#### R&D

Indah Water undertakes R&D and also promotes the transfer of environmentally sound technology and management methods throughout the sewerage services industry;



## Adopt Triple R - Reduce, Recycle and Reuse

Indah Water adopts waste management principles by formulating and enforcing strategies that includes reduce, recycle and reuse of treated water and sludge;



## Good liaison with Authorities and Customer Friendly

Indah Water continuously cooperates and works closely with authorities and enforcement agencies to provide support towards improving the environment in its quest to deliver customer friendly sewerage services;



#### **Engage in Community Education and Awareness**

Indah Water works closely with the community to disseminate environmental education and instil awareness and understanding of the importance of good sewerage service for the environment.

#### **OUR COMMITMENT TO THE ENVIRONMENT**

Indah Water is committed to delivering the highest quality services to meet all environmental regulations. It also contributes to environmental protection and sustainability. In general, sewage treatment produces two streams of waste: effluent discharged from Sewerage Treatment Plants (STPs) and sludge. The effluent discharge and solids from our STPs must not contaminate the environment. The performance of our STPs is bound by strict regulatory compliance with the:

- Water Services Industry Act 2006
- Environmental Quality Act 1974
- Environmental Quality (Scheduled Wastes) Regulations 2005
- Environmental Quality (Sewage) Regulations, 2009
- Environmental Quality (Clean Air) Regulations, 1978
- Factories and Machinery Act 1967 (Act 139) and its regulations
- Occupational Safety and Health Act 1994 (Act 154) and its regulations
- Environmental Quality (Scheduled Wastes) Regulations, 2005

#### **OUR ENVIRONMENTAL PERFORMANCE**

### **STP Effluent Sampling and Compliance**

Indah Water adheres to the Environmental Quality (Sewage) Regulations 2009 (EQ(S)R 2009) and uses them as guidelines for monitoring treated sewerage effluent discharge. The STPs are monitored regularly and the compliance status is reported to the Department of Environment (DOE) and Suruhanjaya Perkhidmatan Air Negara (SPAN). Compliance data over the past three years is presented below.

	2011	2012	2013
Total No. of STPs	5,747	5,879	5,995
% Complied with the Standards	94.3%	94.4%	94.2%

Note: The above data excludes privately maintained plants.

132 plants were taken over in 2012 and 116 in 2013. The percentage of plants complying with the EQ(S)R 2009 standard reduced by 0.42% from 94.4% in 2012 to 94.2% in 2013.



Challenges faced in 2012 and 2013 included:

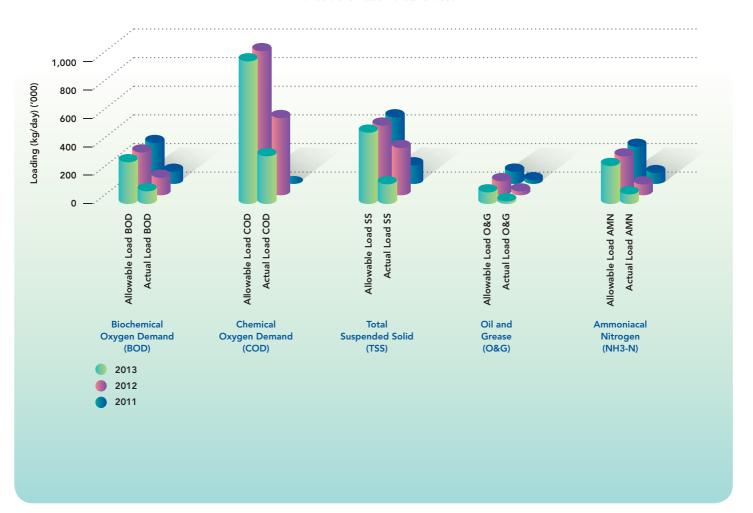
- i. Plants' non-compliance due to structural issues and defective process equipment installed by developers before handover or forced takeovers.
- ii. Plants were highly susceptible to theft and vandalism due to the high scrap value of equipment and materials.
- iii. Plants' non-compliance with effluent standards due to illegally discharging chemicals, industrial waste, fats, oil and grease into sewerage systems.
- iv. Lack of sufficient investment to build large Regional STPs by the Government resulted in the proliferations of small plants for new developments.
- v. Non-compliance with Malaysia Sewerage Industry Guidelines due to:
  - Site constraints
  - Phased development
  - Catchment strategy
- vi. Provision of excess treatment facilities due to:
  - Provision for future capacity
  - Lack of sewerage capital provision
  - Slow phased development
- vii. Abandoned private STPs affected customers with odours, backflow and overflow problems. This could attract adverse publicity by mass media that implicates Indah Water. Some politicians take advantage of these situations for political gain.

