

أدنوك
ADNOC



شركة بترول أبوظبي الوطنية



STRENGTHENING OUR ENERGY PRESENCE

Abu Dhabi National Oil Company (ADNOC)
Sustainability Report 2012



H.H. Sheikh Khalifa bin
Zayed Al Nahyan
President of the United Arab Emirates



Late Sheikh Zayed bin
Sultan Al Nahyan
(May Almighty Allah rest his soul in peace)
Founder of the United Arab Emirates



H.H. Sheikh Mohammed bin
Zayed Al Nahyan
Crown Prince of Abu Dhabi and
Deputy Supreme Commander
of the UAE Armed Forces

“The Emirate of Abu Dhabi will continue to work towards its own comprehensive, multifaceted vision. That vision is to continue to create a confident, secure society and to build a sustainable, open and globally competitive economy.”

H.H. Sheikh Khalifa bin Zayed Al Nahyan

ABOUT THIS REPORT

Welcome to ADNOC's fourth annual Sustainability Report, covering ADNOC's performance and achievements for the 2012 calendar year.

Process for defining report content

Our journey towards sustainability reporting began in 1997 when we committed to transparently report on our health, safety and environment (HSE) performance in annual HSE reports. In 2009, we expanded the scope of our reporting to encompass the Global Reporting Initiative Generation 3 (GRI G3) Sustainability Reporting Guidelines, and replaced our HSE reports with the first of our annual sustainability reports to disclose our 2009 performance.

In preparation for this 2012 Sustainability Report, we further expanded the scope to encompass the GRI Generation 3.1 Oil and Gas Sector Supplement (GRI G3.1 OGSS) Sustainability Reporting Guidelines.

Materiality

We believe the report covers the major issues that reflect the Group's significant economic, environmental and social impacts, as well as the issues that would substantively influence the assessments and decisions made by our stakeholders.

Stakeholder Inclusiveness

We have identified and considered the key stakeholders, and we have outlined in the report how the company engages them, identifies their priorities, and responds.

Sustainability Context

We have considered global trends in sustainability for the oil and gas sector, and have also taken into account the regional and local contexts of our operations.

Completeness and Boundaries of this Report

The report pertains to ADNOC's 2012 performance, covering our operations in the United Arab Emirates and elsewhere where specified. Where limitations have been identified in the scope of our data, it has been stated in the report. The following should also be noted:

- ADNOC Group Companies: Performance has been captured in all sections of this report.
- Independent Operators: Performance has been captured in the Environmental Performance (in full), Health and Safety Performance (in full) and Social Performance (in part) sections of this report. The term "ADNOC Companies" has been used where the Independent Operators' performance has been included with that of the ADNOC Group Companies.
- Civil Projects Division (CPD): Performance has been

captured in the Health and Safety section of this report only.

- The Petroleum Institute (PI): Performance has been captured in all sections of this report, unless otherwise stated. PI is excluded from reporting on certain metrics under ADNOC's sustainability reporting guidelines.

Reporting Cycle

We will report on our sustainability progress annually.

Ensuring quality in our sustainability reporting

We recognise that ensuring the quality and credibility of the information presented in this report is of strong importance and we have therefore used the GRI "principles for defining quality".

Balance

The report seeks to demonstrate transparency, presenting achievements while also highlighting the areas in which ADNOC believes there is an opportunity to improve.

Comparability

Where possible, we have provided 5-year trend data (2008 – 2012), and in some cases earlier years. The reporting on some of the environmental parameters is provided for the reporting year (2012) only, due to the implementation of revised data collection protocols for which normalisation of previous year trend data in accordance with the revised protocols could not be performed accurately.

Accuracy and Reliability

ADNOC is making year-on-year improvements in ensuring the accuracy and reliability of the data we report in our annual Sustainability Reports.

Clarity

This report targets a wide range of stakeholders with varying levels of awareness of sustainability. ADNOC has strived to make the report easily understandable for the anticipated readers.

Assurance

This report has not been externally assured.

GRI Application Level

This report has been checked by GRI to meet the requirements of Application Level A.

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This report is also available at
www.adnoc.ae/sustainability

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MESSAGE FROM THE DIRECTOR GENERAL



I am pleased to introduce the Sustainability Report for the year 2012. Thanks to the dedicated efforts of our employees and to the strong partnerships we have built over the years, ADNOC has been able to realise milestone achievements in our journey towards providing a reliable energy supply that ensures the sustained development of our nation's economy.

Our journey is not without challenge however. As our operations expand to meet rising energy demands, we must seek innovative ways to ensure the continuity to meet our commitment to operate in an environmentally, socially and economically responsible manner.

Safe operation

The safety of our workforce is our top priority, and we all strive to build a safety culture of zero injuries, illnesses and incidents. Despite our efforts to reinforce our safe and reliable operations, we deeply regret that we had twelve work-related fatalities in 2012, affecting our contractor workforce. At ADNOC, a single fatality is one too many. We are determined to improve the way we select and manage our contractors, to ensure we bring our workforce home safely and sustain their trust in ADNOC and our operations.

Meeting rising energy demands

To keep pace with rising domestic energy needs in the years ahead, ADNOC has embarked on two flagship projects, the Integrated Gas Development (IGD) Project and the Shah Gas Development (SGD) Project, that seek to increase gas production from our fields.

The IGD Project is a mega onshore and offshore initiative that is being executed by ADMA-OPCO, ADGAS and GASCO over a number of packages. When complete in late 2013, one billion standard cubic feet per day of gas from the offshore Umm Shaif Field will be transferred via Das Island to Habshan. Similarly, the SGD Project facilities are being developed to process approximately one billion standard cubic feet per day of feed gas from

the Shah Gas Field, located in the Western Region of Abu Dhabi. Upon completion in late 2014, the project will introduce 500 million standard cubic feet per day of sweet gas to the network.

Increasing petrochemical production

ADNOC seeks to strengthen Abu Dhabi's growing role in the region's petrochemical industry through flagship projects to be executed by Borouge and FERTIL, ADNOC's petrochemical-producing Group Companies.

The Borouge-3 project, currently underway by Borouge, will increase Borouge's petrochemical plant capacity to 4.5 million tonnes upon completion in mid-2014. The project includes an ethane cracker, two polyethylene units, two polypropylene units, as well as for the first time, a low density polyethylene (LDPE) unit and a cross-linkable polyethylene (XLPE) unit.

The FERTIL-2 project will increase FERTIL's production capacity to 3,300 metric tonnes per day of ammonia and 5,800 metric tonnes per day of urea, with the introduction of a new Ammonia Plant and Urea Plant.

Pursuing new technologies and applications

A number of technology 'firsts' are being applied across our Group Companies as they pursue their activities in increasingly challenging operating environments.

ZADCO's Upper Zakum 750 (UZ750) Project, which aims to increase production at the Upper Zakum field from 600 to 750 thousand barrels of oil per day by 2017, is applying first time technologies that include Extended Reach Drilling (ERD) and Maximum Reservoir Contact (MRC).

UZ750 is also unique in its application of artificial islands as drilling and production centres, instead of traditional steel-structure well head platform towers. This innovative approach delivers several health, safety and environment benefits that include reduced spill potential, reduced personnel transportation risks and a lower emergency evacuation risk.

Al Hosn Gas is also demonstrating technology leadership in the Shah Gas Development Project, whereby innovative technologies coupled with the highest engineering standards are being implemented throughout the construction, operation and maintenance phases of the project.

Our Group Companies and Independent Operators are also investing in sound flare gas recovery and reduction technologies as they work towards achieving ADNOC's goal of zero flaring. We are proud of their efforts to reduce the total amount of hydrocarbons flared in 2012 by 79.3% compared to 1995 levels, despite undergoing considerable expansions in their operations during this time.

Innovation in our products

A more sustainable future will require cleaner and more efficient types of energy. The year 2012 witnessed the completion of TAKREER's Green Diesel Project and the first international shipment of ultra-low sulphur diesel, a new product that meets tighter quality specifications for distillation, poly-aromatics, total aromatics, and sulphur. At ten parts per million (ppm) sulphur content, the product is in line with the highest international standards for this fuel. The product is planned to be introduced to local markets in 2013.

We are also making continuous progress with introducing a new fuel, Natural Gas for Vehicles (NGV), into the local market as a substitute for conventional fuels. NGV is widely considered to be an inherently safe fuel due to its narrower flammability range, and one which delivers significant reductions in emissions when compared to petrol-fuelled vehicles. Around 2,700 vehicles have been converted to run on NGV since the project began in May 2010.

Strengthening our global reach

To ensure the uninterrupted supply of our crude oil to international markets, particularly amidst rising geopolitical concerns, the Abu Dhabi Crude Oil Pipeline Project (ADCOP) was initiated as

a strategic Abu Dhabi government led project, under development by International Petroleum Investment Company (IPIC), to allow Abu Dhabi to export crude oil directly from Fujairah, bypassing the congested Strait of Hormuz.

Commitment to generating in-country value

ADNOC has a strong responsibility towards creating shared value for our nation.

We are exerting maximum effort throughout our journey towards developing talented national cadres to assume their role in the UAE's oil and gas sector, with a target of achieving 75% Emiratisation across ADNOC Group Companies by the end of 2017. We are also committed to supporting the development of local suppliers, and building strong partnerships with them that deliver long-term benefits to our society.

ADNOC is embracing the future with confidence, and our commitment towards sustainable practice will continue to drive progress across the key pillars of our nation's development path.



Abdulla Nasser Al Suwaidi
Director General

ABOUT ADNOC

Abu Dhabi National Oil Company (ADNOC) is one of the world's leading oil and gas companies, and plays a major role in the on-going economic growth of the Emirate of Abu Dhabi and the in-country value of the United Arab Emirates as a whole.

Who We Are

Abu Dhabi National Oil Company (ADNOC) was established on the 27th November 1971 to operate in all areas of the oil and gas industry in Abu Dhabi, United Arab Emirates (UAE).

Since its establishment, ADNOC has steadily enhanced its energy presence through our sound business interest in 15 specialist subsidiary and joint venture companies, known as the ADNOC Group Companies. The Group's diversified operations cover all aspects of the petroleum industry, including crude oil and natural gas exploration, production, refining, processing, distribution, global marketing, and the manufacture of petrochemicals.

Our Group Companies are currently engaged in a series of strategic development and expansion projects that are fundamental to our nation's energy infrastructure. These carefully selected projects have served to launch and uphold the UAE's respected and globally competitive economy of today, whilst creating favourable conditions to promote sustainable development and prosperous living in our society.

ADNOC today manages and oversees oil production of more than 2.6 million barrels per day (bpd),

and over 7,800 million standard cubic feet per day (MMSCFD) of natural gas (wet gas) production.

ADNOC's headquarters are located in the Emirate of Abu Dhabi, UAE. Our major operations are based in the UAE. Some of the Group Companies have offices in other countries, such as Borouge which has marketing operations across Asia.

Our Leadership

The Supreme Petroleum Council (SPC) was established under law No. 1 of 1988, which stipulates that the Council is the superior authority responsible for the petroleum industry in the Emirate of Abu Dhabi. The Council formulates and oversees the implementation of Abu Dhabi's petroleum policy and follows up its implementation across all areas of the petroleum industry to ensure that the set goals are accomplished.

The SPC functions as ADNOC's governing board and oversight committee. H.H. Sheikh Khalifa Bin Zayed Al Nahyan, the president of the UAE and Ruler of Abu Dhabi, is the Chairman of the SPC. Under H.H. Chairmanship, the Emiri decree on 25 June 2011 was issued restructuring the SPC with membership from the ADNOC Director General and a further 8 independent members.

15 Group Companies

that cover all aspects of the upstream and downstream petroleum industry

>2.6 million barrels of oil production per day (bpd)
with plans to increase to 3.5 million bpd by 2017

>7,800 million standard cubic feet per day (MMSCFD)
of gas production (wet gas)

ADNOC CORPORATE STRUCTURE

SUPREME PETROLEUM COUNCIL

ADNOC DIRECTOR GENERAL

BUSINESS LINE DIRECTORATES

EXPLORATION AND PRODUCTION DIRECTORATE

ADCO (60%)
ABU DHABI COMPANY FOR ONSHORE OIL OPERATION

ADMA-OPCO (60%)
ABU DHABI MARINE OPERATING COMPANY

ZADCO (60%)
ZAKUM DEVELOPMENT COMPANY

NDC (100%)
NATIONAL DRILLING COMPANY

GAS DIRECTORATE

AL HOSN GAS (60%)
ABU DHABI GAS DEVELOPMENT COMPANY LTD.

GASCO (68%)
ABU DHABI GAS INDUSTRIES LTD.

ADGAS (70%)
ABU DHABI GAS LIQUEFACTION COMPANY LTD.

ELIXIER (51%)
ADNOC LINDE INDUSTRIAL GASES COMPANY LTD.

MARKETING AND REFINING DIRECTORATE

ADNOC DISTRIBUTION (100%)

ADNATCO & NGSCO
ABU DHABI NATIONAL TANKER COMPANY (100%)
NATIONAL GAS SHIPPING COMPANY (70%)

TAKREER (100%)
ABU DHABI OIL REFINING COMPANY

PETROCHEMICALS DIRECTORATE

BOROUGE
ABU DHABI POLYMERS COMPANY LTD. (60%)
BOROUGE PTE LTD. (50%)

FERTIL (66.6%)
RUWAIIS FERTILIZER INDUSTRY

SHARED SERVICES DIRECTORATE

ESNAAD (100%)

IRSHAD (60%)
ABU DHABI PETROLEUM PORTS OPERATING COMPANY

ADNOC DIVISIONS

HEALTH, SAFETY AND ENVIRONMENT (HSE) DIVISION

AUDIT AND ASSURANCE DIVISION

OTHER ADNOC DIRECTORATES

STRATEGY AND COORDINATION DIRECTORATE

BUSINESS SUPPORT DIRECTORATE

FINANCE DIRECTORATE

HUMAN RESOURCES DIRECTORATE

ADMINISTRATION DIRECTORATE

ADOC*
Abu Dhabi Oil Company Ltd.

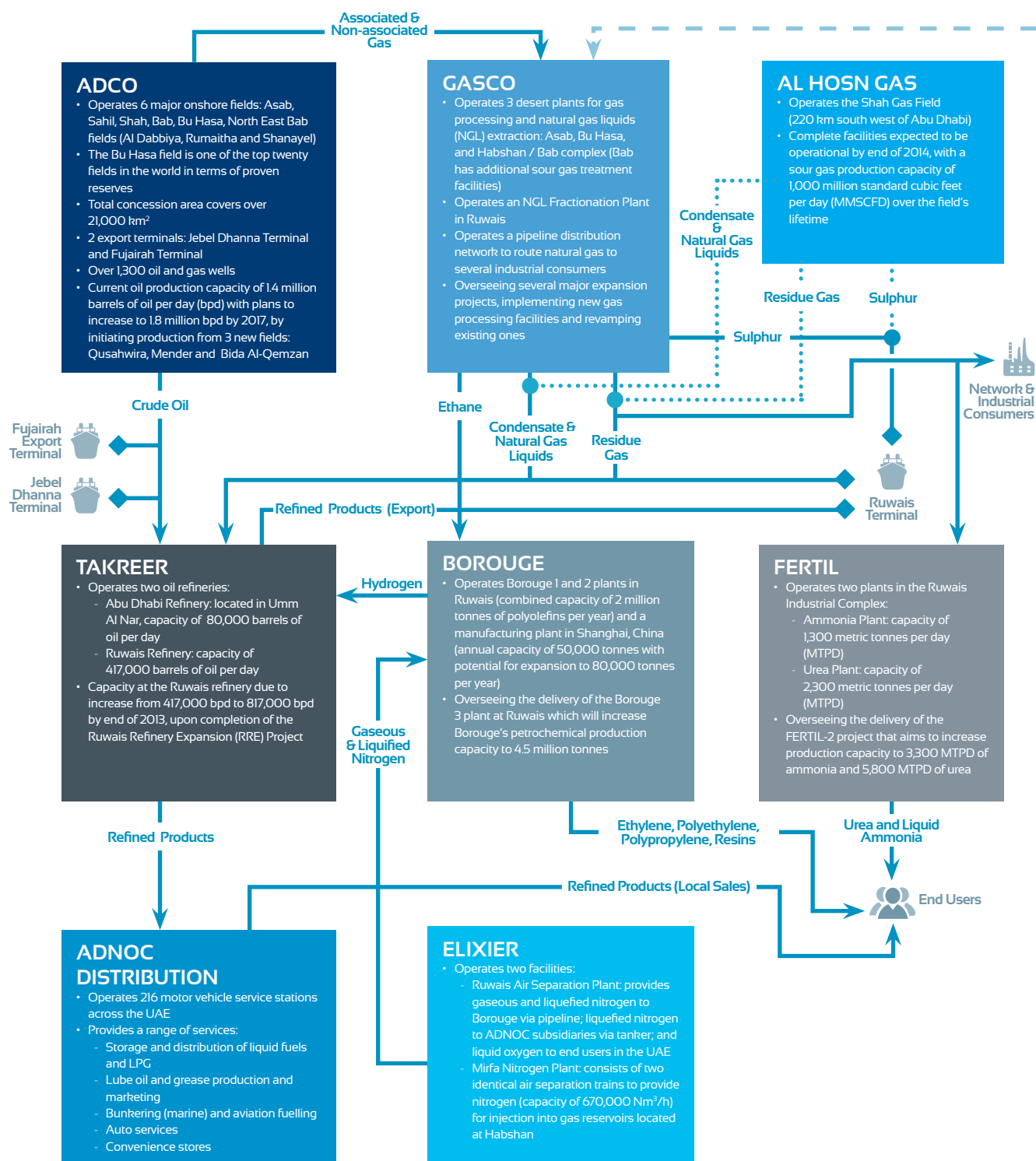
TOTAL ABK*
TOTAL Abu Al Bukhoosh

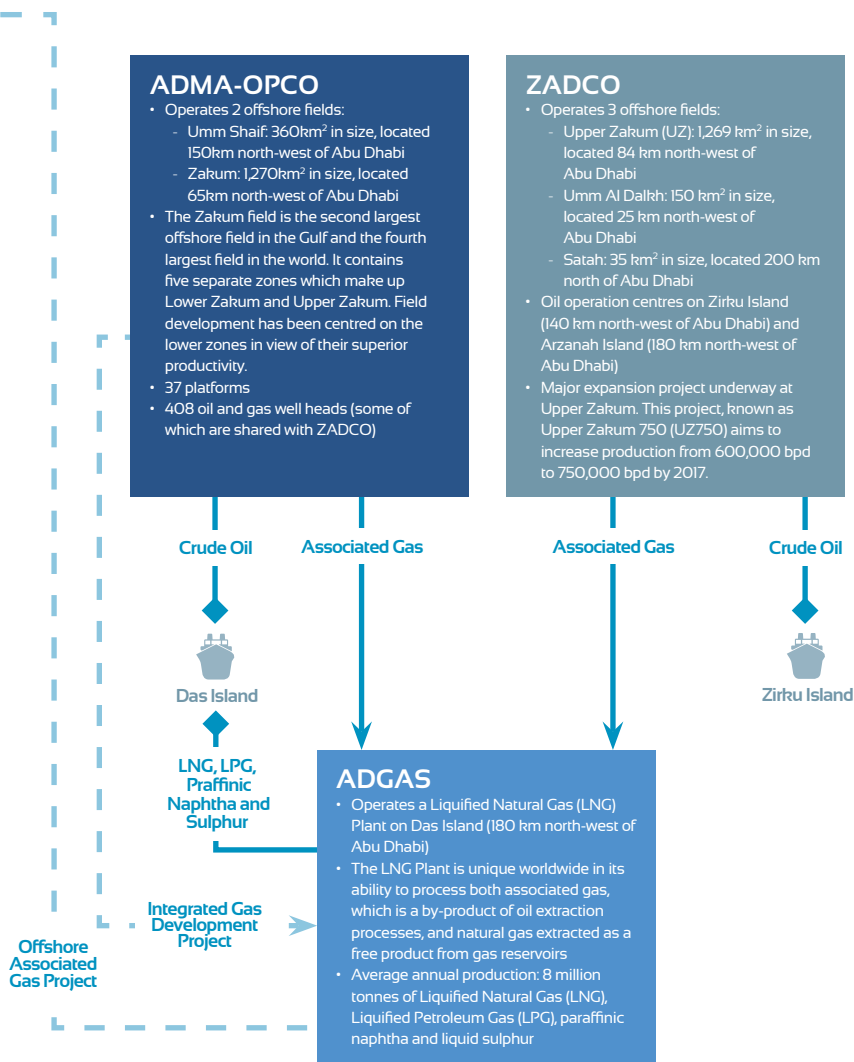
BUNDUQ* Company Ltd.

(%) ADNOC share of ownership in each Group Company

* Independent Operators operate under ADNOC HSE Division directions for HSE matters

ADNOC GROUP COMPANIES





KEY

- Flow of existing products
- Flow of future products
- Projects under development
- Industrial terminal for processing, storage and export of products

OFFSHORE

NDC

- Provides onshore and offshore drilling services to the ADNOC Group Companies
- 1,921,619 feet drilled in 2012
- Operates:
 - 13 offshore jack-up drilling rigs
 - 25 land drilling rigs
 - 5 water-well rigs (to survey the quality, quantity and distribution of groundwater in the Emirate of Abu Dhabi as part of NDC's lead on the "Groundwater Research Programme")
 - 1 multi-purpose service vessel

ADNATCO & NGSCO

- Provides shipping facilities for the trade of petroleum products in international markets, ship bunkering services and bulk sulphur transportation.
- Operates a fleet of:
 - 8 LNG Carriers
 - 8 Oil / Chemical Tankers
 - 9 Bulk Carriers
 - 2 Container Vessels
 - 2 Ro-Ro Vessels
 - 1 Molten Sulphur Carrier

ESNAAD

- Provides a range of facilities, services and supplies to the oil and gas sector, including:
 - Offshore marine support services (ESNAAD operates a fleet of 47 vessels)
 - Berthing, bunkering and bulk supply
 - Port services
 - Well services
 - Drilling fluids services
 - Specialised production chemicals
- Operates a Grinding Plant, Blending Plant and Brine Plant in the Mussafah Offshore Supply Base

IRSHAD

- Provides marine services to the petroleum ports of Abu Dhabi (Ruwais, Jebel Dhanna, Das Island, Zirku Island, Zakum Field and Mubarratz) and Fujairah Port
- Manages a fleet of 40 vessels of which 10 ASD Tugs, 4 tail back boats and 4 pilot boats are ADNOC-owned
- Services include:
 - Pilotage, berthing / unberthing of O&G tankers and the loading of oil products
 - Offshore terminal maintenance, inspection and associated diving operations



ADNOC

PERFORMANCE

ENVIRONMENT

- 79.3% reduction in total amount of hydrocarbons flared compared to 1995 levels
- > 17.9 million GJ saved due to energy efficiency improvement measures
- > AED 7.5 million invested in renewable energy
- > 8 million m³ of water recycled / reused
- 100% of ecologically-sensitive operating sites have biodiversity management plans
- 5 million mangrove seedlings produced in nurseries, with over 675,000 seedlings planted across our concession areas
- 2,700 vehicles converted to run on Natural Gas for Vehicles (NGV) by end of 2012

ECONOMIC

- > AED 12 billion in gross man power costs
- AED 16.6 billion in procurement expenditure on local suppliers; this amounts to 73% of the total procurement budget
- 65% of governance body positions across ADNOC and the Group Companies occupied by UAE nationals

SOCIAL

- > 37,000 employees and > 135,000 contractors
- 65% of governance positions occupied by Emiratis
- 1.16 million man-hours of employee training delivered
- 88% of employees receive annual performance review
- Zero incidents of child, forced or compulsory labour
- 3 academic institutions, one of which specialises in providing skilled workforce to the local oil and gas industry

OPERATIONS

- > 1.9 million feet drilled
- > 864 million man-hours worked
- > 2.6 million barrels of oil produced per day
- > 7.8 billion standard cubic feet of natural gas produced per day (wet gas)
- > 8.5 million tonnes of refined products and > 1.8 million tonnes of sulphur exported to international markets

2012 KEY HIGHLIGHTS

ADCO

began operating the new Fujairah Export Terminal, a key facility under the Abu Dhabi Crude Oil Pipeline Project (ADCOP). ADCOP is a strategic Abu Dhabi government-led project that aims to reduce dependency on oil terminals in the Arabian Gulf and enhance export potential on the eastern seaboard of the UAE (where larger vessels can be accommodated due to the relatively deep water at the location). The first shipment from the Fujairah Export Terminal took place in July 2012.



ADNATCO & NGSCO

respond to new requirements on cargo residue and wash water discharges that were issued by the International Maritime Organisation (IMO). All nine bulk container vessels were retrofitted with separate storage tanks and independent flow lines that would safely retain wash water for later safe discharge outside prohibited areas.



AL HOSN GAS

took over the drilling operations at the Shah Gas Development (SGD) which were previously overseen by ADCO. The SGD is the first unconventional development of sour gas resources in the Arabian Gulf, aiming to deliver 500 million cubic feet per day of clean gas upon completion in late 2014, as well as significant volumes of condensate, natural gas liquids and sulphur. Facilities and pipelines are over 75% complete and drilling is over 20% complete.



ADGAS

complete the installation of all units and facilities required to deliver their end of the Integrated Gas Development Project (IGD).



ADNOC DISTRIBUTION

acquire 74 new motor vehicle service stations and commission 12 new service stations across the UAE, in an initiative to meet and better serve the nation's rising fuel demands.



BOROUGE

introduced a new and innovative grade of polypropylene product known as BorPure™ HJ3IIMO, in response to a market need for high quality packaging materials for the food industry. Borouge also continue to oversee the Borouge-3 Project that aims to increase the total annual petrochemical capacity at their Ruwais plant by 2.5 million tonnes per year to a total of 4.5 million tonnes per year by mid-2014.

ADMA-OPCO

complete the construction and installation of the offshore gas processing platform, Integrated Gas Development Project – Habshan Platform (IGD – HAP), at their Umm Shaif Super Complex.

FERTIL successfully completed a turnaround at their FERTIL-1 plant. FERTIL are currently overseeing the final stages of their FERTIL-2 Project, which is due for completion in mid-2013. Under this project, FERTIL will increase its petrochemical production capacity with a 2,000 tonnes per day single-stream Ammonia Plant, 3,500 tonnes per day single-stream Urea Plant, 100,000 tonnes capacity bulk storage area, and an upgrade of FERTIL's ship loading and conveyer system.



IRSHAD receive two state-of-the-art Azimuth Stern Drive (ASD) tug boats to join their fleet of 49 vessels. This is the final batch of vessels to be received under the company's ambitious plan to replace their conventional fleet with modern, purpose-built vessels in order to meet the growing demands of Abu Dhabi's oil sector.



TAKREER oversee the first year of production from their Green Diesel Plant at the Ruwais Refinery. The Green Diesel Plant was established with the aim of producing a diesel product that meets tighter quality specifications for distillation, poly-aromatics, total aromatics, and sulphur. At 10 parts per million (ppm) sulphur content, the ultra-low sulphur diesel is in line with the highest international standards for this fuel.



GASCO oversee the delivery of the Habshan 5 Integrated Gas Development (IGD) Process Plant. The plant is designed to process 1,000 million standard cubic feet per day (MMSCFD) of offshore gas from Umm Shaif and an additional 1,000 MMSCFD of onshore gas comprising of a mix of associated gas from ADCO and non-associated high sour gas from the Habshan fields.



NDC acquired six new rigs to join their fleet of onshore and offshore drilling rigs, and commissioned the construction of a further six offshore jack-up rigs. The expansion in NDC's operational rig fleet is necessary to keep pace with ADNOC's production targets over the next five years.



ZADCO awarded the EPC-1 and EPC-2 contracts for their Upper Zakum 750 (UZ750) Project, a mega offshore initiative that aims to increase production at the Upper Zakum field from 600,000 to 750,000 barrels of oil per day by 2017 sustainable for 25 years. The project's facilities will be installed on four artificial islands that will serve as drilling and production centres, instead of traditional well head platform towers (WHPTs).

ADNOC

PRODUCTS & MARKETS

ADNOC aims to maintain good business relationships with existing and potential end-users and to ensure reliable supply.

Crude Oil and Condensate

The main onshore grade for our crude oil is Murban. Our offshore grades include Umm Shaif, Lower Zakum and Upper Zakum. ADNOC also produces two grades of condensate; Uweinat and Thamama.

ADNOC's share of crude oil and condensate is sold in both international and local markets. The bulk of ADNOC's crude exports are mainly targeted to the Far East, although ADNOC also has a business relationship with the Indian subcontinent and Africa.

Crude Oil and Condensate Exported in 2012 ('000 bbl)

Export Destination	Total*
Asia	492,866
Europe	2,710
N & S America	-
Africa	936
TOTAL*	496,512

* ADNOC share

496,512 ('000 bbl)

Crude oil and condensate
exported in 2012

6,830 ('000 tonnes)

LPG exported in 2012

1,865 ('000 tonnes)

Sulphur exported in 2012

Petroleum Products

ADNOC also markets refined products, such as naphtha, jet kerosene, gas oil and fuel oil. These refined products are produced by Abu Dhabi Refining Company (TAKREER) and are sold domestically (by ADNOC DISTRIBUTION) and are also exported to international markets. In addition, ADNOC markets its 68% share of paraffinic naphtha produced by Abu Dhabi Gas Industries Company (GASCO).

Refined Products Exported in 2012 ('000 tonnes)

Export Destination	Naphtha	Jet Oil / Kerosene	Gas Oil
Asia	3,986	520	314
Europe	-	3,381	44
N & S America	-	266	-
Africa	-	40	215
TOTAL*	3,986	4,207	573

* ADNOC share

Gas and Sulphur

Although oil will continue to provide the majority of the income for both economic growth and social services in the coming years, gas will play an increasing important role in the UAE's development. ADNOC is therefore undertaking major developments to establish a comprehensive pipeline network to ensure its steady and reliable supply.

Plastics

Borouge's polyolefins (polyethylene and polypropylene) manufacturing capacity tripled to reach almost 2 million tonnes per year with the operation of their Borouge-2 Plant. Borouge is further expanding its petrochemical plant by 2.5 million tonnes with anticipated full operation by mid-2014. The project, titled Borouge-3, includes an ethane cracker, two polyethylene units, two polypropylene units, as well as for the first time, a low density polyethylene (LDPE) unit and a cross-linkable polyethylene (XLPE) unit.



Gas and Sulphur Exported in 2012 ('000 tonnes)

Export Destination	LPG	Sulphur	Paraffinic Naphtha
Asia	6,612	1,213	1,994
Europe	206	61	-
N & S America	-	71	-
Africa	12	520	-
TOTAL*	6,830	1,865	1,994

* ADNOC share

Borouge Petrochemical Capacity Overview ('000 tonnes)

Product	Current	Future (with Borouge 3)
Polyethylene	1,084	2,220
Polypropylene	638	1,760
Low Density Polyethylene	-	350
TOTAL	1,722	4,330

Borouge also has dedicated logistics hubs in Asia with warehousing and packing facilities in Shanghai (600,000 tonnes per year), Ghanzou (246,000 tonnes per year) and Singapore (330,000 tonnes per year).

Ammonia and Urea

In 2012, FERTIL produced 397,815 tonnes of ammonia and 627,951 tonnes of urea.

FERTIL are currently overseeing the final stages of their FERTIL -2 Project, which is due for completion in mid-2013. Under this project, FERTIL will increase its ammonia production capacity to 1.14 million tonnes per year and urea production

capacity to 2 million tonnes per year. The project also involves an upgrade to FERTIL's ship loading and conveyer system.

Lubricants and Grease

ADNOC's lubricants include a comprehensive range of specialty and conventional engine oils, industrial and hydraulic oils, and greases.

Our products are formulated to meet the highest international specifications. In 2012, ADNOC DISTRIBUTION sold approximately 38,500 tonnes of lube oil and 1,455 tonnes of grease for consumption in both the domestic and international markets.





MANAGING OUR
BUSINESS IN A
RIGOROUS
WAY THROUGH OUR
GROUP-WIDE HSE
MANAGEMENT SYSTEM

TIERED
EMERGENCY RESPONSE
CAPABILITIES WITH
AN EMPHASIS ON
PREVENTION

LEADERSHIP
IN STAKEHOLDER
ENGAGEMENT AND
INDUSTRY-WIDE
PARTICIPATION

OPERATING RESPONSIBLY

Conducting our operations in a responsible manner requires leadership in HSE, effective risk management practices and maintaining open engagement with our stakeholders.

Sustainability Management

HSE Policy

ADNOC Group Companies shall:

- Have a systematic approach to HSE management, designed to ensure compliance with ADNOC Codes of Practice, Abu Dhabi and UAE Laws and Regulations, and applicable international standards.
- Conduct activities in a manner designed to minimise HSE risks to a level which is As Low As Reasonably Practicable (ALARP).
- Set targets for continuous HSE performance improvements.
- Measure, appraise and report on HSE performance.
- Hold appropriately empowered line management staff accountable for HSE performance.
- Include HSE competencies and performance in the appraisal and reward of all staff.
- Develop and maintain business continuity plans.
- Empower employees to refrain from actions that are considered a threat to HSE values.
- Require contractors to manage HSE in line with this policy.

Statement of Commitment

ADNOC and its Group Companies are committed to:

- Pursue the goal of no harm to people and the community.
- Reduce greenhouse gas emissions in order to mitigate climate change.
- Promote the use of renewable energy.
- Protect the environment and biodiversity.
- Promote corporate social responsibility and report on sustainability performance.
- Develop and use resources efficiently.
- Manage HSE matters with the diligence accorded to any of its other critical business activities.
- Play a leading role in promoting best practices in our industries.
- Promote a culture in which all Group Company employees share this commitment.
- Publically report on the Group's HSE performance.

ADNOC HSE Objectives

HSE TOPIC	OBJECTIVE
Health and Safety	No harm to people and surrounding communities.
Flaring	Strive towards ultimate elimination of hydrocarbon flaring.
Green House Gas	Reduce emissions, improve energy efficiency and promote renewable energy.
Sustainable Development	Promote sustainable development and corporate social responsibility.
Venting	Elimination of continuous venting of hydrocarbons and other toxic gases.
Biodiversity	Protect and restore natural biodiversity.
Halons and CFCs	Zero losses of Halons and CFCs by gradual elimination and replacement.
Resources	Sustainable use of resources – land, energy and raw materials.
Water discharges	Re-inject produced waters unless their discharge is compatible with the surface environment and can be discharged in line with ADNOC and international standards. Treat and monitor effluents in accordance with ADNOC Codes of Practice.
Oil-based drilling mud and cuttings	Minimize the use of oil-based mud, recycle and dispose of drilling mud and contaminated cuttings in ways that do not cause release of contaminants to the environment.
Solid wastes	Minimize and control all domestic, industrial, medical, hazardous and special waste. Treat and dispose as per ADNOC Codes of Practice.
Water	Minimize water consumption and promote water conservation.
Oil and Chemical Spills	Prevent oil and chemical spills. If they do occur, control and mitigate the impact.

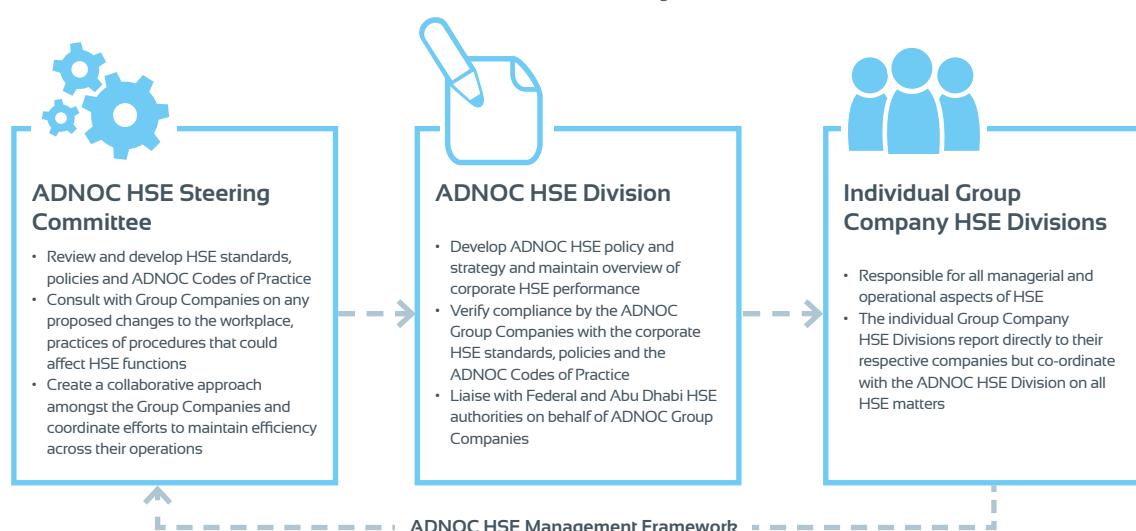
Sustainability is built from the solid foundation of our long-standing HSE policy and our commitment to an outstanding HSE performance. ADNOC's HSE policy drives much of our operations and we aspire to perform as well as, if not better than, our international joint venture business partners.

HSE Management Framework

To ensure that all aspects of health, safety and environmental management are carried out successfully and consistently across the oil and gas sector in Abu Dhabi, ADNOC has established a centralised framework of operational standards against which compliance is mandatory. These standards provide a comprehensive cover of petroleum industry activities with distinct HSE risks or impacts, and their requirements adhere to UAE Federal Laws and Regulations.

The operational standards are collectively known as the ADNOC Codes of Practice. The ADNOC Codes of Practice Manual was launched in 2003 and new guidance documents continue to be produced, in keeping with emerging industry best practice and as necessary to support ADNOC's new uncharted ventures.

To monitor and evaluate Group Company performance against the ADNOC Codes of Practice, HSE is further managed at three distinct but integrated levels:



HSE Management System

The ADNOC Codes of Practice provide structured guidance for the development of a comprehensive HSE Management System (HSEMS), covering all aspects of company employee and contractor activities. The HSEMS is intended to serve as an engine driving ADNOC policy implementation and continuous improvement in performance.

Once the HSEMS is established, the ADNOC Companies are expected to evaluate their individual HSEMS performance via a self-assessment protocol.

The scores and the HSEMS overall are audited regularly by a dedicated team of experts appointed by the ADNOC HSE Division, with representation from the ADNOC Business Line Directorates and the ADNOC Companies. The ADNOC Companies are also required to audit their own performance, together with that of their contractors, in accordance with annual and five year plans that are agreed upon with the ADNOC HSE Division.

The ADNOC HSEMS framework is comprised of eight integral elements as presented below.

HSEMS ELEMENTS

- Leadership & Commitment
- Policy & Strategic Objectives
- Organisation, Resources & Competence
- Risk Evaluation & Management
- Planning, Standards & Procedures
- Audit
- Implementation & Monitoring
- Management Review

Risk Management and Security

HSE Risk Identification and Mitigation

At ADNOC, we place great emphasis on the identification and mitigation of HSE risks at every stage of our operations to ensure that hazards are identified and the associated risks mitigated to a level which is as low as reasonably practicable (ALARP).

ADNOC Company activities, including new project developments and major modifications to existing facilities, are subjected to compulsory Health, Safety and Environmental Impact Assessments (HSEIAs). The framework by which HSEIAs should be prepared prior to submission to ADNOC is clearly stipulated in the relevant ADNOC Code of Practice.

HSEIAs are thoroughly reviewed by the ADNOC HSE Division and the ADNOC HSE Steering Committee, and must ultimately be approved by the ADNOC HSE Steering Committee before project execution can proceed.

Security

ADNOC is committed to ensuring the security of our personnel, facilities, property and information.