#### Sewage Pollutant Loads in Discharged Effluent

Sewage effluent is treated before being discharged into the waterways. The Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solid (TSS), Oil and Grease (O&G) and Ammonical Nitrogen (NH3-N) from discharged effluent must be below the allowable load. This is calculated from the concentration limit of parameters stipulated in the EQ(S)R 2009. The pollutant load refers to the weight of the pollutant released into the waterways. The natural aquatic ecosystem is harmed if the sewerage pollutant load is high and exceeds the self-purifying capability of the river. It is important to reduce the sewerage pollutant loads and contaminants in the waterways.

The overall actual load of BOD, COD, TSS, O&G and NH3-N from treated discharge over the years was below the allowable loads. This indicates that the plants treat sewerage effluent effectively.

#### Allowable and Actual Pollutant Loads



#### EFFECT OF POLLUTION LOAD PARAMETER ON THE ENVIRONMENT

**BOD.** Oxygen consumed in decomposition removes oxygen that other aquatic organisms need to live. High BOD reduces the overall dissolved oxygen level in water. This causes chronic suppression of the habitat and death of fish and other aquatic life.

**TSS.** An increase in stream water turbidity can decrease photosynthesis or growth rates of submerged plants. It can also reduce the dissolved oxygen levels in the water. Fishes' gills are damaged by abrasion and clogging, which reduces fish populations.

**O&G.** An accumulation of O&G prevents the transfer of oxygen and carbon dioxide at the water's surface. This leads to reduced dissolved oxygen levels in the water. It is also toxic for fish and invertebrates, tainting fish flesh and creating a barrier for fish to move.

**NH3-N.** This toxic pollutant directly poisons humans and upsets the equilibrium of water systems. Its toxicity is increased in alkaline conditions and will endanger aquatic animals, particularly fish and invertebrates.

## SLUDGE MANAGEMENT AND ITS ENVIRONMENTAL IMPACT

Effective and efficient sludge management contributes to an environmentally cleaner and safer Malaysia for future generations. The majority of STPs have their own sludge treatment and dewatering facilities. Sludge collected from septic tanks, private plants and pour flush through demand and responsive services undergo a dewatering process at dedicated sludge treatment facilities. Dewatering reduces the amount of sludge, which lessens the environmental impact. Sludge disposal may contaminate groundwater and surface water, create odours and impair aesthetics.

Dewatered sludge or biosolids generated from sewage treatment processes can be either reused or recycled as fertiliser for landscaping. Otherwise, it must be disposed of at Indah Water's dedicated sludge disposal site or other approved municipal sites. An EA study assesses the suitability of Indah Water's dedicated sludge disposal sites. The EA report must be submitted to DOE for approval. EA approval conditions include monitoring ground and surface water quality from the beginning of disposal.

Indah Water monitors any pollution from sludge disposal at the sites. It submits periodic ground and surface water quality monitoring data to the DOE. A baseline study was conducted on the groundwater at the disposal site prior to operations. These readings are compared against the Recommended Drinking Raw Water Criteria by the Ministry of Health (MOH; 1995) and National Guidelines for Raw Drinking Water Quality (MOH; 2000). These standards are used to gauge any groundwater pollution from the sludge disposal activities. The quality of the river water at selected sites is also monitored and compared with the National Water Quality Standards for Malaysia. All other DOE's approval conditions are observed which may also affect the public, communities and other stakeholders economically and socially. Company sludge disposal activities follow recommendations in the Interim Biosolids Utilisation and Application Guidelines by JPP.

Indah Water utilises seven types of sludge treatment and disposal facilities. The amount of sludge generated by sewage treatment has increased significantly over the years. In 2013, Indah Water collected 327,479 m³ of sludge, which is equivalent to 131 Olympic sized swimming pools. Sludge management in Malaysia has evolved from having no proper non-mechanical and mechanical sludge handling facilities to centralised sludge treatment facilities. Options to reuse treated sludge as soil conditioner and fertiliser for non-food crops are being examined.

#### **ENVIRONMENTAL MANAGEMENT SYSTEMS**

An Environmental Management System (EMS) is a set of management processes and a procedure. The EMS allows an organisation to analyse, control and reduce the environmental impact of its activities, products and services, and operate with greater efficiency and control. The purpose of ISO 14001 is to develop a systematic management approach to environmental concerns for continual environmental management.