Security for ADNOC's onshore and offshore facilities is provided by the Critical Infrastructure and Coastal Protection Authority (CICPA), which was established in 2007 to ensure the safe and uninterrupted operation of assets critical to the economy of Abu Dhabi.

The CICPA, a separate body of the government of Abu Dhabi, works closely with ADNOC to develop plans and procedures regarding the security of ADNOC installations.

The international shipment of our products necessitates that ADNOC adopt the highest security arrangements across our maritime operations, especially in the wake of piracy attacks that have become the biggest threat to the shipping industry in recent years.

To ensure their safety in international waters, ADNATCO & NGSCO's vessels are fitted with the latest and most rigid non-lethal security measures. The unique security designs that have been adopted by their vessels have contributed towards establishing international maritime security standards, such as the Best Management Practice Guide No. 4 (BMP-4) For Protection against Somalia Based Piracy.

Systematically identifying the level of HSE, security, quality and business and reputational risks of processes and activities that may lead to loss for our business operations is critical.



Stakeholder Engagement

The dialogue developed between ADNOC and our stakeholders allows us to appreciate different viewpoints and to understand better how our business value propositions can be aligned with the goals of our stakeholders and those of the society at large. We engage with our employees, customers, suppliers, communities,

regulatory authorities and other stakeholders through various avenues of communication. Our stakeholders and our engagement with them have evolved over ADNOC's long history, rather than as a result of a formal defined process.

ADNOC Stakeholders and Stakeholder Engagement Practices

STAKEHOLDERS ENGAGEMENT	
Customers	<ul style="list-style-type: none"> • Customer surveys and follow-up feedback calls • Visits to facilities • Face-to-face interviews • Product specifications and safety datasheets • Exhibitions, conferences and seminars
Suppliers/ Contractors	<ul style="list-style-type: none"> • Regional supplier conferences • Technology-based financial risk management • Provision of lean improvement resources • Supplier development • Supplier Health, Safety and Environment (HSE) requirements and standards during the tender process • Audits
Employees	<ul style="list-style-type: none"> • Employee satisfaction surveys and suggestion scheme • Training and development programmes, seminars and workshops • New employee induction programmes • Annual performance appraisals • Employee appraisals • Regular communications from senior management on performance and business updates • Social activities for employees and their families
Partners & Shareholders	<ul style="list-style-type: none"> • Annual meetings of shareholders • Annual Sustainability Report • Facility tours • Conference calls to discuss business updates • Access to company information and data
Government Organisations	<ul style="list-style-type: none"> • Visits by and meetings with government representatives • Trade delegations • Strategic planning forums
Public/ Community	<ul style="list-style-type: none"> • Supporting educational and public institutions across Abu Dhabi • Career and recruitment fairs • Employee volunteerism and local contribution programmes • Monthly ADNOC Newsletters • Sponsorship of community events in Abu Dhabi and the Western Region e.g. International Day and National Environment Day celebrations, Liwa Date Festival and Al Dhafra Camel Festival
Industry	<ul style="list-style-type: none"> • Conferences, seminars and exhibitions • Membership with trade/industry groups and associations, including Abu Dhabi Sustainability Group (ADSG), Oil and Gas Producers Association (OGP), Global Reporting Initiative (GRI), Abu Dhabi Emergency Support Committee for Offshore Operators (ADESCO)
Press/Media	<ul style="list-style-type: none"> • Press releases in newspapers and magazines • Visits and interviews • Conferences, seminars and exhibitions

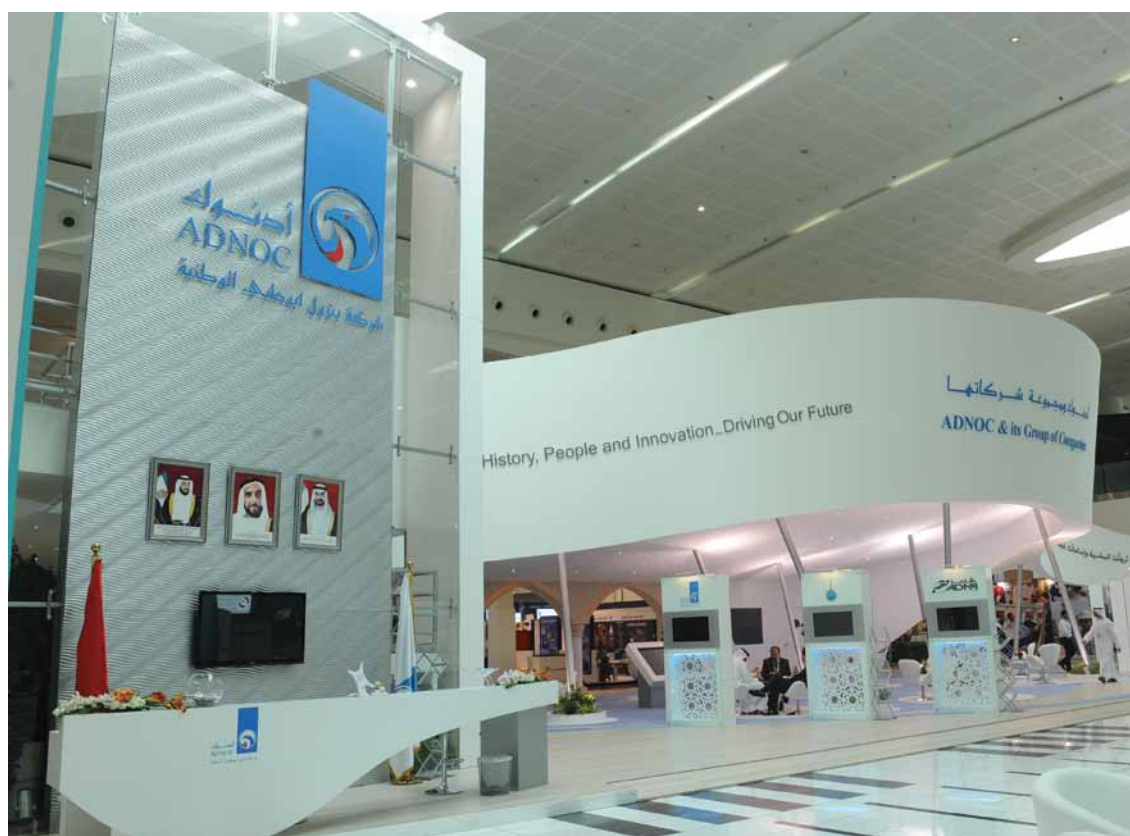
Maintaining good relationships with our stakeholders is a key component of ADNOC's business. As we continue our progress, we will continue to define and redefine our stakeholders and our interaction with them.

Exhibitions and Conferences

In 2012 ADNOC and its Group of Companies participated in several high profile exhibitions and conferences in order to exhibit our projects and expand our knowledge of the best practices being adopted in the oil and gas industry.

Exhibitions and Conferences

EVENT	VENUE	DATE
World Future Energy Summit (WFES 2012)	Abu Dhabi, UAE	16 - 19 January 2012
Middle East Geoscience Conference and Exhibition (GEO 2012)	Manama, Bahrain	4 – 7 March 2012
International Conference on Renewable Energy: Generation and Applications (ICREGA 2012)	Al Ain, UAE	13 – 15 March 2012
Offshore Technology Conference (OTC 2012)	Houston, Texas, USA	30 April – 3 May 2012
Middle East Refining and Petrochemicals Conference & Exhibition (Petrotech 2012)	Manama, Bahrain	20 – 23 May 2012
Global Petroleum Show (GPS 2012)	Calgary, Alberta, Canada	12 – 14 June 2012
The China (Ningxia) International Investment and Trade Fair & China - Arab Economic Forum 2012	Yin Chuan, Ningxia, China	26 – 30 September 2012
Gastech Conference and Exhibition (GASTECH 2012)	London, UK	8 – 11 October 2012





79.3%
REDUCTION

IN AMOUNT OF
HYDROCARBONS FLARED
IN 2012 COMPARED TO
1995 LEVELS

17.9
MILLION GJ

IN ENERGY SAVINGS
REALISED ACROSS
OUR OPERATIONS

AED
387.5
MILLION

IN ENVIRONMENTAL
EXPENDITURE

ENVIRONMENTAL PERFORMANCE

While pursuing our goal to be a global leader in the oil and gas industry, ADNOC has an overriding commitment towards our environmental responsibilities across our business operations. This commitment will continue to be one of our foremost priorities.

Air Emissions

In line with ADNOC's HSE policy and objectives, ADNOC established an Air Quality Monitoring System (AQMS) in 2007. The system comprises of a network of eight monitoring stations (seven fixed and one mobile) for monitoring the ambient air quality in the vicinity of the Group Companies' operating sites, as well as continuous stack monitoring at major facilities both onshore and offshore. Emission monitoring guidelines are currently being developed for the Group Companies.

As a result of the AQMS, ADNOC is now able to:

- Send ambient air quality and meteorological data on an hourly basis from all monitoring stations to the Group Companies through a central server.
- Validate and do quality checks on monitoring data with the help of a professional team organised at the central station on a daily basis and archive these data on a back-up server.
- Receive continuous (every hour) stack monitoring data from the Group Companies' database to the central server.

- Prepare and submit an ambient air quality monitoring report of the complete stations to the Group Company's HSE divisions on a monthly basis.
- Compare actual ambient air quality with air quality objectives.
- Develop real-time Air Quality Index (AQI), where instant readings of these AQIs are made available to the Group Companies.
- Broadcast real-time AQI and weather report on ADNOC's intranet web site and an extranet web site for Group Companies access.
- Provide an information and simulation tool to develop and implement an air quality management programme.

The ADNOC AQMS is currently under review and there are future plans to:

- Increase the number of continuous emissions monitoring systems installed at major emissions stacks.
- Expand the AQMS network by installing three additional ambient air quality monitoring stations.

ADNOC's objectives regarding air emissions include striving towards the ultimate elimination of hydrocarbon flaring, reducing emissions, improving energy efficiency, promoting renewable energy, eliminating continuous venting of hydrocarbons and achieving zero losses of halons and chlorofluorocarbons (CFCs), whilst gradually phasing them out.

Flaring

Flaring across ADNOC's activities in 2012 amounted to approximately 54 million standard cubic feet per day (MMSCFD). This corresponds to a 14.8% reduction in flaring compared to 2011, and a 79.3% reduction in the amount of hydrocarbons flared in 1995.

We aim to continue the flaring reduction trend in the future. New project designs are scrutinized to ensure that flaring is minimised during the design phase through the use of closed flare systems. Existing assets are being retrofitted to optimise efficiency through flare gas recovery methods, sour gas separation and re-injection into reservoirs and the implementation of Best Available Techniques (BAT).

Greenhouse Gas Emissions

In 2011, ADNOC implemented the "equity share approach" for greenhouse gas (GHG) emission accounting and reporting. GHG emission data are based on direct measurements of scope 1 and scope 2 GHG emissions. Where direct measurements are not available, engineering calculations and estimations were implemented. Our five-year emission trends are presented below.

NO_x and SO_x Emissions

In 2012, the total amount of nitrogen oxide (NO_x) and sulphur oxide (SO_x) emissions from ADNOC's operations amounted to 67,842 tonnes and 241,611 tonnes respectively.

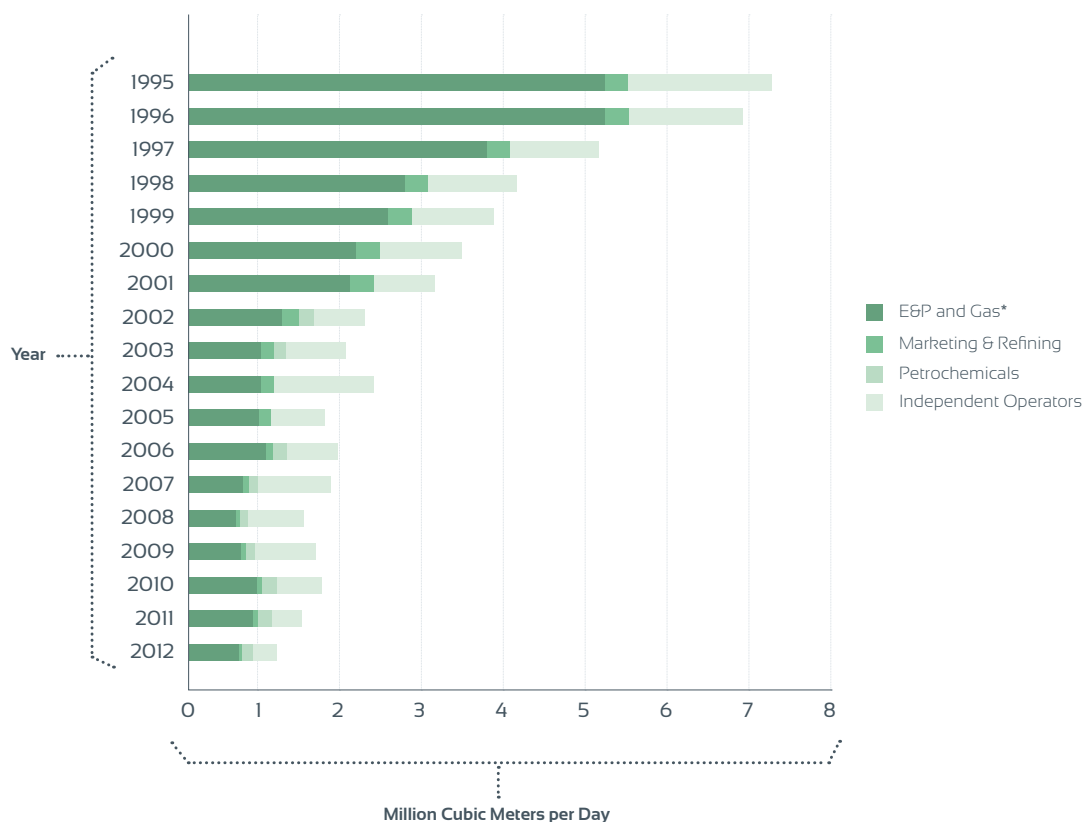
Whilst NO_x emissions remained stable compared to 2011 levels, SO_x emissions increased by 16%. This increase is largely accounted for by ADGAS and ZADCO, whose sulphur recovery units underwent planned shutdowns and maintenance activities in 2012.

VOC Emissions

In 2012, the total VOC emissions across ADNOC's operations amounted to 230,195 tonnes, of which approximately 75% is accounted for by ADNOC DISTRIBUTION's activities.

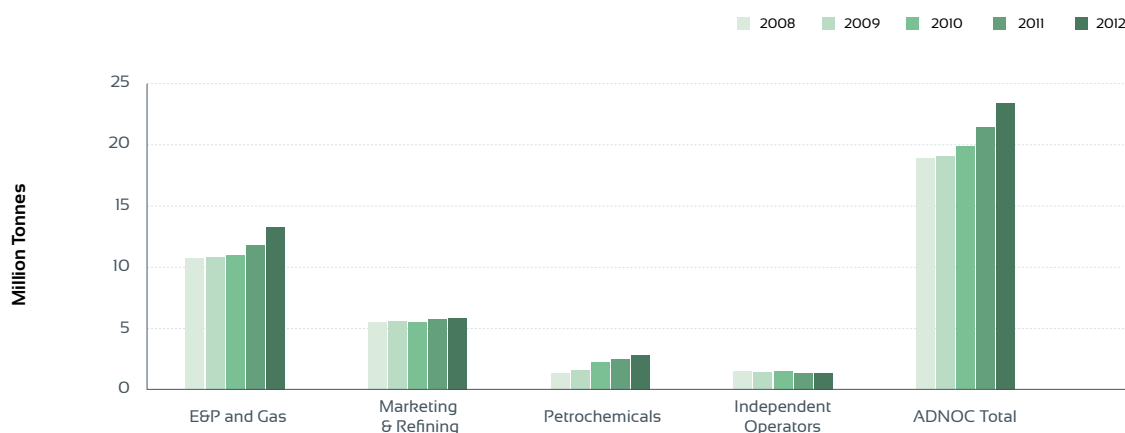
A representation of the 5-year trends for VOC emissions has not been included in this report, as a new methodology for estimating VOC emissions was initiated by ADNOC DISTRIBUTION in 2012 which could not be applied to previous years' data.

Hydrocarbon Flaring Trend (1995 - 2012)

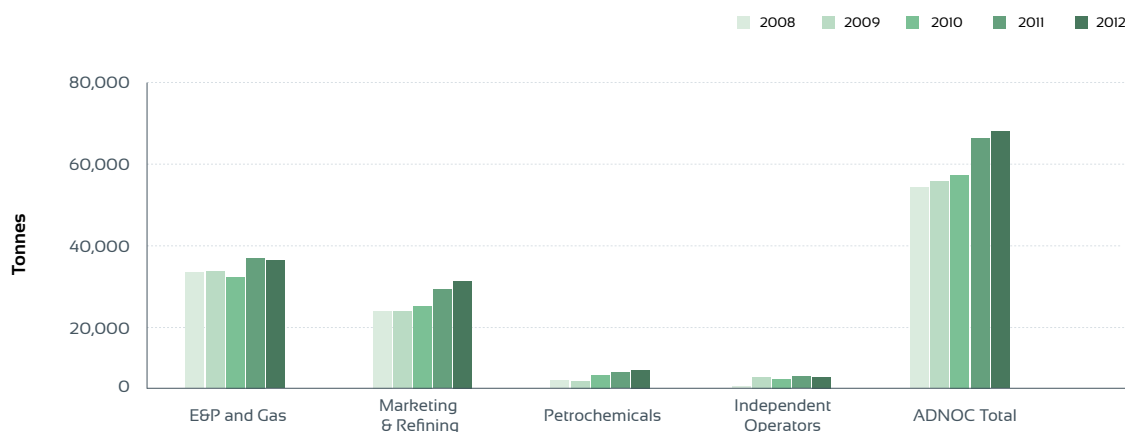
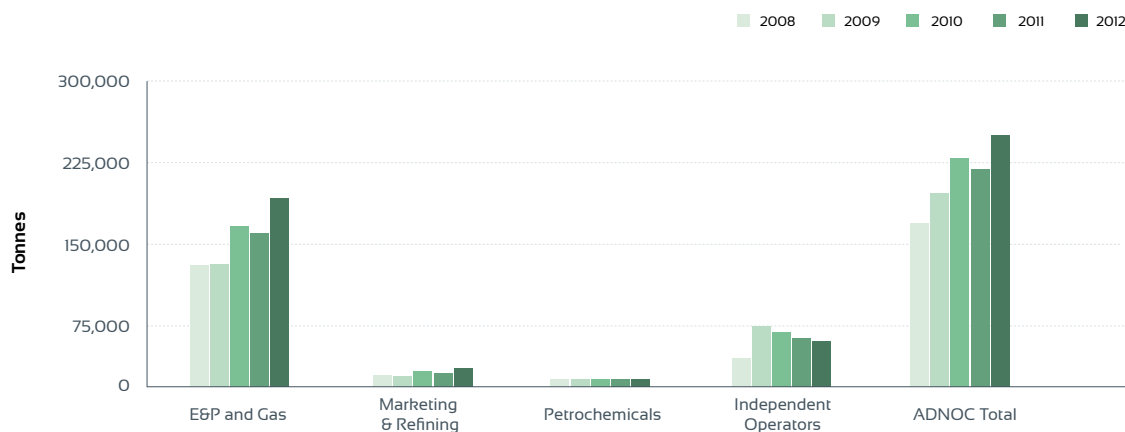


* Where mentioned in this report, the data relating to the 'E&P and Gas' abbreviation corresponds to activities performed by companies operating under the Exploration & Production (E&P) Directorate and the Gas Directorate.

GHG Emissions (5-Year Trend)



The values for our 2008 – 2011 GHG emissions have been revised to reflect the new GHG reporting methodology adopted in 2011 (equity share approach), and the switch made in 2012 from using the 20 year to 100 year time CO₂ equivalent horizons (Intergovernmental Panel for Climate Change (IPCC) fourth assessment report, 2007). As such, GHG emissions disclosed in this report for 2008 – 2011 will differ from those disclosed in ADNOC's 2009 – 2011 Sustainability Reports.