Indah Water attained the ISO 14001:2004 certification on 22 March 2013. The current scope of the EMS certification covers the Operation & Maintenance Department at HQ and Kuala Lumpur Operation Unit (Network Services, Desludging Services and two selected STPs). The key EMS scopes for Operation & Maintenance (O&M) Unit Offices are as follows:

SECTION	KEY TASK & RESPONSIBILITIES		TYPE OF SERVICES	
		PUBLIC	PRIVATE	
Treatment	This section oversees the O&M of STPs, Network Pumping Station (NPS)s and sludge treatment facilities within the jurisdiction area of the UO. Inspection, checking, corrective and preventive maintenance ensure the STPs, sludge treatment facilities and NPSs are operating as intended, and meet the design and regulatory requirements.	O&M of public STPs & sludge treatment facilities.	N/A	
Network	This section oversees the maintenance of sewer pipelines within the jurisdiction area of the UO. Its tasks include inspection, checking, corrective and preventive maintenance of sewer pipelines. Uninterrupted sewerage flows with minimum sewer overflows are desired.	Public sewer line blockage, clearance, clearing and flushing.	Private sewer pipeline blockage clearance	
Desludging	This section is responsible for removing sludge from the septic tank and STPs. Duties include desludging operation, survey works as well as record and data management.	Desludging of sewage treatment facilities and maintenance of sludge disposal sites.	Desludging of septic tanks and pour flush	

Various personnel have been involved in the implementation of the EMS:

- UO Unit Manager appointed as the Environmental Management Representative.
- EMS committee: Unit Manager selects employees to become EMS committee members with various duties and responsibilities.
- Internal Consultant: UO Committee Member, Environmental Management Unit (EMU, KLHQ) and Quality System Unit (QSU, KLHQ).

The EMS addresses environmental compliance, performance and other established environmental objectives such as preventing environmental pollution and protecting public health. These obvious benefits led to three more UOs being selected for EMS implementation. Skudai, Penang and Gombak UOs were selected for an estimated duration of 12 months. The proposed progress flow chart below summarises the steps for EMS implementation in these UOs.

#### **PROPOSAL**

Submitted to management in July 2013

#### **ROLL OUT TO SELECTED UOS**

Endorsed on 2 August 2013 and forwarded to the selected UOs

#### ESTABLISHMENT AND APPOINTMENT OF EMS COMMITTEE

Established on 3 September 2013 (Gombak UO), 13 September 2013 (Skudai UO) and 17 September 2013 (Penang UO)

#### **AWARENESS TRAINING**

On 17 to 18 September 2013 (Gombak UO), 26 to 27 September 2013 (Skudai UO) and 3 to 4 October 2013 (Penang UO)

#### **GAP ANALYSIS**

On 11 September 2013 (Gombak UO), 26 September 2013 (Skudai UO) and 2 October 2013 (Penang UO)

#### LIVE RUN AND PROMOTION

On 25 November 2013 (Gombak UO), 17 October 2013 (Skudai UO) and 20 December 2013 (Penang UO)

#### MANUALS AND PROCEDURES BRIEFING/TRAINING

### **EMS IMPLEMENTATION**

**INTERNAL AUDIT** 

MANAGEMENT REVIEW

## OUR APPROACH TO CLIMATE CHANGE AND GLOBAL WARMING

Many global issues are climate related according to the US Environmental Protection Agency (USEPA). Basic needs such as food, water, health and shelter are affected by increased temperatures, sea level rises, changes in rainfall patterns and increasingly frequent or intense climatic events. Climate change can increase or decrease rainfall, affect agricultural crop yields, worsen human health, cause changes to forests and other ecosystems, or even impact energy supplies.

Climate change is already affecting Malaysia, which experiences intense rainfall. In 2010, 89 STPs were flooded in the northern region, Kuala Lumpur, Selangor and Labuan. Similar events occurred in Kedah in 2012. In 2013, heavy floods affected residents and Indah Water in Kelantan, Terengganu and Pahang; 50 STPs were affected. In 2013, RM600,800 was spent repairing damaged equipment and facilities, and cleaning spilled sewage. STP flooding is serious and not only damages equipment, but may seriously affect the public health of nearby residents. These residents, already contending with property damage, face sewage contaminated floodwater.

The United Nations Framework Convention on Climate Change (UNFCCC) released a report entitled 'Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries'. This report predicts that billions of people, particularly those in developing countries, will face shortages of water and food, and greater risks to their health. Concerted global action is needed to help developing countries adapt to the current and future effects of climate change.

The human race must adapt to the impact of climate change in order to survive. According to the report, adaptation ensures societies are better able to cope with an uncertain future. The right measures, adjustments and changes must be taken to reduce the negative effects of climate change and exploit the positive ones. Technological changes include increased sea defences or flood-proof houses on stilts and individual behavioural changes to reduce water use. Other strategies include early warning systems for extreme events, better water and risk management, various insurance options and biodiversity conservation.

In Malaysia, the Regulator has already specified that STPs should not be constructed in flood plain areas. Building plan submissions to LAs must also be in compliance with the various NPS/STP design guidelines.

Indah Water also installs early warning systems at its NPSs and STPs. The operator is notified of any malfunction, power failure or high levels of incoming flow at STPs. 2,790 electronic security systems and early warning systems have been fitted to NPSs and STPs nationwide.