NO_x Emissions (5-Year Trend)SO_x Emissions (5-Year Trend)

ZADCO

Minimising Gas Flares While Maintaining Oil Production

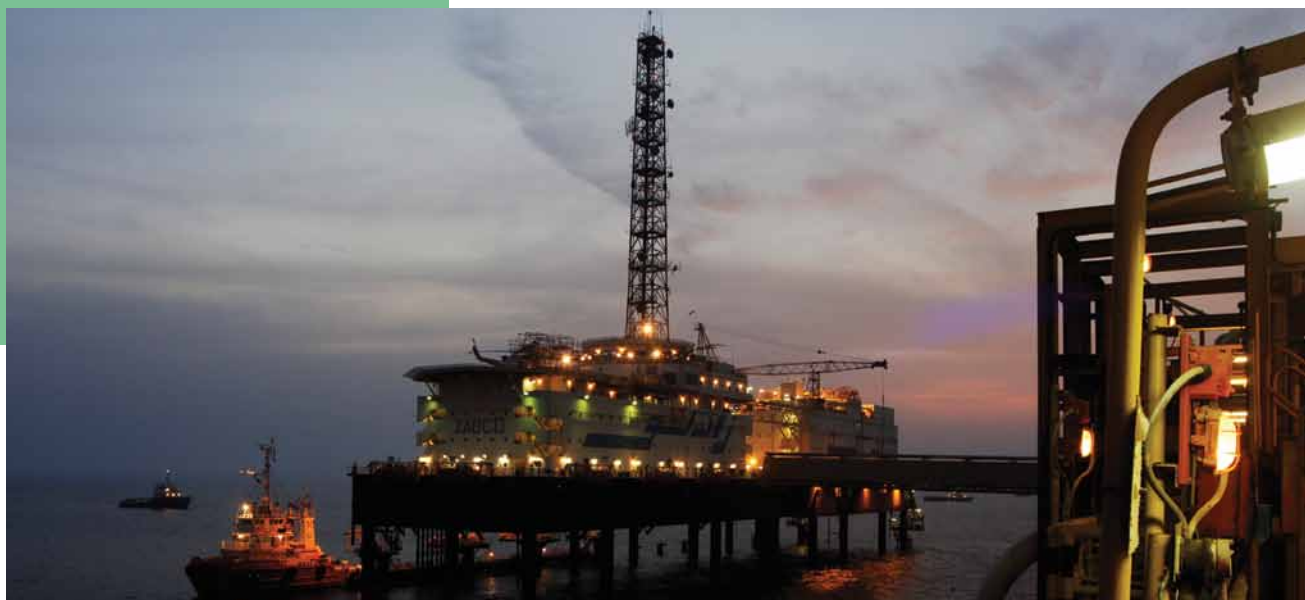
Every 6 to 8 years, the Condensate Stabilisation Unit (CSU) on Zirku Island must undergo a maintenance shutdown for a period of 4 weeks. During this time, excess high pressure (HP) gases and Low Pressure (LP) gases must be flared if ZADCO is to maintain their standard crude-oil production. Oil production is therefore typically reduced by over this period to avoid the excess flaring that would otherwise be required.

During 2012's planned shutdown of the Zirku Island CSU, ZADCO implemented several in-house operational adjustments and modifications (that involved LP gas recovery and reuse in existing gas compressors) in an ambitious attempt to maintain maximum oil production while avoiding gas flares.

As a result of the project, an estimated 480–520 million standard cubic feet (MMSCF) of gas flaring was eliminated during the CSU shutdown, (avoiding 64,000 tonnes of CO₂ emissions), while maximum crude oil production was maintained without violating plant design parameters. This approach will be applied in all future CSU shutdowns.

OUR INITIATIVES

- **ADCO** bettered their flaring target of 7.71 MMSCFD by achieving 4.73 MMSCFD. ADCO is currently undertaking a Clean Development Mechanism (CDM) project involving the use of a spiking gas compressor to recover and utilise the associated gas from the Sahil, Asab and Shah Full Field Development Project. The initiative is estimated to reduce gas flaring by 3.4 MMSCF by 2014.
- **Al Hosn Gas** developed a Flare Management Strategy for their Shah Gas Development Project, with the aim of minimizing flaring from well-testing and clean-up operations.
- **ADMA-OPCO** performed a modification to the off-gas ejector system at Umm Shaif Field that resulted in a reduction in amount of hydrocarbon continuously flared (from 0.25 MMSCFD to 0.05 MMSCFD) and a reduction of 73 MMSCF in fuel gas consumption, equivalent to a reduction of 5,100 tonnes of CO₂ emissions.
- **ADMA-OPCO** bettered the 5.6 MMSCFD flaring target for their overall operations by achieving 4.3 MMSCFD.
- **TAKREER** bettered their flaring target of 3.0 MMSCFD by achieving 2.03 MMSCFD.
- **ZADCO** bettered their flaring target of 4.04 MMSCFD by achieving 3.037 MMSCFD.



Emissions from Ozone Depleting Substances

In 1997, ADNOC initiated a phase-out programme for halon (an ozone layer depleting substance). The ADNOC Companies have since replaced large volumes from their facilities with zero ozone depleting fire-protection substances. The decommissioned halon stock is purified and stored at a centralised facility in Abu Dhabi in order to be disposed of through high efficiency thermal destruction.

With the exception of ADMA-OPCO and ZADCO, who are actively exploring viable alternatives that are appropriate for their complex offshore operations, all our ADNOC Companies operate halon-free. The halon stock remaining in use is approximately 20.3 tonnes. This is largely accounted for by ZADCO's halon stock at the Upper Zakum and Zirku crude oil storage tanks, which is planned to be phased-out by the first quarter of 2015 under a new progressive halon phase-out strategy.

The ADNOC Companies are also investing in replacing existing chlorofluorocarbon (CFC) and hydrochlorofluorocarbon (HCFC) units with environmentally-friendly refrigerants. No halons or CFCs are planned for use in any future developments and facility upgrades.

The table below provides a breakdown of ozone depleting substance (ODS) emissions and the corresponding CFC-II equivalent emissions from our operations in 2012.

ODS Emissions in 2012

	ODS Emissions (Tonnes)	CFC-II Equivalent (Tonnes)
Halons	0.4	2.6
CFCs	6.3	6.3
HCFCs	25	2.9
TOTAL	31.7	11.8

OUR INITIATIVES

- **Al Hosn Gas** undertook an advanced SO₂ dispersion modelling study for the purpose of developing a flaring shut-in strategy during well clean-up operations at the Shah Gas Field. The key benefits and purposes of the study included: creating a model to fit the unique topography of the Shah Gas Field; building meteorological data sets representative of the natural climatic conditions of the area to accurately predict the dispersion and flow patterns of SO₂ gas concentrations during flaring operations; and developing a flaring shut-in strategy to manage SO₂ impacts on ambient air quality.
- **GASCO** implemented an Advanced Process Control (APC) application at their Habshan-I Sulphur Recovery Unit (SRU) to more efficiently distribute the acid gas feed. Processing more acid gas into the higher efficiency SRU results in additional liquid sulphur production (by an average of 15 metric tonnes per day), and a reduced production of SO₂ emissions to the atmosphere by 10,000 metric tonnes per year.

TAKREER

99.9% Sulphur Recovery Target at Ruwais Refinery

In 2012, TAKREER successfully completed the implementation of the Shell Claus Off-gas Treatment (SCOT) Sulphur Recovery Project at Ruwais Refinery. The resulting reduction in sulphur emissions to the atmosphere from combustion of sulphur-containing gases was estimated at approximately 658 tonnes. The SCOT technology was also applied to the Green Diesel Project (GDP) that is implemented at Abu Dhabi Refinery. GDP is one of TAKREER's flagship projects that was successfully completed in 2012 to produce an ultra-low sulphur diesel product (less than 10 ppm sulphur content) that also meets tighter quality specifications for distillation,

poly-aromatics and total aromatics. As the sulphur is removed from the diesel, an acid gas is produced which is then processed in a sulphur recovery unit to recover elemental sulphur.

TAKREER selected the international best practice SCOT process over conventional processes to enable this sulphur recovery, despite the additional capital expenditure of AED 37 million, due to the superior sulphur recovery abilities that this technology offered. TAKREER plans to further optimize the operation of sulphur recovery units within its refinery through the integration of acid streams, re-routing of acid gas streams, optimization of feed rates, interconnecting pipelines and debottlenecking of SCOT processes. Ruwais Refinery targets to achieve an additional 154.5 tonnes of sulphur recovery per year (achieving an overall 99.9% recovery rate target for Ruwais Refinery).

Resource, Waste and Biodiversity Management

In 2012, the energy consumption across ADNOC's Group Company and Independent Operator activities amounted to 527 million GJ in direct energy (of which approximately 28,000 GJ was generated from renewable sources), and 21.2 million GJ in indirect energy.

Energy

The significant increase in the demand for energy across ADNOC's expanding operations, and the subsequent impact this has on the environment and our production costs, has necessitated the implementation of continuous and innovative energy efficiency measures across our oil and gas operations.

Our Performance

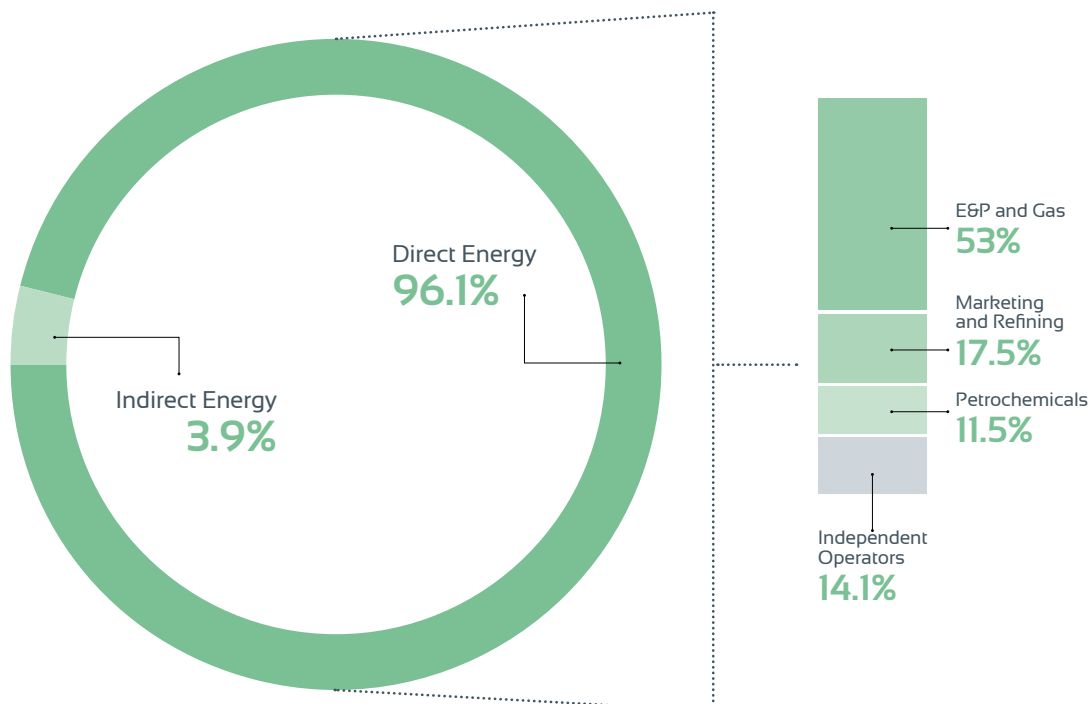
The majority of our direct energy consumption is accounted for by the Exploration and Production Companies, followed by the Independent Operators, Marketing and Refining Companies, and

Petrochemicals Companies respectively. Due to the nature of their operations, the relative contribution of the Shared Services Companies to ADNOC's direct energy consumption is considered to be relatively negligible.

Following the implementation of numerous energy efficiency-related initiatives, a total of 17.9 million GJ is reported to have been saved across the ADNOC Companies in 2012.

The ADNOC Companies are also studying the feasibility of introducing more renewable energy sources into their operations; over AED 7.5 million has been invested into these studies.

Energy Consumption by Type and Operation



OUR INITIATIVES

- **ADCO** continued to phase out inefficient on-site power generators (operating at 20% efficiency) by switching to more efficient power imports from Abu Dhabi Water and Electricity Authority (ADWEA). In 2012, the phase-out programme reached the Bab, Bu Hasa and Asab fields such that 77.2% of ADCO's total power requirements were supplied by ADWEA (compared to 67.7% in 2011 and 64% in 2010). ADCO also developed an energy management policy under which a comprehensive energy survey on all assets has been completed; an initiative to upgrade energy metering systems is currently being pursued.
- **ADNATCO & NGSCO** concluded an energy efficiency study for their vessels which has identified six opportunities for improvement. The implementation of these opportunities (for which start-up plans are currently underway) could result in a 21% reduction in fuel consumption (equivalent to a reduction of 450,000 tonnes in CO₂ emissions and a saving of AED 341 million).
- **Borouge** realised an 18.5% reduction in the energy intensity of polyolefin production in 2012 (6.42 MWh / tonne) compared to 2011 (7.88 MWh / tonne) with the development of an energy management system, whose implementation led to the identification of several energy reduction opportunities and helped raise overall awareness within the organisation.
- **GASCO** developed an energy efficiency management system for their operations in Bab and Habshan in accordance with the ISO 50001 Standard, which received accreditation in April 2012. With the management system's implementation, improvements in energy efficiency have been realised through a reduction in fuel gas consumption (equivalent to approximately 3,200 million standard cubic feet (MMSCF), and a subsequent reduction in greenhouse gas emissions (equivalent to approximately 212,000 tonnes of CO₂).
- **NDC** realised a 13% reduction in diesel consumption in 2012 compared to 2011 as a result of replacing the traditional mobile camps with centralised camps.
- **TAKREER** reduced temperature fluctuations in the distillation and stripper towers of their Abu Dhabi Refinery, resulting in annual fuel gas savings of approximately 168 tonnes / year (equivalent to AED 92,000 / year) and subsequent emission reduction of 900 – 1000 tonnes CO₂ equivalent / year. TAKREER also undertook a project to recover heat from steam fin-fan coolers to be reused for heating make-up water for their process facilities. The annual heat energy savings from this arrangement amount to approximately AED 337,000.



ADMA-OPCO

Elimination of Emissions Through Integrated Power Generation

ADMA-OPCO has been operating the Umm Shaif and Lower Zakum oil fields for more than 40 years. To support the expansion in production witnessed at both fields since their initial development in the 1960s, the original power generation infrastructure was upgraded to two separate systems. This power configuration however is insufficient to meet the production requirements planned under future projects, where additional load demand on the capability of existing electrical plants cannot be met.

Considering the unavoidable HSE risks and concerns associated with installing additional power generators on the offshore platforms (which include limited space, noise, and air emissions), ADMA-OPCO identified an opportunity to bypass this option by integrating the existing two power generating systems together. In addition to savings on capital and operating costs (estimated to be in excess of AED 367 million), integrating the two systems resulted in multiple benefits that include:

- Eliminating 40,000 tonnes / year in air emissions (based on emission estimates of existing generators);
- Avoidance of additional load stress due to introducing a new power generator;
- Eliminating HSE risks e.g. noise, fire, dust etc.;
- Optimum utilization of available power generator capabilities; and
- Better operational flexibility of the two power systems.

Water and Effluent

Minimising water consumption and promoting water conservation is one of ADNOC's key HSE objectives, and our ADNOC Companies continually assess the effectiveness of their water consumption and wastewater management strategies, whilst adhering to ADNOC's Codes of Practices on all matters relating to water and effluent discharges.

Our Performance

In 2012, approximately 4.2 billion cubic metres of water were extracted to support operating requirements across the ADNOC Companies. Over 99% of the total water withdrawn is extracted from the sea and used as cooling water. Most of this water is then discharged back to the sea after undergoing treatment, where required, to meet ADNOC discharge limits.

Across the ADNOC Company operations, there is one sensitive water body that may be significantly affected by the withdrawal of water. This is the Liwa shallow groundwater aquifer (located immediately north of Liwa, and covering a surface area of about 1,800 km²), from which ADCO withdraws water to perform their operations in the Bu Hasa and Asab fields. Shallow water supply wells are drilled in the brackish zone to conserve the freshwater resources.

In 2012, approximately 8.1 million cubic metres of water was recycled and reused across the ADNOC Companies. This is largely accounted for by the recycling of treated sanitary waste water for on-site irrigation of green areas (practiced by ADCO, GASCO, Borouge and TAKREER).



Water Withdrawal

Major Streams	Volume Extracted (Million m ³)
Surface water	4,190
Ground water	7
Municipal water	22
TOTAL	4,219

Effluent Discharge

Major Streams	Volume Extracted (Million m ³)
Cooling water	3,829
Process effluent and sewage water	363
TOTAL	4,192

Across the ADNOC Company operations, there is one sensitive water body that may be significantly affected by effluent discharge. This water body is the Marawah Marine Protected Area, located 100 km west of Abu Dhabi, which lies within ADOC's concession area. The Marawah Marine Protected Area is approximately 4,255 km² in size. To minimise their impact, ADOC's wastewater discharges are regulated and are in accordance with the discharge limits and criteria stipulated in the ADNOC Codes of Practice.

In keeping with ADNOC's objective towards produced water, all produced water is normally discharged to deep wells. Across ADNOC's operations in 2012, approximately 20 million m³ of produced water was discharged to deep wells. Treatment was practiced where necessary to reduce oil content of produced water to permissible levels (in accordance with ADNOC Codes of Practice requirements) prior to re-injection.

OUR INITIATIVES

- **ADCO** completed the installation of water flow regulators in offices and continues to extend their installation across ADCO's fields. In 2012, Bab offices and accommodation camps were included in the programme and water savings of 32,850 m³ were realised at these locations.
- **ADNOC DISTRIBUTION** implemented an approach by which 80% of car wash water across their service stations is recycled and reused.
- **ADNATCO & NGSCO** responded to new requirements on cargo residue and wash water discharges that were issued by the International Maritime Organisation (IMO). By retrofitting their bulk container vessels with separate storage tanks and independent flow lines (that would safely retain wash water for later safe discharge outside prohibited areas), ADNATCO & NGSCO were able to overcome the existing challenge surrounding the absence of shore reception and treatment facilities for cargo residue and wash water. This technique will be shared with IMO through their UAE representative and with other bulk carrier owners in bid to solve the challenges imposed by the new IMO requirement.
- **GASCO** initiated a water management study at Bu Hasa to analyse water consumption trends and identify water conservation and recycling opportunities. A commercially feasible plan has been developed that could reduce the site's water footprint by approximately 400,000m³ / year (~60% reduction) and deliver cost savings of AED 915,000 / year. One of the key initiatives under the programme involves reusing back wash water, after treatment using existing sludge drying beds. Some of the initiatives under this plan are currently under implementation.
- **FERTIL** reduced water consumption by 2.9 million m³ using a technique to recover ammonia plant process condensate.
- **NDC** realised a 10% reduction in water consumption in 2012 compared to 2011 as a result of its switching from mobile camps to centralised camps.
- **TAKREER** realised a reduction in water consumption of 45,829 m³ by implementing a series of water minimisation programmes at Abu Dhabi Refinery and Ruwais Refinery.

Materials

As an oil and gas producer, the majority of ADNOC's products are hydrocarbon products extracted from the ground and refined for consumers.

To perform their operations, the ADNOC Companies consume a wide variety of associated process and support materials (including fuel, chemical additives, semi-manufactured goods / parts and packaging materials). We started tracking these materials in 2009 and our reporting members are making year-on-year progress in developing reliable material data tracking systems. Materials used for construction purposes are excluded from ADNOC's scope of reporting on this environmental topic.

Our Performance

In 2012, approximately 2.98 million tonnes of input materials were consumed across the ADNOC Companies, of which nearly 50,285 tonnes were recycled input materials.

Waste

The majority of ADNOC Companies implement their own specific waste management standards, developed in compliance with the requirements stipulated in the ADNOC Codes of Practice, with additional procedures tailored to each of their operating plants. To ensure the centralised management of ADNOC's hazardous waste, ADNOC established the Central Environment Protection Facility (known as BeAAT) in Ruwais. Operated by TAKREER, BeAAT offers a range of treatment processes in a single site. Liquids, slurries, poly-chlorinated biphenyls (PCBs), heavy metals, and even highly flammable and ultra-toxic metal organic compounds can be treated at BeAAT.

BeAAT is planning to establish a Natural Occurring Radioactive Material (NORM) Plant in parallel with the existing hazardous waste treatment plant.

Waste Drilling Fluids and Cuttings

Drilling operations across ADNOC's business lines are performed through NDC, who takes every care to perform its activities in parallel to protecting the environment and safeguarding its assets. The choice of drilling fluid to be used in our fields (water-based drilling fluids, oil-based drilling fluids, or a combination of both) is determined by rigorous risk assessments of different drilling fluid systems, which consider and seek to balance the potentially conflicting health, safety and environmental requirements that each system presents. The choice is also made with due regard of ADNOC's overarching HSE objective to minimise the use of oil-based mud in our operations.

ADCO and ZADCO use a combination of oil-based muds (OBM) and water-based muds (WBM) in their fields. OBM is recovered, reconditioned and reused in future wells. OBM drill cuttings are treated by a thermal desorption technique in ADCO's Thermal Desorption Plant (for ADCO cuttings), and BeAAT (for ZADCO's cuttings). No oil-based drilling mud and cuttings are discharged to the environment. ADMA-OPCO, Al Hosn Gas and our Independent Operators (ADOC, BUNDUQ and TOTAL ABK) use only water-based muds to perform their drilling activities. Water-based muds and cuttings across the ADNOC Companies are treated to ADNOC standards, where required, or discharged as inert material to the sea or desert environment.

Waste Drilling Fluids and Cuttings

		Tonnes
Oil-based	Drill mud	35,241
	Drill cuttings	19,861
Water-based	Drill mud	156,445
	Drill cuttings	148,095

Hazardous and Non-hazardous Waste

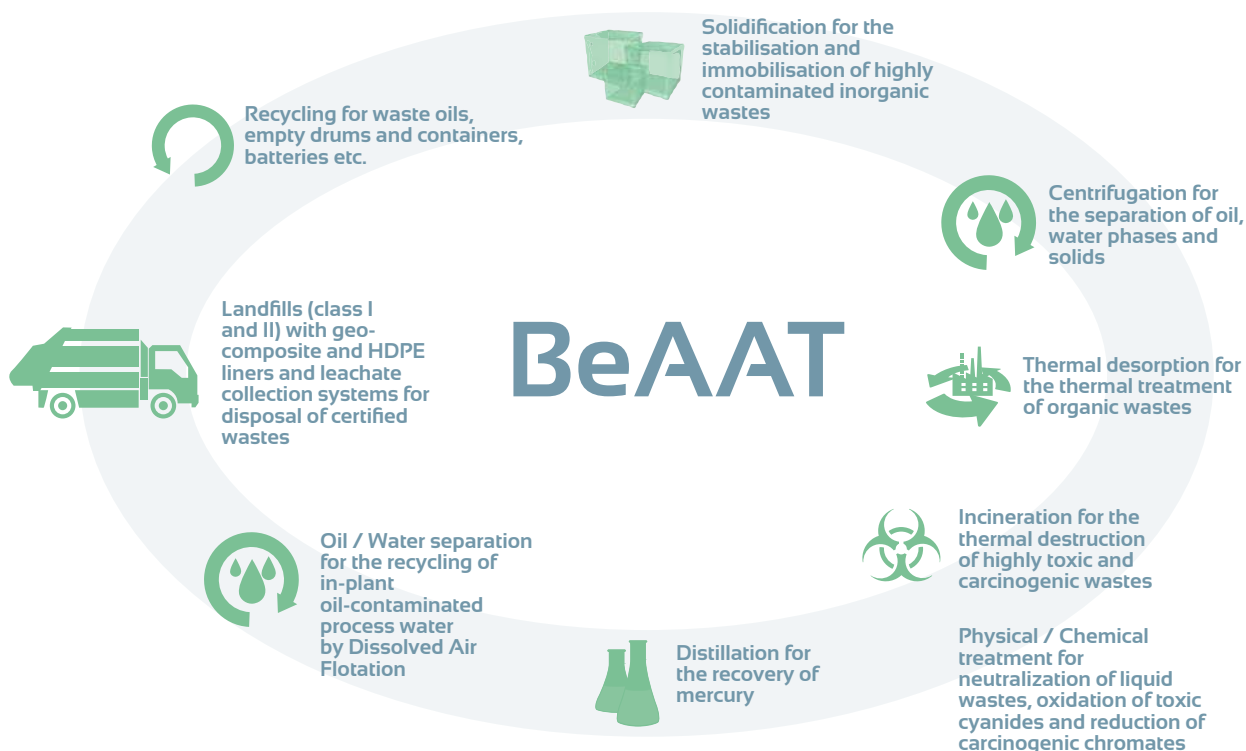
		Tonnes
Hazardous Waste¹	Quantity Generated	41,197
	Quantity Treated	
	By BeAAT ²	23,551
	By self	1,117
	Other ³	16,529
Non-hazardous Waste¹	Quantity Generated	201,409
	Quantity Treated / Disposed	
	Composting	254
	Recycling	2,823
	Incineration	472
	Landfill	11,658
	Other (unspecified)	186,202

¹ These quantities exclude drill mud and drill cuttings

² A breakdown of this waste by BeAAT treatment method is not available

³ This waste is sold to a third party (15,005 tonnes) or sent to the municipal authority for disposal (1,524 tonnes)

BeAAT Waste Management Techniques



OUR INITIATIVES

→ **ZADCO** undertook a programme to divert 60% of the organic waste generated on Zirku Island away from landfill, and instead recycle it as fertilizer material for the enhancement of the greenery on the island. Zirku Island now boasts over 7,000 seasonal flowers, 8,000 plants, 129,000m² grass-covered ground, and 13,000 mangrove plants. In 2013, ZADCO plans to increase compost production by 15% and increase green-area coverage by 20%.

Biodiversity

The ADNOC Companies operate in a variety of terrestrial and marine environments which range from areas of low biodiversity value to those of high ecological sensitivity. As part of ADNOC's commitment to the conservation of natural resources, ecosystems, wildlife and wildlife habitats, the ADNOC Companies take every care to integrate biodiversity considerations and management plans into their HSEIA process, in order to ensure their operating environments are protected and capable of delivering their ecological services.

These efforts are supplemented with regular inspections to monitor and mitigate potential adverse ecological impacts that may arise throughout project lifetimes.

ADNOC also takes a proactive approach towards enhancing the productivity and biodiversity of Abu Dhabi's marine environment, and has a dedicated team of marine specialists whose role is to complement marine protection activities through a number of rehabilitation and proliferation projects that involve mangrove plantation and the deployment of artificial reef structures across our concession areas.

Our Performance

Across ADNOC's operations in 2012, there were a total of eight operating sites located in or adjacent to (within a 50 km radius) protected areas or areas of high biodiversity value. Biodiversity action plans (BAPs) are in place across all eight operating sites, and no significant biodiversity impacts from activities were reported in 2012.

Operating Sites Located In or Adjacent to Protected Areas or Areas of High Biodiversity Value

Site	Description	Biodiversity Management
ADCO	Qusahwira Oil Field (58 km ²)	<ul style="list-style-type: none"> • Desk-top studies to establish species present in ADCO's concession areas (birds, mammals, reptiles, plants). • List of priority species based on IUCN Red List of Threatened Species. • Biodiversity awareness campaigns (targeted at employees and contractors) with a special focus on transportation impacts in biodiversity sensitive areas. • A book on biodiversity found in ADCO concession areas was created. • Sign boards in three languages on the rare and endangered species present in Qusahwira. • Leaflet "Why Biodiversity Matters" circulated across ADCO personnel and contractors.
	Mender Oil Field (62 km ²)	
	Al Dabbiya Oil Field (296 km ²)	
	Jebbel Dhanna Terminal (49 km ²)	
ADOC	Mubarraz Island (569 km ²)	<ul style="list-style-type: none"> • Mangrove plantation project (82,487 seedlings were planted in 2012; 111,310 seedlings in 2011; 65,200 seedlings in 2010 and 13,000 seedlings in 2009). The project has been implemented on the island since 1983. • Sea grass plantation and coral reef preservation projects. • Breeding and monitoring of Ospreys
Al Hosn Gas	Shah Arab Gas Field (700 km ²)	<ul style="list-style-type: none"> • Visual inspections for flora and fauna that may be impacted by construction work. • Procedures to be developed to record and report sighting of rare species, nesting areas and ecological finds identified during all works. • Avoiding fencing of the interpad lines and transfer lines to maintain gazelle movement through the area. • Minimise off-road driving. • Construct rig accommodation camps, as far as is practical, by avoiding removal of vegetation; destruction or disturbance to animal burrows or dens; and areas identified as containing desert roses. • Construct laydown areas and temporary access roads after due consideration of ecological constraints in the vicinity. • All sites including temporary laydown areas and access roads should be reinstated to their original condition on completion of works.
	Shah Gas Plant (12 km ²)	
ZADCO	Zirku Island (8 km ²)	<ul style="list-style-type: none"> • The west coast of Zirku Island was self-declared by ZADCO as a protected exclusion zone. • In partnership with ADNOC trained volunteers conduct visual assessments of the turtles and their nesting grounds, particularly during their spawning season.



IUCN Red List Species identified across ADNOC's Operations

IUCN Red List of Threatened Species	No. of Species Identified	Species
Critically Endangered	1	Hawksbill Turtle
Endangered	3	Green Turtle, Fin Whale, Arabian Tahr
Vulnerable	15	Saker Falcon, Spotted Eagle, Arabian Oryx, Sand Gazelle, Arabian Gazelle, Mountain Gazelle, Nubian Ibex, Dugong, Fossil Shark, Tawny Nurse Shark, Whale Shark, Leopard Shark, Bowmouth Guitarfish, Dalmatian Pelican, Cairo Spiny Mouse
Near-threatened	8	Sand Cat, Striped Hyaena, Estuary Cod, Whitecheek Shark, Pygmy Devil Ray, Tiger Shark, Pallid Harrier, Persian Shearwater
Least Concerned	>150	E.g. Red Fox, Desert Hedgehog, Grey Dolphin, Arabian Hare, Wild Cat, Golden Eagle, Mouse-tailed Bat, and Long-legged Buzzard

OUR INITIATIVES

In 2012, ADNOC's environmental protection team extended our marine biodiversity enhancement efforts across three of our key projects.

MANGROVES

Mangroves are well-adapted to deal with natural stressors (temperature, salinity, anoxia, and ultraviolet (UV) rays) and have an enormous ecological value and CO₂ sequestration ability. In 2012, our mangrove nurseries located across ADNOC's concession areas produced a total of five million seedlings.

- The transplanted mangrove seedlings in Sas Al Nakhl Island from 2011 were re-visited to investigate their health. The success rate of plantation was found to exceed 90%.
- 75,000 mangrove seedlings were transplanted along the South Eastern Coast of Zirku Island and in an artificial lagoon. The survivorship of the transplanted mangrove along the shoreline ranged from 35 – 40% because of the high wave action and accumulation of algae on the transplanted seedlings immediately after plantation while in the artificial lagoon the survivorship was close to 95%.
- 2,000 mangrove seedlings were transplanted in Musaffah, Nita Island and Umm Elanbar Island to test the suitability of these areas for mangrove transplantation.
- 600,000 mangrove seeds were planted in the Al Dabbiya nursery, and 10,000 mangrove seedlings were planted in Al Dabbiya as a pilot project. The survivorship of the transplanted mangrove seeds exceeded 95%.

SEAGRASS

Seagrass beds serve as forage and nursery grounds for endangered species (such as dugong and sea turtles), fish and crustaceans. They also act as carbon dioxide sinks, contaminant and sediment filters and natural water purifiers. As such, the restoration of Abu Dhabi's seagrass beds will improve water quality, and also benefit important species.

From 2010 – 2012, ADNOC conducted two seagrass plantation projects in Mubarraz Island and in Al Dabbiya. Different transplantation and propagation methods were trialled to select the most efficient method.

CORAL REEFS

The health of coral reefs continues to decline around the world and the Arabian Gulf is one of the areas most severely affected due to high sea water temperature fluctuations. ADNOC is therefore devoting significant effort to preserving and enhancing these ecosystems through a number of coral reef rehabilitation projects that involve the deployment of artificial reef structures across western areas of Abu Dhabi.

On-going monitoring of their condition in 2012 revealed that a balanced ecological process is at work, consisting of high diversity (at least 20 different fish species inhabiting the structures).

Emergency Response and Crisis Management

The potential threat of spills does not only exist within our operations, but also exists as a result of the industrial, commercial and political activities surrounding ADNOC's areas of operation.

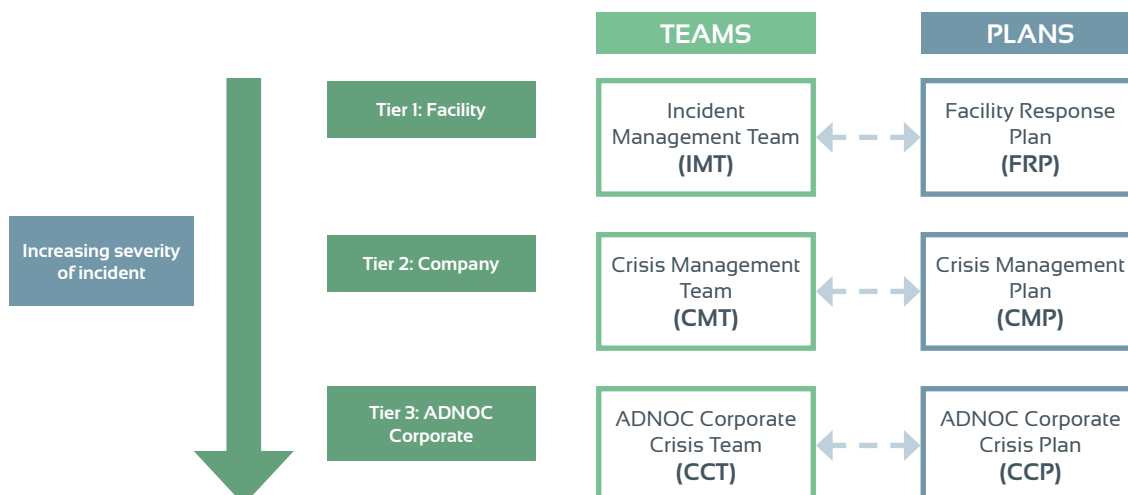
The management of oil spills is dominated by the ADNOC Code of Practice on Crisis and Emergency Management, which calls for a tiered response structure. The philosophy of the tiered response structure is that every facility will provide an immediate response capability directly supported by a corporate response organisation and by mutual aid. The final tier of response is attained by promoting and expanding relationships with the regional and international oil industry and oil spill response providers.

ADNOC's Corporate Crisis Team works closely with the Abu Dhabi Maritime Security Council and the UAE Armed Forces. Our team is strategically established across the Abu Dhabi Emirate, where we have two major oil spill response centres located at Mussafah and Ruwais, a response outpost at Al-Dabbiya, and a response vessel anchored between Zirku Island and Das Island. Our well-trained personnel are capable of providing support to the teams already established at each of the ADNOC Group Companies, and are equipped to deploy quickly with significant stockpiles of equipment to respond to larger Tier 2 spills.

We are looking to rationalize all oil spill response equipment to ensure uniformity across the ADNOC Group Companies. This serves the dual purpose of enhancing the capability for mutual aid and improving maintenance programmes, in addition to the benefits in economies of scale. We have recently received delivery of several new vessels including the first of several fast response vessels, a small passenger ferry, a multi-purpose hovercraft, and several escort tugs permanently equipped with oil spill response equipment. The addition of these assets will improve our team's response time, even to locations with difficult access.

Our in-house training programmes are accredited by The Nautical Institute in the UK to meet the requirements of the International Maritime Organization (IMO). During the year and with oversight and support from the National Emergency Crisis and Disasters Management Authority (NCEMA), our personnel also undertake several international exchange programmes to share knowledge with international professionals.

Tiered Emergency Response Structure



Our Performance

Across ADNOC's operations in 2012, a total of 25 hydrocarbon spill incidents were recorded involving the release of more than one barrel of oil equivalent (boe), of which two were considered to be significant spills (involving the release of more than 100 boe).

None of the spill incidents, including significant spill incidents, occurred in environmentally sensitive locations or protected areas. Minor adverse environmental impact was reported for all spill incidents. No spill dispersant agents were used or required.

The spill incidents have highlighted a need to improve risk management and operational integrity across ADNOC's operations, and to improve the response capabilities (Tier 1 response in particular) across our companies.

Hydrocarbon Spill Incidents

To water surfaces

Total number of spill incidents	2 ^a
Total volume released (boe)	52.3
Total volume recovered (boe)	2
Recovery rate (%)	3.8

To land surfaces

Total number of spill incidents	23 ^b
Total volume released (boe)	1,073 ^c
Total volume recovered (boe)	880.6 ^c
Recovery rate (%)	82.1

^a One of the two incidents involved the release of oil (50.3 boe) and the other involved the release of oily water (2 boe).

^b The majority of spill incidents involved the release of oil (1,070.5 boe); two incidents involved the release of oil-based mud (2.5 boe).

^c The volumes released and recovered relate to only 13 out of the 23 incidents. The volumes corresponding to the remaining 10 incidents could not be quantified, however are included in the table above as they are assumed each to be in excess of one barrel of oil equivalent.

ZADCO

Innovative Rig-less Solution for Restoring the Integrity of Downhole Safety Valves

Downhole safety valves (DHSVs) play a critical role in preventing oil spills from offshore wells by automatically blocking the flow of oil and gas to the well surface in the event of flow irregularity. Over time however, these crucial devices lose receptiveness to surface remotes for automatic shutdown, requiring costly and time-intensive repairs.

The conventional well workover process of repairing DHSVs uses enormous amounts of energy, releases huge quantities of GHG emissions, and generates 10,000 feet of pipe waste and hazardous sludge.

After searching for alternative repair techniques, ZADCO decided to switch to a new type of seal, B-type seals, which are not commonly used with DHSVs. B-type seals may be installed and repaired using a rig-less procedure, which is vastly preferable to the traditional well workover process. The new rig-less approach results in almost zero waste, no hazardous sludge, and insignificant energy consumption.

The new system also boasts great time efficiency, requiring only three hours of shutdown compared to 21 days for a workover. Since implementing this approach, ZADCO has successfully resumed operation in damaged wells while maintaining well integrity. Each well has been operational for 6 months without interruption or valve failure.



Significant Hydrocarbon Spill Incidents

SIGNIFICANT SPILL INCIDENTS		
Incident 1	Activity	Exploration and Production
	Cause of incident	Leak as a result of internal corrosion in flow lines
	Material released	Oil
	Spill destination	Land surface
	Total volume released (boe)	255.8
	Total volume recovered (boe)	255.8
	Recovery rate (%)	100
	Clean-up measures	Contaminated soil was extracted and sent to BeAAT for suitable disposal. No dispersants were used in the process.
Incident 2	Activity	Refining
	Cause of incident	Overflow in internal flow lines
	Material released	Oil
	Spill destination	Land surface
	Total volume released (boe)	566
	Total volume recovered (boe)	377.4
	Recovery rate (%)	66.7
	Clean-up measures	Contaminated soil was extracted and sent to BeAAT for suitable disposal. No dispersants were used in the process.

Furthermore, one non-hydrocarbon spill incident involving the release of sulphur to land surfaces as a result of a leak in flow lines was reported. The quantity of material released could not be quantified; however the contaminated soil resulting from the spill was effectively disposed with negligible environmental impact.

Environmental Impacts of Transportation

ADNOC began to examine the environmental impacts of transporting our products in 2009, upon preparing for the release of our first ADNOC Sustainability Report. Since then, our Group Companies have been putting in place systems to capture this data, whilst gradually expanding the scope to cover their local, regional and international operations.