## **Carbon Footprint Study**

Universiti Teknologi Malaysia (UiTM) conducted an eightmonth study, "Consultancy Services for Developing Inventory on Greenhouse Gases (GHG) for Indah Water Activities", from 22 November 2012 to 21 July 2013. The objectives of the study were to:

- 1) Identify all Indah Water activities that generate GHG from:
  - Sewage collection and conveyance
  - Sewage treatment processes
  - Sludge treatment and disposal sites
  - Septic tanks and desludging services
  - Administration
- 2) Create a spreadsheet using the most accurate emission factors for calculating GHG (CO<sub>2</sub> equivalent) generated from identified sources within Indah Water;
- Conduct a detailed study for selected Individual Septic Tanks (IST), Communal Septic Tanks (CST), STPs and dedicated sludge treatment and disposal sites;
- 4) Provide recommendations to improve GHG emission calculations using available emission factors;
- 5) Devise mitigation strategy for a carbon reduction and adaptation strategy for climate change impacts as part of recommendations and a conclusion.



## Findings and proposed mitigation strategy for carbon footprint reduction

The main contributors to GHG emissions are STPs and electricity consumption, which account for approximately 51% and 45% respectively. Scrubbing the emitted gas from the treatment processes for use as renewable energy will help reduce GHG emissions and dependency on power. Scrubbing effectively reduces GHG emissions although the exact amount depends on the collection rate efficiency.

Electricity used to operate STPs and company offices also generates a significant carbon footprint. The use of renewable energy such as solar or wind can reduce GHG emissions. Hydraulic structures such as weirs and spillway that agitate and naturally aerate can be used in STPs. Although this approach saves energy with favourable technology, adoption must consider a gravity-flow conveyance system with high efficiency and a low carbon footprint.

Other recommended strategies for improving energy efficiency relate to the design of the plants and integral energy management. Energy efficiency from plant design can be improved by:

- Reducing wastewater flows.
- Selecting energy-efficient equipment.
- Using correctly sized drives and motors in the detailed design of the plants.
- Installing a control system that matches supply and demand.
- Laying good thermal insulation if heat energy is supplied externally.

Efficiency from integral energy management can be achieved using:

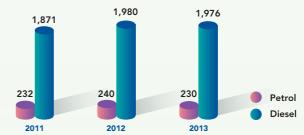
- Entire digester gas to generate power.
- Surplus anaerobic digester capacity to generate additional gas from imported organic waste.
- Heat efficiently by recovering it from processes or wastewater effluent.
- On-site sludge drying and incineration with energy recovery and reuse.
- Renewable energy such as wastewater, heat, wind or solar energy.

### **Our Carbon Footprint**

Fuel consumption is calculated from purchases made for desludging tankers, company vehicles and the personal vehicles of Heads of Department for all operations in Malaysia. The emissions are calculated based on 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories Vol. 2 Energy Guidelines with the emission factor of 0.0741 MT  $\rm CO_2/GJ$  for diesel vehicles and 0.0693 MT  $\rm CO_2/GJ$  for petrol vehicles.

Diesel consumption increased by 5.83% in 2012 compared to 2011. It then dropped slightly by 0.20% in 2013. There was an increase of 3.45% in petrol consumption in 2012. In 2013, 4.17% less petrol was consumed compared to the previous year due to fewer vehicles using this fuel type.

#### Annual Fuel Consumption ('000 Litres)



Annual CO, Emission (Metric Tonne)



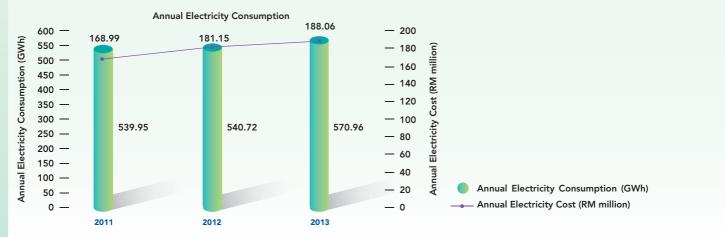


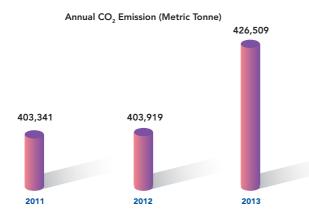
#### **Direct and Indirect Fuel Consumption**

YEAR	PETROL (LITRE)			DIESEL (LITRE)		
	DIRECT	INDIRECT	TOTAL	DIRECT	INDIRECT	TOTAL
2011	107,439.00	124,334.00	231,773.00	1,871,063.00	0	1,871,063.00
2012	102,123.70	137,910.43	240,034.13	1,979,792.42	0	1,979,792.42
2013	85,602.65	144,128.48	229,731.13	1,975,636.46	0	1,975,636.46

<sup>\*</sup> Indirect refers to Heads of Department fuel consumption based on petrol cards.

## **Electricity Consumption and Cost**





The Malaysian Green Technology Corporation CDM Electricity Baseline emissions factor for Peninsular Malaysia in 2011 is 0.747 MT CO<sub>2</sub>/MWh. Over 70% of public STPs are mechanical treatment systems, which consume large amounts of energy. Energy conservation efforts have been ongoing since 2007 and electricity consumption has remained stable over the past three years. The 5.59% increase in electricity consumed in 2013 compared to 2012 was due to an increased number of plants taken over and the upgrading of non-mechanised to mechanised plants during the year.

#### **ENERGY MANAGEMENT**

Indah Water started to plan an Energy Management System (EnMS) in November 2012. The Malaysian Green Technology Corporation (MGTC) was appointed as the consultant to guide in the EnMS Manual and Procedures development.

It is hoped that the EnMS will help build structural capacity to address energy-saving compliance, reduce costs and achieve other established energy objectives. These include reducing the energy consumption by 5% for our selected 15 Regional STPs and educating employees on energy-saving practices.

The EnMS Manual and Procedures were finalised and implemented on 1 August 2013 at HQ and Kuala Sawah Regional STP. The first internal audit was held in October 2013 followed by an external audit in November 2013. On 20 December 2013, both the sites, Indah Water HQ and Kuala Sawah Regional STP were certified with ISO 50001 by SIRIM QAS Sdn. Bhd. By the end of 2013, the 15 selected Regional STPs achieved 7% energy savings, above the target of 5%.

#### Water Consumption for STPs

WATER	2011	2012	2013
Water Consumption Volume (m³)	827,093	1,003,455	1,090,423
Water Consumption Cost (RM'000)	2,157.63	2,468.09	2,683.77

The table above shows an increasing water consumption from 2011 to 2013. This was mainly was due to more plants being taken over and sewer line cleaning work. A loss of water was also due to theft and leakage. Preventative action is taken to prevent future reoccurrence. Indah Water always tries to maximise the use of treated effluent to conserve water as shown below.

#### Sewage Treatment By-Products - A Valuable Commodity

Indah Water has begun reusing sewage by-products at some of its larger plants to conserve water, energy and the environment. This occurs mainly at regional plants with a PE of over 100,000. These plants can polish bioeffluent using filter media. Approximately 10% of bioeffluent is recycled for internal housekeeping or non-potable use such landscape watering and cleaning the plant compound, plant equipment and vehicles. The treated effluent is also recycled as make up water for polymer preparation and clearing blockages. It is used as water filling or refilling into the jettors or sewer cleaning vehicles for sewer cleaning maintenance work.

The biosolid is reused as landscaping fertiliser at some of our plants. Biogas is combusted to generate electricity for internal consumption at Jelutong STP in Pulau Pinang. Currently, this plant produces an average of 800 m³ of biogas each day. A 170kW gas engine has been installed to generate electricity from the released biogas. This engine powers lighting within the plant compound, an odour control system and a lift in the digester equipment building. This plant also reuses treated effluent for cleaning the plant area and landscaping.

#### **Biodiversity Conservation**

A proper sewerage system protects our rivers from pollution from faeces, faecal coliform, high BOD and ammoniacal nitrogen. STPs eliminate diverse sources of pollutants and wastewater to the required standard. The STPs also helps conserve the biodiversity of our watercourse and rivers.

There is a growing world population, unrelenting urbanisation, increasing scarcity of good quality water resources and rising fertiliser prices. These factors are driving forces behind the accelerating increased use of wastewater, excreta and greywater for agriculture and aquaculture.

With the presence of nutrients and required oxygen, the biodiversity of the natural habitat and fish populations are stable. In several parts of receiving water bodies, fish of various sizes have been observed in the effluent discharge area within the receiving water bodies.



#### **ENVIRONMENTAL CONSERVATION PROGRAMMES**

Employees from the Kuala Lumpur UO participated in the Anti-Littering Campaign Bukit Bintang 2013 programme. This auspicious event was organised by Dewan Bandaraya Kuala Lumpur on 2 March 2013. It was launched by YB Datuk Seri Hj. Ahmad Phesal B. Hj. Talib, Mayor of Kuala Lumpur. Indah Water participated to uphold its good name in social work. Rapport was also strengthened with LAs, agencies, associations and individuals.

## MOVING FORWARD

Indah Water will continue developing and growing to serve the nation in a structured manner. Its business agenda is maintaining momentum and formulating future strategies to further enhance our sustainability as follows:

#### **EFFICIENCY AND EFFECTIVENESS IN OPERATIONS**

#### (i) ISO 9001:2008 - Quality Management System

Indah Water aims to improve its customer orientation and satisfaction levels. It hopes to establish a solid foundation for ongoing development through a continuous improvement process. Currently, Indah Water has obtained four ISO 9001:2008 certifications for its Certification Services, Project Management Consultation Services, Bandar Tun Razak STP and Bandar Baru STP. The O&M Department targets ISO 9001:2008 certification in 2014.