Efforts are still underway to capture the transportation impacts of some of our domestic product movements that are undertaken by contractors, and those of our international

shipments that are performed by third parties (i.e. those not undertaken by ADNATCO & NGSCO).

ADNOC's intention is to develop an accurate and comprehensive baseline of our transportation impacts before we embark on developing a high level and target-based approach for their management. In the meantime, the ADNOC Companies are driven by ADNOC's overarching HSE objectives to devise strategies in order to minimise the transportation-related impacts associated with their operations.

OUR INITIATIVES

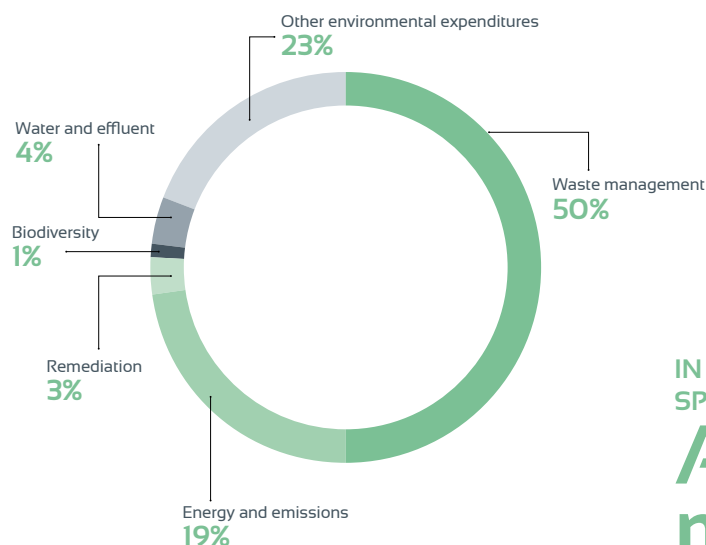
- **GASCO** is collaborating with Etihad Rail in implementing the Shah and Habshan Rail (SHR) Granulated Sulphur Transportation and Management Project to install a 250 km single track rail system in order to reduce the environmental and safety impacts associated with the existing truck method of transporting sulphur from Habshan to Ruwais. Throughout project design and implementation, strong emphasis will be placed on HSE aspects in accordance with the ADNOC Codes of Practice in order to minimise and mitigate adverse impacts on the environment and surrounding communities.
- **TAKREER** implemented the Inter Refineries Pipeline (IRP) Project in order to connect Ruwais Refinery with Abu Dhabi Refinery, and hence eliminate cargo ship movement and tanker transport of raw materials and products between the two refineries. The project has delivered multiple HSE benefits including huge reductions in emissions, operational flexibility, increased safety at berths and reduced hydrocarbon exposure to personnel. An extension to this project, IRP-II is also underway to link the refineries with the Al-Ain storage terminal, Mussafah terminal and the Abu Dhabi International Airport. The project is being implemented in anticipation of the increase in demand for refined products in the foreseeable future.

To ensure pipeline integrity, approximately 2,000 test point locations along the new pipelines are visited weekly by plant integrity staff for measurement and visual inspection. To minimise the environmental impacts associated with driving along these pipeline corridors, in addition to the safety hazards associated with the desert (e.g. heat stresses and car accidents), TAKREER installed two electronic system technologies at these locations, the Supervisory Control Data Acquisition System (SCADA) and wireless global system for mobile (GSM)-based monitoring system, which have reduced the need for manual inspections. In addition to reducing travel frequency, the method has assisted TAKREER with achieving zero safety incidents so far.

Environmental Expenditure

Whilst no formal ADNOC-wide study of the financial implications of climate change on our operations has been conducted, our Companies are investing heavily in a wide-range of technologies and environmental practices in an effort to minimise and mitigate the adverse environmental impacts of our operations.

Breakdown of Environmental Expenditure by Category



IN 2012, ADNOC COMPANIES
SPENT MORE THAN
AED 387.5
million
IN ENVIRONMENTAL EXPENDITURE



ADNOC COMPANIES
IMPLEMENT A
TIERED
APPROACH
TOWARDS MANAGING
OCCUPATIONAL HEALTH
AND SAFETY ACROSS
OUR OPERATIONS

865
MILLION

MAN-HOURS REGISTERED
ACROSS THE ADNOC
COMPANYS' EMPLOYEE
AND CONTRACTOR
WORKFORCE

OUR 2012 SAFETY
PERFORMANCE
HIGHLIGHTS THE
NECESSITY FOR
ADOPTING A MORE
RIGOROUS APPROACH
TOWARDS SCREENING
AND MANAGING
OUR CONTRACTOR
WORKFORCE

HEALTH AND SAFETY PERFORMANCE

The health and safety of our workforce comes first across our lines of business, and ADNOC strives to build a workplace culture of zero injuries, illnesses and incidents.

Occupational Safety

Occupational safety across our operations is managed at an organisational level through the relevant ADNOC Codes of Practice.

The responsibility for ensuring the proper implementation of these operating standards rests with senior company management.

Occupational safety is also managed at a corporate level by the individual HSE committees that are in place across the ADNOC Companies' sites and operations. The number of HSE committees per company ranges depending on size, number of operating sites and the level of risk. The majority of these committees have joint management / labour representation.

Tiered Approach Towards Occupational Safety



From our senior leadership to our front-line supervisors, visible, consistent commitment to safety makes a significant impact to the way ADNOC conducts our operations. Our leaders hold themselves and others accountable for demonstrating caring, safe behaviors and correcting hazardous situations. Safety is also a personal value for all our employees and contractors, who are required to ensure that all governing safety rules and operating procedures are followed.

Our Performance

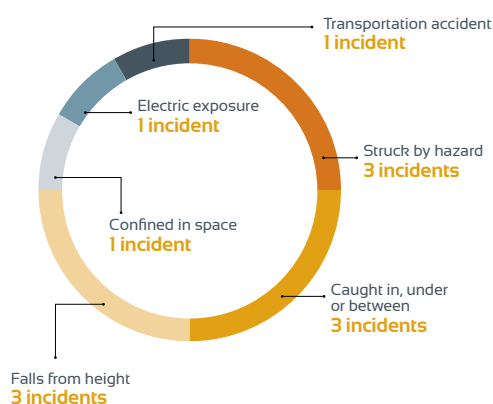
Despite our untiring efforts to reinforce the safety culture across our operations, there were twelve regrettable work-related fatalities amongst the ADNOC Companies in 2012, which affected our contractor workforce.

We are determined to learn from these incidents and improve the way we screen, select and manage our contractors to ensure we bring our workforce

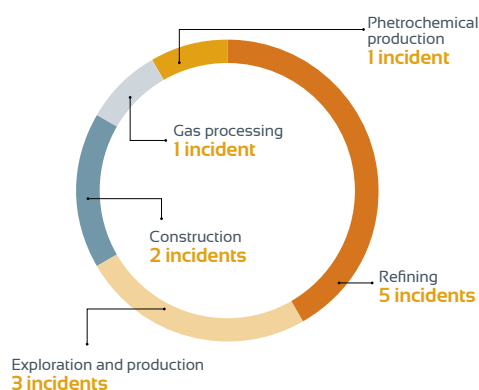
home and sustain their trust in our leadership and operations.

ADNOC's 2012 Fatal Accident Rate (FAR) of 1.39 fatalities per 100 million man-hours is lower than the industry benchmark of 2.38 fatalities per 100 million man-hours (International Association of Oil and Gas Producers (OGP) average).

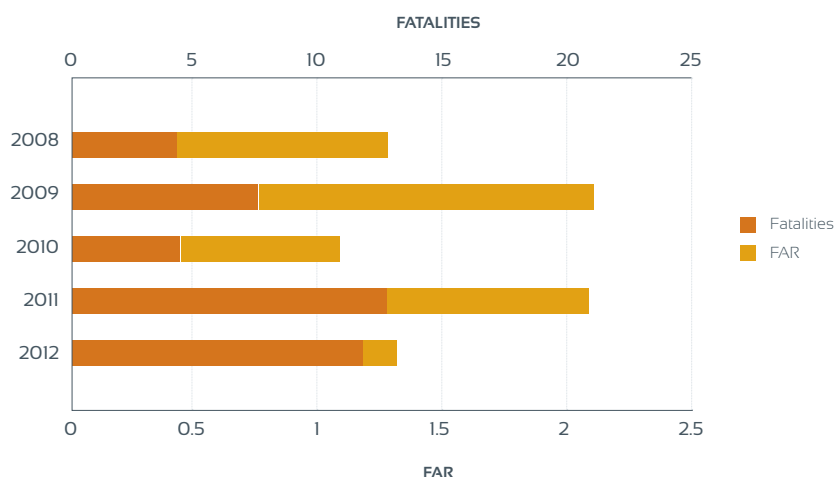
Fatalities by Incident Category



Fatalities by Work Activity



Fatalities and FAR (5-Year Trend)



Lost Time Injuries

In 2012, ADNOC recorded a Lost Time Injury Frequency (LTIF) of 0.10 injuries per million man-hours. This is 28.5% lower than that recorded in 2011

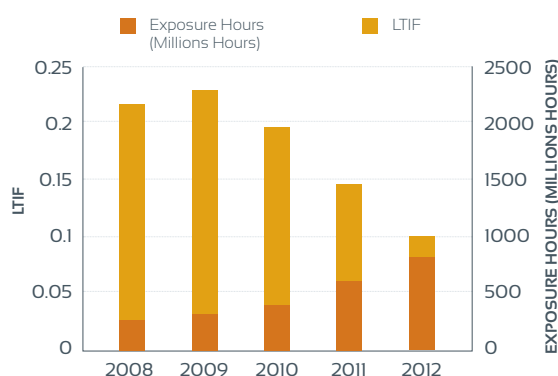
(where we recorded a LTIF of 0.14), and is lower than the industry benchmark of 0.48 injuries per million man-hours (International Association of Oil and Gas Producers (OGP) average).

Total Recordable Incidents

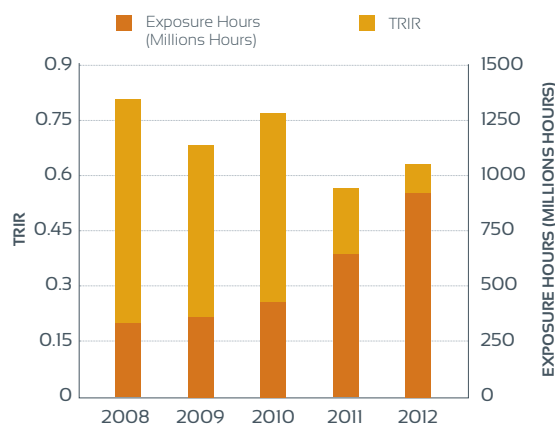
ADNOC's 2012 Total Recordable Incident Rate (TRIR) of 0.63 incidents per million man-hours is 14.5% higher than that reported in 2011 (where we recorded a TRIR of 0.55).

Our 2012 TRIR is also lower than the industry benchmark of 1.74 injuries per million man-hours (International Association of Oil and Gas Producers (OGP) average).

Exposure Hours and LTIF (5-Year Trend)



Exposure Hours and TRIR (5-Year Trend)



GASCO

Improving Confined Space Entry Safety Through Video Surveillance and Heat Stress Avoidance

Entering a confined space is a high risk activity which involves many hazards e.g. exposure to toxic/explosive gases, exposure to harmful chemicals, poor air quality, fire hazard, and process-related hazards such as residual chemicals, release of contents and biological hazards.

GASCO Habshan and Ruwais have implemented an innovative technology based on a monitoring concept to manage confined space activities. This technological approach significantly increased the safety of workers by enhancing the manhole watcher function and encompasses:

- Access control
- Video surveillance
- Two way communication
- Visual and audible alarming
- Permanent gas detection
- Vortex cooling technology (employees working in extreme temperatures wear personal air conditioners. Cold air circulates through a "diffuse air vest" to cool the upper body).

The newly implemented monitoring technology reduces worker incidents and fatalities when entering confined spaces by transmitting all data (via wireless connection) to the central control unit. Trained and experienced operators continuously monitor and analyse respective data, and, if necessary take mitigating action.



Road Safety

Road safety is an integral component of ADNOC's safety objective concerning 'no harm to people and surrounding communities'. Our Companies are encouraged to develop road safety management plans that are tailored to the nature and location of their operations, and many have adopted advanced fleet management systems that follow vehicle movements in real-time and provide accurate driving behavioral reports that include violations as they happen (e.g. harsh acceleration and breaking, over speeding and vehicle idling), in order to ensure safety is pursued at all times.

Despite considerable efforts to improve road safety, a total of 365 incidents involving road transportation were reported in 2012. Compared to 2011, road transportation incidents reported by employees increased by 41% (from 80 to 113), whilst those reported by our contractors increased by 23.5% (from 204 to 252).

We will continue to work to improve road safety for our employees and contractors by addressing the various behavioural and operational challenges associated with these incidents.

Al Hosn Gas

Remote Road Safety Monitoring with Professional Mobile Traffic Safety Teams

Three Road Safety Monitoring Teams (RSMTs) were established at Al Hosn Gas's Shah Gas Development in 2012 in order to improve land transportation safety and reduce the number of vehicle incidents and vehicle-related near misses.

The three RSMTs are responsible for monitoring the site roads and enforcing the requirements of the Company Standard on Land Transportation Safety with regards to both driver behaviour and vehicle specifications. The RSMTs also provide support on road safety initiatives and offer road safety advice to drivers.

All company and contractor vehicles receive a Pre-Mobilisation Inspection by the RSMT. When the vehicle passes the inspection, it is fitted with an e-Tag (Active Radio Frequency Identification) that allows the RSMTs to identify the vehicle on the road.

The roving teams stop unsafe vehicles which do not meet vehicle specifications, communicate the violation to the driver, and educate the driver on the relevant requirements. With over two thousand vehicles on site every day, the RSMTs have enabled Al Hosn Gas to effectively implement its land transportation safety requirements and ensure a safe driving and working environment.

The programme has been very successful, resulting in a reduction of vehicle incidents and driver violations since its inception.



Safety Performance (5-Year Trend)

	2008	2009	2010	2011	2012
Exposure Hours (Million hours)	298	313	355	589	865
Fatality (Work-related incidents)	4	7	4	13	12
Fatal Accident Rate (Per 100 million man-hours)	1.34	2.23	1.13	2.21	1.39
Fatality (Non-work related incidents)	9	7	11	19	23
Disability	2	1	0	2	3
Lost Time Incident (LTI)	68	75	66	80	89
Lost Days (Scheduled work days)	1,663	2,372	1,482	1,747	2,432
Lost Day Rate (Per 1 million man-hours)	5.58	7.58	4.17	2.97	2.81
Lost Time Incident Frequency (LTIF) (Per 1 million man-hours)	0.23	0.24	0.19	0.14	0.10
Total Recordable Incident Rate (TRIR) (Per 1 million man-hours)	0.79	0.68	0.76	0.55	0.63
Vehicle Incidents	169	135	177	284	365
Aircraft Incidents	2	5	2	4	4
Accidents Involving Third Parties	2	0	4	11	6
High Potential Near Miss Incidents	Requirement introduced in 2009	164	131	259	72
Near Miss Incidents	Requirement introduced in 2009	24,255	30,055	50,365	58,716

OUR INITIATIVES

→ **Al Hosn Gas** installed the latest in long-range detector technology at their Shah Gas Development Project to ensure that all sensitive receptors (up to 3.5 km from the well) are protected from exposure to H_2S and SO_2 . The detectors provide live data feeds of H_2S and SO_2 levels during operational activities, including well testing, which is accessible from the rig site in Shah and headquarter offices in Abu Dhabi.

→ **Borouge** recorded 78 million man hours in the construction of their Borouge-3 plant in Ruwais, of which over 40 million man hours were achieved without a lost time injury, and for which the overall TRIR was 0.10 (based on 1 million man-hours).

Borouge also undertook a campaign to address employee and family personal safety (home and travel) in their commitment to instil a safety culture that goes beyond the operational facility boundaries.

→ **GASCO** achieved 80 million safe man-hours at their Habshan 5 integrated Gas Development (IGD) Process Plant as a result of the committed efforts of GASCO and their contractor and sub-contractor workforce towards HSE.

→ **NDC** introduced an automated and mechanized pipe handling system to replace manual handling. The total elimination of human-equipment interface delivered multiple HSE benefits including alleviating the derrickman from the derrick (and thus eliminating working at heights), the complete elimination of repetitive stress injuries due to manual handling, elimination of hand and finger injuries and overall accident and incident reduction.

NDC also upgraded their system of managing blowout preventers (BOPs) and other well control equipment. The previous practice of carrying out examinations and recertification was replaced with a more elaborate process requiring monthly monitoring of well control equipment, annual inspections, intermediate (2.5 year) strip-down inspections and certification, and five-year restoration to design tolerances and re-certification.

→ **TAKREER** developed a new sampling technique to reduce the exposure of personnel to hazardous hydrocarbon vapours whilst undertaking sampling and quality control checks on TAKREER's highly volatile products.

→ **ZADCO** established a new risk management system especially for operations performed at their offshore Satah Field, which contains high levels of the lethal H_2S gas. International best practice was adopted throughout the system's design and implementation, and was an important tool in enabling ZADCO to maintain their record of zero fatalities and zero lost-time injuries. The application of the risk management system has been extended to the Umm Al-Dalkh Field adjacent to the Satah Field.



Process Safety and Asset Integrity

Process safety focuses on preventing fires, explosions and accidental chemical releases in chemical process facilities or other facilities dealing with hazardous materials such as offshore platforms, pipelines and gas production and distribution systems.

At ADNOC, we manage and safeguard the integrity of our facilities, operating systems and processes by applying industry-wide and international safety standards and procedures throughout our facility and asset design, construction, start-up activities and modifications.

Process safety incidents are reported internally as part of the ADNOC Code of Practice incident reporting process. They are managed internally by the ADNOC Company and also by the appropriate business line directorate, with oversight from the ADNOC HSE Division.

Our Performance

Annual reporting of process safety incidents at a corporate level was not mandatory until 2010, when we introduced the process safety performance indicators for the refining and petrochemical sector, specified in the American Petroleum Institute Recommended Practice 754 (API RP 754).

Process Safety Performance

	No. of Events
Tier 1 Performance Safety Events*	5 ^a
Tier 2 Performance Safety Events*	9 ^b

* The data excludes construction activities and the activities of Petroleum Institute, for which process safety data is not applicable as per ADNOC requirements.

^a Break down by activity: 2 oil and gas production, 1 refining and 2 petrochemical production

^b Break down by activity: 7 oil and gas production and 2 petrochemical production

ADGAS

Life Extension of Desalination Unit by Improving Acid Wash Technique

ADGAS employs three multiple-effect desalination units to support the needs of the LNG complex on Das Island. As per design, two units are to be in operation with the third on standby.

Over the past few years, a 25% decline in the output of all three units was experienced. All three units had to therefore be in operation to meet total plant requirements. However, with no stand-by desalination unit available, the LNG complex operation was under threat should any of the three units fail.

Investigations identified scaling to be the problem, whereby the existing procedure of descaling by acid-wash with final pH of 3 ineffective. An improved acid wash procedure with final pH of 1-1.5 was therefore adopted.

The application of the simple yet effective method across the desalination units restored their production to design values. Only two desalination units are currently being operated, with the third unit back on standby. Furthermore, by stopping one unit, the overall steam consumption has reduced by 87,600 tons/year, equivalent to approximately AED 4 million per year and also an equivalent reduction in 14,590 tonnes per year in CO₂ emissions.