#### (ii) Asset Management Plan

Indah Water established a line of sight between the Company's goals and its resources and budget needs. The development of the Asset Management Plans (AMP) was one of the greatest achievements in 2013. In 2014, AMP will be enhanced by:

- Improving the budget request through AMP justification.
- Following through until the implementation of the AMP related projects.
- Monitoring the effectiveness of asset performance, reducing costs and mitigating risks.

The Asset Risk Management Framework will also be reviewed by a peer review panel to improve the Company's asset-related risk management approach.

#### (iii) Enterprise Resource Planning (ERP)

Indah Water has decided to implement SAP, a world renowned leader in the era of ERP. This new system addresses current stand-alone systems and integrates the different corporate and functional groups in the organisation.

The SAP will be implemented in four phases. Phase 1 will go live in September 2014; phases 2 and 3 are scheduled to go live in November 2014 and January 2015 respectively. Subsequently, Phase 4 will be finalised by July 2015.

A budget of RM25 million has been allocated for the project. Phase 1 is concerned with plant maintenance, financial control, funds management, materials management and human resources management. The second phase consists of Activity Based Costing and Linear Asset Management.

#### (iv) Centralised Monitoring System (CMS)

The CMS is an initiative to provide online information from the early warning systems that are installed at the STPs throughout the country. The early warning system will transmit all system alerts such as power trips and equipment failure to the Geographic Information System at the HQ. This information will be displayed graphically indicating the health of the STPs at any point in time. The system will capture the time of the alerts and colour-code them for easy reference. The pilot system is currently undergoing trials with various early warning systems.





#### (v) Energy Management

The ISO 50001:2011 certification for Indah Water's EnMS at HQ and Kuala Sawah Regional STP was successful. It achieved 7% energy savings for 15 selective Regional STPs applying the EnMS in 2013. This success encourages Indah Water to extend its methodology to an additional 14 Regional STPs in 2014.

### (vi) Information Security Management System (ISMS)

Indah Water's objective is managing information security according to the requirements of the ISO/IEC 27001:2007. Overall security assurance will be achieved by preserving confidentiality, integrity and availability. The ISMS covers three key areas of the application system: O&M; planning and certification; and billing and customer relationships. Concentrating on these areas ensures sewerage services are properly managed to preserve the country's waste resources for a cleaner and safer environment. In 2013, all ISMS manuals, policies and procedures have been established for ISO certification. The Stage 1 audit was conducted in December 2013 and Stage 2 is scheduled for early 2014. Indah Water looks forward to being certified with ISO/IEC 27001:2007 in ISMS in the first quarter of 2014.

#### (vii) Upgrading plants to meet EQ(S)R 2009 standard

The capital programme is the Government's responsibility. Moreover, Indah Water lacks the financial resources to carry out the capital programme. The Company is engaging the Government to secure funds for sewerage infrastructure from Rancangan Malaysia and the Government's annual budget. Besides new infrastructure, this resource can be used for refurbishing and upgrading existing plants and networks. As some plants are in imminent danger of endangering public safety, Indah Water has budgeted RM49 million to address this immediate risk in 2014. This budget will fund the construction of brick perimeter walls, pond distilling, slope improvements, rectification of structural problems, grounds and access to the plants and also sewer replacements.

Indah Water is also sourcing funds to install a detoxification facility at selected plants that will increase the effluent quality to "A" standard as required by the DOE.

## MOVING FORWARD

#### **EDUCATING THE PUBLIC AND FUTURE GENERATION**

Indah Water is a non-profit service provider with a limited budget for awareness campaigns. However, the Company cannot afford to neglect continuous awareness campaigns that remind the public of its unseen services and encourage payment. Communication messages emphasise our role of ensuring a conducive environment and good public health. Indah Water continues to approach government agencies to jointly create awareness of the importance of a good sewerage system. Many do not realise the impact of releasing untreated wastewater into the waterways. Indah Water will continue to educate the future generations by introducing the topic of wastewater in their studies. Indah Water has published several junior books on wastewater and hopes to continue shaping the minds of the nation's future leaders.

#### LESSONS LEARNED REPOSITORY

An electronic documentation system is being developed to share knowledge within the Company. This system is scheduled to be launched in the second quarter of 2014. It will encourage employees to share information within and across departments to improve the workforce's knowledge.

#### **MODEL STP**

In line with the Government Transformation Programme (GTP) and attracting more Foreign Direct Investment into Malaysia, Indah Water proposed a standardisation concept for new STPs called Model STP.

Model STP defines the ideal future design parameters, processes, equipment, features and other relevant requirements for the construction of STPs. Standardising STPs raises their quality for operations and maintenance (O&M) efficiency to consistently comply with effluent, noise, odour and H&S. In addition, standardising STPs can set an industrial benchmark in design, construction, project management, material and selection.

This standardisation initiative will focus on STPs that will be handed over to Indah Water for O&M. The standardisation of STPs up to 5,000 PE has already begun.





The benefits of standard STPs:

- Standardised plants and systems are easier to service, operate and maintain.
- Fewer types of inventory or equipment can be stocked, which lead to cost savings.
- Bulk orders of selected fast-moving items can be made without financial shocks.
- Equipment parts and machineries can be interchangeable with other STPs of similar size without deep cost implications.
- Specialised skill sets are possible, which lead to improved efficiency, productivity and standards.
- Reduced operator training places less strain on financial resources.



#### **GREEN RESOURCE CENTRE**

The sewerage industry and STPs are considered pioneers and early adopters of green technology. They contribute to sustainable development and holistic environmental management. This is part of the future goal of transforming STPs into a Green Resource Centre. Green technology and resource recovery will be integrated into the STPs' operations. STPs will move from a utility based model to one centred on green resources. STPs will play a crucial role in supplying raw materials, energy and resources to key industries and communities whilst providing essential public services.

## RESTRUCTURING OF THE SEWERAGE INDUSTRY FOR A SUSTAINABLE FUTURE

It is envisaged that the sewerage industry will be restructured in accordance with the Water Services Industry Act, 2006. The restructuring plan is dependent on the Government. It encompasses forming a sewerage facilities licensee and reviewing the sewerage services tariff for the industry's long-term sustainability. The restructuring may take years.

In the meantime, Indah Water has proposed to SPAN and KeTTHA a tariff revision that would enable it to operate at a financial break-even level. Additionally, the concept of joint sewerage and water billing with water operators has been mooted to SPAN to enable smooth migration to an integrated and holistic management of water and sewerage services to safeguard the environment.

#### **OUR PLEDGE**

As Malaysia's national sewerage company, we are responsible for developing and maintaining a modern and efficient sewerage system for all Malaysians. Our hard work and dedication will not bear fruit if the public continues to take restroom facilities for granted. Only by working together can we continue to improve sewage treatment standards and water quality. We proactively take measures to ensure sewerage-related issues do not arise. Our role is to provide an excellent service that is measured by our customers' satisfaction.

We pledge to provide current and future generations with a clean and healthy environment through a dependable long term sewerage system. Our operational efficiency is being improved to minimise reliance on the world's natural resources. Our continuous pursuit of ways to transform each and every by-product into value-added resources will benefit society as a whole.



#### SIRIM QAS INTERNATIONAL SDN. BHD. (410334-X)

SIRIM Complex,
1, Persiaran Dato' Menteri, Section 2,
40911 Shah Alam, Selangor Darul Ehsan.
Tel: 603-5544 6400 Fax: 603-5544 6810
www.sirim-qas.com.my



## INDEPENDENT ASSURANCE STATEMENT

#### Scope and Objective

SIRIM QAS International Sdn. Bhd., a third party Conformity Assessment Body in Malaysia, with extensive expertise and experience in the provision of sustainability-related assurance services, was engaged by Indah Water Konsortium Sdn. Bhd. (hereafter referred to as IWK) to perform an independent verification of its 2012 - 2013 Sustainability Report. The main objective of the verification process was to provide IWK and its stakeholders with an independent opinion of the accuracy of the information presented in the report. This was confirmed through checking and verifying claims made in the report. The verification audit by SIRIM QAS International covered all sustainability-related activities which had been included in the IWK Sustainability Report 2012 - 2013.

The management of IWK is responsible for the preparation of the Sustainability Report. The objectivity and impartiality of this verification statement is assured as no member of the verification team and no other employee of SIRIM QAS International was involved in the preparation of any part of the IWK Sustainability Report 2012 - 2013.

#### Verification team:

The verification team from SIRIM QAS International consisted of:

- 1) Ms. Aminah Ang
- Team Leader
- 2) Mr. Hafriazhar Mohd Mokhtar
- Team member
- 3) Mr. Shaiful Azmir Abdul Rahman
- Team member

#### Methodology

The verification process was carried out by SIRIM QAS International in April and May 2013. It involved the following activities:

 Reviewing and verifying the accuracy of data collected from various sources and that are presented in the report;



AS ISO/IEC 17021: 2006 GS 02121999 GS 01 48 ISO/IEC 17021: 2006 EMS 17122002 GS 03 48 ISO/IEC 01001E 65 - 2009 FC 05400004 GS 01 48 ISO/IEC 17021: 2006 OSH 06122005 GS 01 48 ISO/IEC 17021: 2006 HACCP 05052006 GS 03 50/IES 22003: 2007 FSMS 23122006 GS 03 50/IES 22003: 2007 FSMS 23122006 GS 01













- Reviewing of internal and external documentation and displays such as awards, reports, media publications, internal bulletins, etc.;
- Interviewing of key personnel responsible for collating information and writing various parts of the report in order to substantiate the veracity of the claims;
- Evaluating the adequacy of the Sustainability Report of IWK and its overall presentation against the GRI G3.1 requirements.