OUR INITIATIVES

- **Al Hosn Gas** devised the Emergency Exercise Risk Assessment Utility (ExRAY) as an emergency response assurance system that provides a methodology to help exercise planners identify emergency exercise risks (including HSE risks as well as business risks e.g. reputation and production). The system also provides guidance on the safeguards and risk reduction measures to consider, giving users confidence in the exercise preparation.
- **Borouge** re-engineered the injection point of a very dangerous pyrophoric product, triethylaluminium (TEAL), which is required to activate the process catalyst, hence reducing the risk of smoke and small fires from occurring in their plants.
- **FERTIL** implemented a process re-configuration that involves utilizing off-gases containing oxygen and ammonia, in order to overcome the issue of corrosion and frequent tube failure in the decomposer unit of their Urea Plant. Plant integrity was improved together with urea production, and emissions of ammonia were reduced to <70 ppm (compared to earlier emissions that exceeded 200 ppm).
- **GASCO** undertook an asset-wide initiative to identify critical processes and establish their safe operating limits (SOLs) through a series of critical tags. The tags and process information was automated to enable continuous monitoring without additional manpower. In Monitoring safe excursions of SOLs is a leading process safety indicator utilized in preventing loss of primary containment (LOPC) events.
- **IRSHAD** received the last two Azimuth Stern Drive (ASD) tugs under a programme to replace ageing and outmoded conventional tugs with the omni-dimensional and superior ASD tugs (built to the latest international standard in terms of bollard pull, speed, navigation equipment, fire-fighting abilities and safety appliances).
- **TAKREER** devised an innovative pipeline pigging approach to ensure the integrity of the pipeline connecting Abu Dhabi Refinery and Ruwais Refinery; a high risk and important asset. The pipeline operates at 95oC, which is not an optimal temperature for pigging to work. The new pigging method involves uses a cold slug of gas oil in front of the pig to absorb the heat from the pipeline, followed by a smaller slug of gas oil behind the pig to act as a buffer. This approach lowers the temperature of the pipeline just enough to allow the pigging to work.

TAKREER also initiated a wireless vibration monitoring system (WVMS) to monitor the integrity of rotating equipment in the hydro-skimmer and hydro-cracker units of the Ruwais Refinery. The method provides continuous and more effective assessment of vibration data, and at higher sensitivity. The new system allows for higher levels of productivity, uptime and in addition to delivering an overall upgrade in HSE performance.
- **ZADCO** devised an innovative approach to improve the safety factor of moving 'wire-line equipment packages' by helicopter between well head platform towers (WHPTs), which is widely considered to be one of the riskiest operations in the oil and gas industry. The new approach involves redesigning the loads and updating the process and operating procedure for all wire-line and aviation service providers. These modifications have improved helicopter stability and manoeuvrability, as well as the safety of personnel on the ground. The necessary training was conducted for the revised process and are being monitored for full compliance.

Health

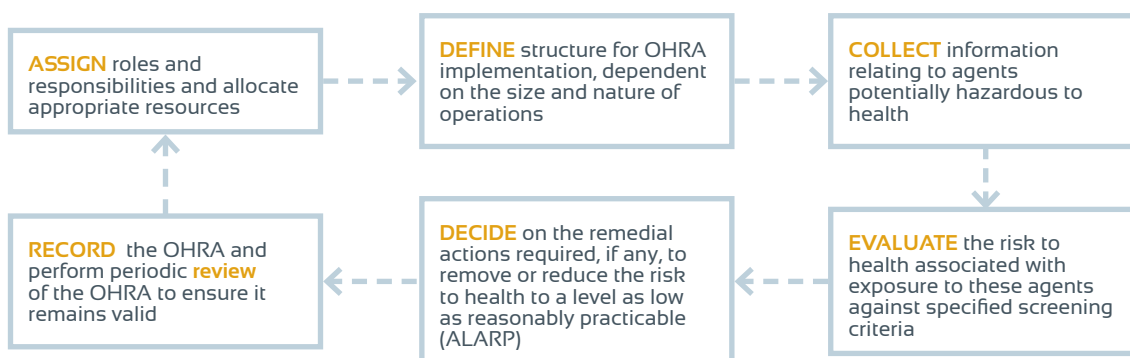
ADNOC's approach to ensuring our employees' health begins at the employment stage. New employees are screened medically before employment and regular medical examinations are compulsory for all our staff.

Occupational Health

The ADNOC Companies' diverse activities involve processes, operations and materials which can pose significant risks to occupational health. Occupational health hazards (chemical, physical, biological, ergonomic and psychosocial) are suitably

controlled across ADNOC's operations through our effective oversight of worker training needs and line supervision, and through our ADNOC Codes of Practice guides, which require our operators to perform structured Occupational Health Risk Assessments (OHRA) across their operations.

ADNOC Occupational Health Risk Assessment Process



Our Performance

ADNOC is making year-on-year improvements in addressing the challenge of obtaining accurate occupational health statistics for our workforce, particularly for our contractors who are at times reluctant to report such issues with a view to perceived potential contractual repercussions.

Our ADNOC Companies will continue to provide the necessary resources, training and guidance on

reporting occupational health cases in accordance with ADNOC's corporate reporting guidelines.

In 2012, we recorded an Occupational Disease Rate (ODR) of 0.46 (per 1 million man-hours) across our employees and contractors. We are committed to annually improve upon our occupational health reporting efforts, and to use this process to inform and prioritise management focus in the areas where additional resources to combat occupational health concerns are required.



OUR INITIATIVES

- **ADGAS** launched a comprehensive noise management programme that used the techniques of noise contour mapping, octave band analysis, hearing protector evaluation and personal dose monitoring, to analyse the effects of high noise exposure for a group of 1,000 employees. The findings of the programme set the scene for substituting various hearing protection equipment with more appropriate variants, and introducing signage to demarcate high noise areas. The implementation of these changes resulted in a 54% reduction in risk of exposure to high noise for the group that was surveyed.
- **GASCO** was the first Group Company to introduce the Thermal Work Limit (TWL) system (an internationally recognised heat stress index that has been adopted by Abu Dhabi Health Authority and Environment Agency Abu Dhabi) as a tool for heat stress management. The technique has been tested in onshore and offshore environments, and has been shared with other Group Companies. ADMA-OPCO and TAKREER have since adopted the TWL system in their own operations.
- **Al Hosn Gas** established a centralised Heat Stress Steering Committee in its bid to drive a step-change in the management of heat stress, which goes beyond the efforts applied by its contractors and sub-contractors at the Shah Gas Development. With an emphasis on 'Leadership and Commitment', one of the integral elements of the ADNOC HSE Management System, the Committee's efforts were reflected in the reduction of heat stress cases reported in 2012.
- **NDC** replaced the traditional X-ray method of detecting flaws in welding and steel with the safer Phased Array Ultrasonic Testing technique. In addition to being a more sensitive and accurate method, the new method also greatly reduces the occupational health risks associated with accidental exposure. The method is also more efficient without necessitating the otherwise occupational interruptions due to isolation of areas and evacuation of personnel.
- **TAKREER** adopted a number of proactive occupational health initiatives that include biological monitoring at BeAAT, indoor air quality monitoring in more than 110 offices at Ruwais Refinery, performing heat stress surveys using the Thermal Work Limit (TWL) approach, developing an industrial hygiene manual and occupational awareness manual, and assigning an occupational health coordinator to each operating unit at Ruwais Refinery.
- **ZADCO** invested in state-of-the-art devices to replace the thermo-luminescent dosimeters (TLDs) traditionally used to detect radiation exposure. The TLDs, although compliant with ADNOC's regulations, do not provide immediate radiation detection. The new devices, on the other hand, provide immediate notification when dangerous levels of radiation are detected, allowing effective radiation monitoring thus reducing the overall risk of prolonged radiation exposure. After a successful implementation of 13 devices across four of ZADCO's sites, ZADCO is moving forward with implementing this centralised system on other sites, including the UZ750 Project.

General Health and Welfare

Healthcare and Medical Treatment

ADNOC Group Company employees are provided with comprehensive health insurance coverage at select private and public healthcare facilities in Abu Dhabi. Healthcare facilities are also available to employees internally through ADNOC's Abu Dhabi Medical Services Division (MSD) and Ruwais Hospital Division (RHD).

The Medical Services Division is ADNOC's umbrella organisation for providing an international standard of healthcare to the employees and eligible family dependents of ADNOC, its Group Companies and academic institutions.

The Medical Services Division is situated at ADNOC's Headquarters and operates two medical centres, 18 clinics and several pharmacies across Abu Dhabi and the Western Region. The MSD manages the previously outsourced medical facilities in the Western Region through the Remote Area Medical Services (RAMS) Department. Its facilities serve the employees, contractors and sub-contractors of the Group Companies, in addition to the local communities within its areas of jurisdiction.

Through the RAMS Department, the Medical Services Division also operates one hospital in Ruwais, which has undergone renovation in January 2012 to become a state-of-the-art health facility. The RAMS department will also soon manage one fixed camp-based clinic and two mobile clinics.

Health Awareness and Disease Prevention

Health professionals across our ADNOC Companies conduct regular campaigns that focus on general health and life style issues e.g. breast cancer and prostate cancer awareness, smoking, ergonomics, weight and diabetes.

OUR INITIATIVES

- **ADCO** launched a cancer screening programme in 2011 to screen high risk employees (e.g. those with a history of tobacco use and a family history of cancer incidence) which was continued in 2012. Over 1,300 employees have undergone screening since the programme began, and the programme proved to be life-saving in some of the cases where polyps were identified, highlighting the importance of early detection.
- **TAKREER** runs an incentive-based initiative to encourage staff to improve their health by setting targets for their Body Mass Index (BMI) and monitoring their progress towards achieving their goal.
- **ZADCO** conducted a 'Middle-aged Men's Health' campaign to increase awareness about important health issues and to improve early detection and treatment. A total of 120 employees were screened, and approximately 75% of participants tested positive for one or more conditions which required medical attention. The campaign received significant media coverage and findings are planned to be published in the European Urology Journal.

The success of the campaign persuaded ZADCO management to hold similar activities annually at their head office, and to expand the programme to an additional two offshore sites in 2013, which will benefit a further 3,500 participants.

ESNAAD

Occupational Health Improvement for Mobile Equipment Operators

One of the main operations performed by ESNAAD is material handling using mobile equipment. This activity exposes mobile equipment operators to noise, heat, exhaust gases, dust and whole body vibration, which in turn puts them at risk of developing musculoskeletal disorders, noise-induced hearing loss, heat-related illnesses, and respiratory disorders. To reduce this risk, ESNAAD conducted a systematic study in accordance with international best practice standards, to identify a series of occupational health improvement measures that will help safeguard ESNAAD's mobile equipment operator workforce of 100 employees.

The study involved performing workplace assessments (including noise and whole body vibration measurements), conducting operator interviews, filming operators whilst working for later evaluation, analysing employee health records, and performing ergonomic assessments using the tools RULA (Rapid Upper Limb Assessment) and REBA (Rapid Ergonomic Body Assessment).

The study was conducted over a period of six months, and identified recommendations across three focus areas: employees (e.g. improving training, awareness and fitness), processes (e.g. job rotation and work-break patterns, and amendments to the vibration-control procedure), and equipment (e.g. modifications of non-ergonomic seats). The findings of the study (particularly whole body vibration measurements) are undergoing third part review in order to appropriately assess the shift patterns and operator working hours that should be implemented. The study is also planned to be extended to vessel crane operators in 2013.





**> 37,000
EMPLOYEES**

ACROSS THE ADNOC
GROUP COMPANIES AND
INDEPENDENT OPERATORS

**3 ACADEMIC
INSTITUTIONS**

PROVIDING SKILLED
WORKFORCE TO THE
UAE'S LOCAL OIL AND GAS
INDUSTRY

**AED
106.4**

MILLION
IN COMMUNITY
INVESTMENTS IN THE
EMIRATE OF ABU DHABI

SOCIAL PERFORMANCE

The principle of 'Decent Work' is integrated into ADNOC's policies and practices for managing our people. We also recognise our responsibility to make a positive impact in our society.

Labour Practices and Decent Work

Our people, and the means with which we empower them and invest in their continued growth and development, are ADNOC's greatest asset.

Our employees come from around the world, primarily Asia, Europe and other Arab countries. We are proud of our workforce and value the diversity of ideas, perspectives, skills, knowledge and culture that they bring to the workplace.

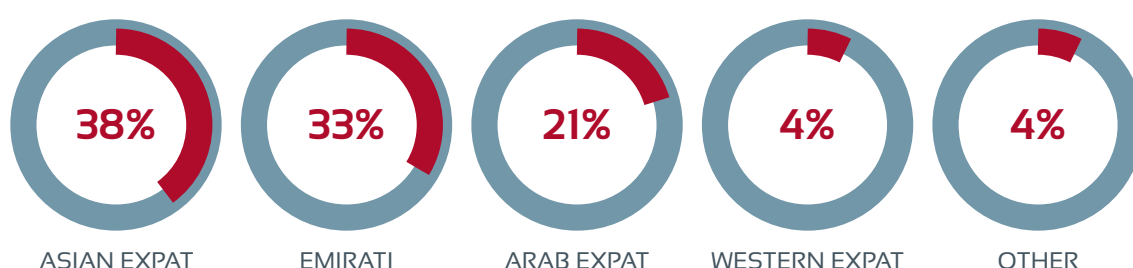
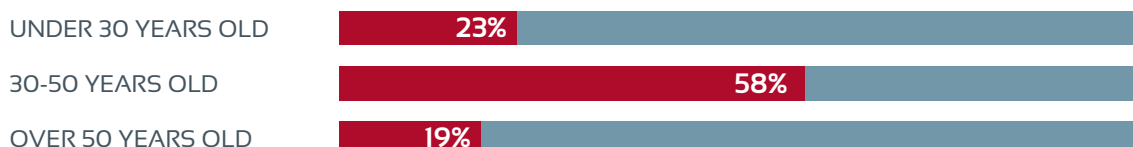
In 2012, ADNOC registered over 37,000 employees across our operations. The services of over 153,000 contractors were utilized on major projects that were underway in 2012 as well.

Diversity and Equal Opportunity

ADNOC has a clear employment structure of job grades whereby employees are assigned specific grades on the basis of their entry level experience and qualifications. Job grades 1-17 constitute non-managerial positions; grades 18-20 are senior management positions; and grades 20 and above are top management positions.

In recent years, more women have started to fill our positions and they represented 8.7% of our employees in 2012 (an increase of 0.2% on their representation in 2011).

Employee diversity (by age and nationality)



In the competitive oil and gas industry of today, where a shortage of experienced and professional talent presents an on-going challenge, ADNOC places great emphasis on remaining competitive and ensuring the right people are in the right jobs to support the growth of our business.

Equal opportunity is ensured for all ADNOC's employees, and no difference is applied on the basis of gender, age or origin. For example, job grades and basic salaries, including minimum amount paid, are the same for male and female employees. ADNOC is also committed to providing an environment that enables all employees to pursue their careers free from any form of discrimination.

Employee Employment Contract

EMPLOYMENT TYPE	EMPLOYEES (%)
Permanent	87.6
Fixed Term	9.9
Temporary	2.5

Employee Hire and Turnover

CATEGORY		RATE OF EMPLOYEE HIRE (%)	RATE OF EMPLOYEE TURNOVER (%)
Gender	Male	89.1	92.7
	Female	10.9	7.3
Age	<30 years old	39.2	25
	30 – 50 years old	56.4	47.3
	>50 years old	4.4	27.7



Training and Development

At ADNOC, we take a comprehensive and long-term approach towards building the capabilities of our workforce.

To support ADNOC's business, the ADNOC Companies spent over AED 229.5 million in 2012 to deliver in excess of 1.16 million man-hours of employee training. These training programmes covered a wide range of technical (operation-specific) and non-technical aspects (organisational development, project management, coaching and mentoring, IT skills, first aid etc.) that are tailored to the needs and responsibilities of employees within their respective roles, and centred on developing the employee's knowledge base, skill set and career. Training programmes are reviewed regularly to

ensure they remain relevant to meeting the needs of the Companies' operations and ADNOC's wider objectives.

ADNOC also has a core training programme known as the Competence Assurance Management System (CAMS). This is a three to four year programme offered to promising new graduates who are keen to serve the UAE's national oil and gas economy. The CAMS programme is shared amongst the ADNOC Group Companies and has an annual budget of AED 1.5 – 2 million per year.

Some of the ADNOC Companies also offer programmes to assist with pre-retirement planning and budgeting. Furthermore, ADNOC goes beyond legal requirements to support individuals in transition.

Labour and Management Relations

The ADNOC Companies recognise the importance of developing and maintaining good working relationships between employees and their management. A combination of measures is applied to ensure employee performance, career development and underlying concerns are suitably addressed. These include open forums, workshops, employee satisfaction surveys and regular performance appraisals.

Approximately 88% of employees across the ADNOC Companies received a performance review in 2012.

Contractor Relations

Due to the nature of our business, we hire numerous contractors to support us in executing our operations. We strive to maintain a stable and fair business relationship with our contractors throughout all stages of our projects, from procurement to delivery.

Management of Change

Management of change is an integral component of the ADNOC HSEMS Audit Programme. In 2012, the ADNOC Group of Companies had an overall compliance score of 74% against ADNOC's expectations in this regard. These expectations include the provision of:

- Control procedures to assess impact of changes, to people, organisation, plant, equipment, processes (and their controls), with a view to avoiding adverse HSE consequences
- Control procedures that document the evaluation and approval process, responsibilities and required competencies involved
- An auditable change control register in which changes are documented.

The ADNOC Management of Change protocol does not stipulate the minimum notice period to be provided to employees prior to significant operational change. However, the ADNOC Companies have their own internal procedures to ensure employees are suitably informed of these changes, including the reason for change and how it impacts roles and responsibilities, well in advance of their implementation. Where details are not directly stipulated in the employment contract, the notice period has been reported to range from one to six months depending on the extent of the change.

GASCO

Working with Contractors to Achieve Excellence in HSE Performance During Shutdowns

Gas plant shutdowns require expert levels of competence and dedication to HSE in order to control the hazardous activities involved, and manage the large number of people and resources that need to be mobilised and demobilized in a relatively short time.

In 2012, GASCO teamed up with their contractors to perform 20 safe and successful shutdowns for facilities in Ruwais and Habshan.

Some of the initiatives undertaken by GASCO to engage and positively influence their contractors' site safety culture throughout the shutdown periods include:

- developing integrated activity plans, risk assessments, checklists and method statements for critical jobs;
- providing mandatory training to all shutdown personnel;
- performing pre-job evaluations;
- conducting bi-weekly audits to follow-up on corrective actions; and
- holding regular meetings with senior contractor management to monitor progress and HSE performance.

All shutdowns were completed as scheduled or ahead of time, and achieved leak-free start-up.

A total of 926,832 safe man-hours were recorded without LTI, coupled with effective near miss reporting.



Non-retaliation and Grievance Procedure

The ADNOC Companies implement their own management approach towards non-retaliation and confidential employee grievance, in compliance with the requirements of the UAE Federal Labour Law. This is normally embedded within their Human Resources (HR) Policy and ensures a fair and impartial approach. In 2012, a total of 371 issues were raised across the ADNOC Companies through this system. These issues largely relate to salaries and promotions, annual leave policies, training opportunities, management support, work structure, and end of service benefits.

ADNOC does not currently have a policy to cover collective bargaining agreements.

Human Rights

Respect for human rights is a key principle in many of the policies and practices that are integral to ADNOC's sustainability efforts, including safety, health and wellbeing, ethics and governance and community and environmental management. ADNOC has a zero tolerance stance towards human rights abuses or claims of abuse, and significant measures are taken to safeguard human rights across our operations and sphere of influence.

ADNOC has a department that has been specially formulated to oversee the welfare and labour conditions of suppliers, contractors and workers employed by contractors on ADNOC projects. The department refers to the UAE Federal Labour Law, international best practice, and ADNOC Codes of Practice as reference to define violations of workers' rights. These principles are clearly defined in ADNOC's contractual agreements and their practice is evaluated prior to the decision making process of whether or not to proceed with an investment.

Suspected cases of human rights violations are thoroughly investigated by ADNOC. Entities found not to be compliant with ADNOC's policy of promoting and upholding respect for human rights are blacklisted from providing services to ADNOC and our Group Companies.