During the verification process, issues were raised and clarifications were sought from the management of IWK relating to the accuracy of some of the data and statements contained in the report. The report was reviewed and revised by IWK as a result of the findings of the verification team. It can be confirmed that changes have been incorporated into the final version of the report to satisfactorily address the issues raised.

The verification process was subject to the following limitations:

- Only the corporate office was visited as part of this assurance engagement. The verification process did not include physical inspections of any of IWK's operating assets; and
- · Contractor and third party data were not reviewed.

#### Conclusion

Based on the scope of the verification process, the following represents SIRIM QAS International's opinion:

- The level of accuracy of data included in the Indah Water Konsortium Sdn. Bhd.
   Sustainability Report 2012 2013 is fair and acceptable;
- The Sustainability Report is in accordance with the A+ Application Level of the GRI G3.1 Sustainability Reporting Framework;
- · The information has been presented in an appropriate manner;
- The personnel responsible were able to reliably demonstrate the origin(s) and interpretation of data contained in the report;
- IWK has satisfactorily addressed, in the final version of the report, all issues that had been raised during the verification audit;
- The report provides a reasonable and balanced presentation of the sustainability performance of IWK.

Prepared by:

AMINAH ANG

Verification Team Leader Sustainability Certification Section Management System Certification Department SIRIM QAS International Sdn. Bhd.

Date: 16 May 2014

Approved by:

PARAMA ISWARA SUBRAMANIAM

Senior General Manager Management System Certification Department

SIRIM QAS International Sdn. Bhd. Date: 16 May 2014

# **YOUR PAYMENTS ARE CRUCIAL**

THANK YOU... for doing the right thing





It is vital that we all help care for the facilities and services that we use every day. Your sewerage charges are your compulsory contribution towards the efficient management and operation of public sewerage pipelines, networks and sewage treatment plants across the country. Ultimately you are paying for the protection of our environment and public health. IT IS FOR ALL OF US. Thank you for playing your part responsibly.

Please help us to serve you better. You can reach us through:

Customer Service Centre: 03-2083 2828 • Fax: 03-2095 6002 Email: care@iwk.com.my • Website: www.iwk.com.my SMS 36399 (Type IWK<space>Message)



Your National Sewerage Company Indah Water Konsortium Sdn Bhd

> Owned by Minister of Finance Incorporated

The 2012-2013 Sustainability Report Committee would like to express our heartiest appreciation to all our colleagues who have contributed in providing the data and information for the successful publication of this report. We also would like to thank our management for their invaluable comments and feedback to this report.

#### THE 2012-2013 SUSTAINABILITY REPORT COMMITTEE:

i. May Lim Corporate Planning Department

ii. Azhan Mohd Lazim Human Capital & Administration Department

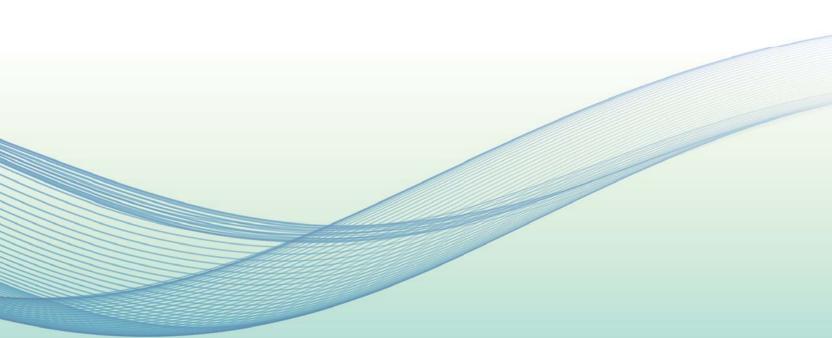
iii. **Aznan Abdul Aziz** Project Management Department iv. **Azurah Azahar** Communications Department

v. **Gan Chee Choy** Capital Works Department

vi. **Kamila Abu Bakar** Finance Department

viii.Nazatul Adawiyah Abdul JamalCorporate Planning Departmentviii.Ruhaidah Md HassanPlanning & Engineering Departmentix.Sasidharan VelayuthamOperation & Maintenance Department

x. **Wong Mew Ling** Corporate Planning Department





## INDAH WATER KONSORTIUM SDN. BHD. (211763-P)

No. 44, Jalan Dungun, Damansara Heights, 50490 Kuala Lumpur

T +603 2780 1100 F +603 2780 1101