Whilst employee labour associations and collective bargaining agreements are not permitted in the UAE under Federal Law, the International Labour Organisation (ILO) principle of 'Decent Work' is integrated in all aspects of our relationships with our employees, and extends to our contractor workforce as well. Overtime is duly compensated and employee passports are not retained.

ADNOC does not hire anyone under the legal working age of 15. Forced, compulsory and child labour are strictly forbidden under the UAE Federal Labour Law and ADNOC takes a firm stance on ensuring no violations of this kind take place

amongst our workforce. In 2012, no ADNOC operations were identified as having risk for incidents of child, forced or compulsorily labour.

No specific issues concerning human rights violations or the security of our workforce across our operations have been brought to ADNOC's attention in 2012.

Corruption and Anti-Competitive Behaviour

ADNOC policy bans employees from making use of their jobs or positions to acquire an illicit personal benefit or interest, financial or otherwise, from accepting, directly or indirectly, any gift, commission or donation from any person who has work relations with ADNOC.

The ADNOC Disciplinary Code specifies that misusing a position in ADNOC or a Group Company for the acquisition or acceptance of bribes or personal benefits from other employees or outsiders will result in dismissal without notification or benefits.

While ADNOC has developed a policy to address corruption and takes complaints or allegations very seriously, at present there is no formal anti-corruption training programme or corruption review of ADNOC business units.

ADNOC's Legal Division is responsible for ensuring ADNOC's operations and activities are in compliance with the law and that ADNOC Group Companies abide by their contractual agreements. It also helps to ensure the legal protection of ADNOC's national and international interests. No legal actions for anti-competitive behaviour, anti-trust, monopoly practices and non-compliance with laws and regulations were reported in 2012.

ADNOC Group Companies are subjected to regular audits by ADNOC's Audit and Assurance Division (A&AD) where the reliability and integrity of financial and operating information, as well as the means used to identify, measure and report such information, is carefully evaluated. Furthermore this ADNOC division assists Group Company management in the deterrence of fraud by evaluating controls in relation to the potential risk. Known incidents of fraud or corruption are reported to the ADNOC Head Office for immediate investigation and response.

The A&AD has future plans to initiate a forensic risk management framework which is intended to cover:

- Fraud and Misconduct Risk Assessment
- Code of conduct and related standards
- Third party due diligence
- Process specific Fraud Risk Control
- Hotlines and a 'Whistle-Blower' mechanism
- Proactive forensic data analysis.

Our Society

Managing our Impacts

ADNOC takes great care to ensure we remain a good and involved neighbour. Our structured HSEIA process forms the basis of our management approach and covers the duration of our project lifecycles. Risk assessments are also performed to evaluate the projects' risks to society, and our ADNOC Codes of Practice require our operators to develop mitigation measures to reduce risks to a level that is ALARP. These control measures are supplemented with a regular monitoring requirement throughout the operating and decommissioning stages.

Across ADNOC's onshore and offshore operations, the impacts of our petrochemical and refining operations in the Ruwais Industrial Complex are of particular sensitivity as they lie in close proximity

to ADNOC's Ruwais Housing Complex (RHC), which is home to over 15,000 of our workers and their families. ADNOC also has operations in close proximity of the community of Bida Zayed, which involve ADCO's Bab processing facilities that are located approximately 20 km from the community.

No substantial complaints from nearby community residents were reported to ADNOC in 2012.

Enriching our Society

ADNOC's far-reaching community sponsorships extend across all the key pillars of our society, including the academic, professional, cultural and recreational. In 2012, ADNOC and our Group Companies spent AED 106.4 million supporting a number of important national causes.

Causes Sponsored by ADNOC and the Group Companies



Science, Technology and Education

- Young Future Energy Leaders Programme
- Education Without Borders
- International Arab Children Congress
- Abu Dhabi Higher College of Technology
- Petroleum Institute Internship Programme
- Accountants and Auditors Association
- Society of Petroleum Engineers



Sports

- International Zayed Marathon
- Camel Race Association
- National Day Bowling Tournament
- Abu Dhabi Grand Prix Formula One
- UAE Wrestling, Judo & Jiu-Jitsu Federation
- UAE National Football Association
- UAE National Swimming Association
- Abu Dhabi Chess Club



Social and Development

- General Women Union
- Shamsa Bint Suhail Award for Creative Women
- Liwa Dates Festival
- ADNOC Heritage Village (41st UAE National Day)
- Abu Dhabi Municipality Group Wedding
- Western Region National Day
- General Women Union National Day
- Directorate of Rehabilitation and Employment
- Al Dhafra Camel Festival
- Emirates Nursing Association
- Family Development Foundation



In our bid to raise the profile of the Western Region of Abu Dhabi, ADNOC and our Group Companies proudly sponsor several high profile annual events that include the Liwa Dates Festival and the Al Dhafra Camel Festival. The festivals attract nationals, expatriates and tourists with the aim of

celebrating the UAE's longstanding bedouin culture, reviving the role of poetry and its influence on UAE culture, introducing and preserving the authentic camel breeds of Asayil and Majaheem, and ultimately activating the region's economic growth.

OUR INITIATIVES

- **ADMA-OPCO** took the lead in organising the clean-up of Abu Dhabi's ports (Mina Zayed, Free Port, New Free Port and Musaffah Port), whose marine environments are faced with challenges (including pollution and waste) as a result of urban development. The two-day campaign, titled 'Dive together to clean our Capital Ports', brought together hundreds of local divers and volunteers from government and private sectors.
- **ADGAS** launched the 'Sustainability Awareness Week' to engage its employees and their families about how sustainable practices can be integrated into their daily lives. The week-long initiative featured a unique theme each day, and was executed in collaboration with several external organisations (such as Emirates Environment Group, Red Crescent, and Emirates Diving Association) and leading industry professionals. Key to the programme's success was its use of multiple engagement tools including posters, presentations, videos and motivational speeches.
- **Borouge** developed a booklet titled 'Water Sustainability: You are part of it' to serve as a guide for families on how to save water at home. In addition to providing useful tips, the booklet includes a self-evaluation test on water-saving habits as well as interactive games, in order to appeal to both parents and children alike. The booklet was produced in English and Arabic and distributed to Borouge employees and visitors. Future family booklets are being planned to cover topics such as energy and waste.
- **BUNDUQ** implemented an educational programme titled 'Hana-lku' (which means 'Flower cultivation' in Japanese) in six pre-schools across the UAE and Qatar. Over a period of nine months, over 1,000 students were engaged in a series of horticulture activities that included learning about how to take care of different types of flowers, growing flower seeds to study their life cycle, and creating colourful flower arrangements.
- **GASCO** undertook an interactive environmental awareness campaign in two schools in the Western Region, through which they were able to engage over 1,500 children about resource, energy and water conservation. Following the successful outcome of the campaign, the Habshan complex HSE department plans to implement similar campaigns for years to come.



Academic Institutions and Programmes

We are very proud of our three academic institutions. These were established by ADNOC to nurture a specialised, competitive, and highly professional young workforce for the local oil and gas industry, and help create educated and engaged citizens for Abu Dhabi.

The Petroleum Institute (PI)

The Petroleum Institute (PI) was launched in 2000 in collaboration with the Colorado School of Mines in the United States of America (USA). The PI has the goal of creating a world-class institution in engineering, education and research areas of significance to the oil, gas and broader energy industries. The PI currently offers bachelor degrees in chemical, electrical, mechanical, petroleum engineering and petroleum geosciences, as well as master degrees in chemical, electrical, mechanical and petroleum engineering. In 2012, the PI celebrated the graduation of 190 male and female engineers, with 66% representation from UAE nationals.

ADNOC Technical Institute (ATI)

The ADNOC Technical Institute (ATI) was established in 1978 as the first vocational training institute in Abu Dhabi to offer programmes that meet the needs of ADNOC and its Group Companies for skilled national manpower. The ATI produces entry-level technicians in the oil and gas industry and contributes to the community by providing an alternative to conventional academic education for UAE male nationals. The institute has a current capacity of 750 students. Since its establishment, the ATI has trained more than 3,500 technical staff in a range of disciplines. The Group Companies assist the ATI by providing job instructional training (JIT) opportunities for trainees in relevant areas within each company's operational sites.

The Glenelg School of Abu Dhabi (GSAD)

The Glenelg School of Abu Dhabi (GSAD) was founded in 2008 by ADNOC in collaboration with the Glenelg Country School in Maryland, USA. Its mission is to offer a distinguished primary and secondary education to national and expatriate students, preparing them to join prestigious universities worldwide.

Achiever Oasis Programme (AOP)

ADNOC has an innovative summer training programme known as the Achiever's Oasis Programme (AOP) which was established in 2002. The programme aims to motivate young nationals to pursue studies in the fields of engineering, exploration and production and management engineering. Graduates from the AOP, often go on to join the Petroleum Institute, enrol in local universities or are awarded scholarships abroad to pursue their university studies. The AOP awards financial incentives in addition to free summer courses during the elementary, preparatory and secondary school education stages. The AOP students are given a stipend, while outstanding students are rewarded with bonuses and incentives.

NDC

Groundwater Research Programme

NDC has an on-going partnership with the US Geological Survey (USGS) to operate a Groundwater Research Programme (GWRP) in the Emirate of Abu Dhabi. The value of this research programme lies in the realisation that much of Abu Dhabi's groundwater resources have been depleted, with the rising demand for water needed to support the Emirate's people and the millions of hectares of newly planted desert greenery.

The search for new groundwater sources is therefore critical. Recognising the importance of this community issue, NDC have contributed their drilling expertise for the purpose of drilling water wells, interpreting geophysical logs, reprocessing existing petroleum seismic data, evaluating aquifer hydraulics, estimating historical water use, determining the volume of usable ground water, and locating problem areas where water levels are declining or water chemistry is changing.

Data collected from about 600 boreholes and observation wells was then used to characterize and map the hydrogeological nature of fresh and brackish ground water, and compile maps of ground-water levels. Emphasis was also made on understanding the groundwater system, in order to make informed decisions concerning the future development of the Emirate's water resources.

ADNOC Scholarship Programme

ADNOC also contributes to the advancement of UAE nationals through its Scholarship Programme which sponsors talented high school graduates and sends them to pursue their post-secondary education in reputable academic institutions locally and abroad, to specialise in the various technical disciplines essential to the oil and gas industry. ADNOC started its Scholarship Programme in 1974 and the programme initially sent scholars to study in the USA and the United Kingdom (UK). The first graduating class of 10 students was in 1979. Today, there are several hundred students, both men and women, studying in undergraduate and postgraduate programmes around the world, a clear testament to the success of the programme.

Product Responsibility

Across ADNOC's operations, there are four Group Companies that have the most significant obligation towards product responsibility and stewardship, as they manufacture and deliver products directly to consumers. These are **ADNOC DISTRIBUTION, Borouge, FERTIL and TAKREER.**

To maintain our reputation for product quality and performance, ADNOC ensures that these companies adhere to the best industry standards and international specifications throughout their product supply chain. Their operations and products are also endorsed by the relevant international authorities and certification bodies.

Health and Safety Impacts of Products and Services

ADNOC guides the quality of its products and services through the implementation of comprehensive Quality Assurance and Quality Control testing to ensure customer specifications are strictly met.

Furthermore, our products are subject to stringent health and safety impact assessments prior to market entry. Our manufacturing companies consider the use and end-of-life impacts of their products in their health and safety lifecycle assessments.

Product related risks are most significant during the manufacturing and production stage. These risks are managed internally through appropriate procedures. Where applicable, the safety information concerning product use is effectively communicated to consumers through Material Safety Data Sheets (MSDS) and product labels.

Borouge is signatory to the Responsible Care Global Charter, the chemistry industry's global initiative under which companies, through their national associations, work collaboratively to improve their health, safety and environmental performance. Borouge have also established and implemented the Responsible Care Management System, RC 14001, which broadens the scope of ISO 14001 to include health and safety, security, distribution, product stewardship, process safety, community awareness and emergency response.

TAKREER implements stringent laboratory screening and analysis on all products prior to their local sale (through ADNOC DISTRIBUTION) or international export. Wherever specifications relating to product health, safety or quality are not met, products are sent back to the refinery for further processing or recycling.

No incidents of non-compliance with health and safety, labelling requirements and use of our products and services were reported to ADNOC in 2012.

Product Innovation

Our Group Companies strive to introduce innovative products into the market place that deliver enhanced performance throughout their life cycle.

ADNOC DISTRIBUTION in partnership with GASCO commenced their mission in 2010 to introduce a new fuel, Natural Gas for Vehicles (NGV), into the local market. NGV is widely considered to be an inherently safe fuel, due to its narrower flammability range, and one which delivers significant reductions in emissions when compared to petrol-fuelled vehicles (20-25% for CO₂, 50-80% for CO and 25-60% for NO_x).

ADNOC DISTRIBUTION operates a network of 17 NGV fuelling stations (13 in Abu Dhabi and four in Sharjah), as well as 4 NGV conversion centres. Around 2,700 vehicles have been converted to run on NGV since the project began in May 2010.

Borouge is finalising the start-up of their Innovation Centre in Abu Dhabi to better serve their customers across the UAE and Middle East region and strengthen the overall innovation capabilities in the Emirate. The Innovation Centre, expected to be operational during the second half of 2013, will be equipped with state of the art tools for plastic processing and analysis. The centre will work together with the European innovation centres of Borealis, as well as local and international educational institutions such as the Petroleum Institute of Abu Dhabi, to further develop the competence of polymer science in the UAE. More than 50 international researchers and engineers will focus on innovations for compounding as well as innovative plastics solutions for the infrastructure, automotive and advanced packaging industries in close cooperation and partnership with Borouge's customers throughout the value chain.

Borouge also has an Application Centre at their manufacturing plant in Shanghai, focusing on innovative solutions for the fast growing automotive and appliances markets.

TAKREER launched the new ultra-low sulphur diesel product (10 ppm sulphur content) in 2012 (further details on this product can be found on page 27 of this report). TAKREER is also overseeing the Group III Base Oil Production Facilities Project to produce 500,000 tonnes per year of high viscosity index (Group III) base oils and 100,000 tonnes of Group II base oils. Scheduled to reach production by end of 2013, the Group III base oils

have superior performance characteristics such as viscosity index (VI), pour point, volatility and oxidation stability, and have smaller environmental impacts compared to conventional mineral oils.

The newly-built TAKREER Research Centre, located within the Petroleum Institute campus, will help drive research and development in the field of petroleum engineering and help ensure that TAKREER's operations and products deliver on ADNOC's vision for optimal performance.

Customer Outreach and Satisfaction

Customer satisfaction is critical to our outward-facing Group Companies as our success at home and abroad is determined to a large extent by the reputation of our products.

ADNOC DISTRIBUTION runs a series of internal and external surveys across their product range and customer base. ADNOC DISTRIBUTION also have a telephone hot line specifically established for customer feedback and complaints.

Borouge have been utilizing an independent third party consultant to conduct an annual customer satisfaction survey since 2003. The customers surveyed correspond to a representative sample of Borouge's customer base, and were distributed across the Indian Subcontinent, North East Asia, South East Asia, the Middle East and Africa regions. Overall, Borouge's performance in 2012 against industry peers was again strong on the majority of the parameters studied. Improvements in particular areas were identified, for which action plans have been developed.

FERTIL engages with its customers regularly to understand their perceptions of the company, its products and operations. Unplanned disruptions to their supply of urea were experienced over the duration of a 10 day period in 2012, for which a rescheduling of export programmes with customers was required. Nonetheless, their customer satisfaction survey revealed a 94% satisfaction rate.

TAKREER markets their products through ADNOC DISTRIBUTION, and therefore takes a proactive approach to ensuring customer specifications are met prior to product transfer from TAKREER's refineries.

Our Group Companies' approach towards customer satisfaction is complemented with other methods such as performing regular customer visits, product trials and technical follow-ups where possible.

No substantiated product-related concerns, incidents of loss of customer data, or breaches of customer privacy were reported to ADNOC in 2012.

Marketing Communications

The Group Companies' individual marketing departments strictly adhere to the provisions of signed customer agreements and to applicable laws and standards related to advertising, promotion

Borouge

BorPure™ HJ3IIMO – Delivering Sustainable Benefits for the Food Value Chain

In 2012, Borouge launched the new product BorPure™ HJ3IIMO in response to a market need for high quality packaging materials that ensure premium protection of food products to prolong shelf life.

BorPure™ HJ3IIMO, is a high flow polypropylene (PP) homopolymer that provides good aesthetics in enhancing the packaging appeal of the end product. Containers made from BorPure exhibit light-weight, good processability (whilst retaining material rigidity) and improved breakage-resistant properties compared to alternative materials. Maintaining the stiffness of containers makes BorPure an ideal choice for microwave re-heating applications whilst ensuring high food safety integrity by preserving the taste of the packed food content. Furthermore, with Borealis Nucleation Technology (BNT), the high melt flow characteristics and enhanced organoleptic properties of this new injection moulding grade allows the delivery of odour-free food containers that are required in food packaging.

The product can also be injection-moulded at lower temperatures and at higher speeds, improving the moulding cycle time by 10% compared to alternative resins, and therefore leading to higher productivity. This also reduces CO₂ impact to the environment. High stiffness and an anti-static formulation contribute to efficient de-moulding. Consequently, the cost and energy consumption in producing each unit is effectively reduced, while machine utilisation is maximised.

and sponsorship. On a voluntary basis, ADNOC DISTRIBUTION makes reference to the British Code of Advertising, Sales Promotion and Direct Marketing that has been developed by the UK Advertising Standards Authority (ASA).

No incidents of non-compliance were reported to ADNOC with regard to advertising, promotion and sponsorship in 2012.



AED
12 BILLION

IN MANPOWER COSTS
ACROSS ADNOC AND OUR
GROUP COMPANIES

70%

OF TOTAL PROCUREMENT
BUDGET ACROSS ADNOC
AND OUR GROUP
COMPANIES SPENT ON
LOCAL SUPPLIERS

65%

OF GOVERNANCE BODY
POSITIONS ACROSS
ADNOC AND OUR GROUP
COMPANIES OCCUPIED BY
EMIRATIS

ECONOMIC PERFORMANCE

ADNOC has a first class balance sheet. Our economic performance impacts the fiscal health of the Emirate of Abu Dhabi and the reputation of the United Arab Emirates as a whole.

Direct Economic Performance

Like many national oil companies, ADNOC plays a central role in promoting industrial sector expansion and fueling the UAE's growing economy.

ADNOC does not have individual investors or shareholders. The Supreme Petroleum Council (SPC) functions as ADNOC's governing board and the SPC Advisory Committee serves as the SPC's board committee.

ADNOC reports directly to the SPC on matters of strategy and financial performance. Additionally, the Abu Dhabi Accountability Authority (ADAA) provides independent external assurance and scrutiny of the company's activities as part of its mandate to review key government owned entities. Details of ADNOC's financial performance are regarded as highly confidential under both ADNOC and Abu Dhabi protocols.

ADNOC receives little direct support from the government. Its operations, new capital investments and major developments are funded primarily from the company's own cash flow. After reinvestment and working capital, surpluses are available for distribution as annual dividends. These are paid to the Abu Dhabi Investment Authority (ADIA) and Abu Dhabi Investment Council (ADIC), two of Abu Dhabi's sovereign wealth funds. ADNOC does not provide any financial or in-kind contributions to political parties.

Direct Economic Performance

	AED
Operating costs	96.1 billion
Employee wages and benefits	12.9 billion

Benefit Plan Obligations

National employees receive their pension entitlements in accordance with the provisions of the UAE's statutory pension scheme. For UAE nationals of all pay grades, the company contributes to a pension programme that is managed by the Abu Dhabi Retirement Pensions and Benefits Fund (ADRPBF), an entity of the Abu Dhabi Government.

Expatriate employees receive the company's end of service benefits, which equate to one month of salary for every year worked, increasing to 1.5 months of salary for every year worked after three years of service.

ADNOC's entry-level compensation package is highly competitive. Standard ADNOC benefits for employees include life insurance, health care, disability coverage and leave policies (e.g. annual leave, maternity leave, sick leave, Hajj travel), educational assistance and retirement provisions.

Our minimum wage is highly competitive with market rates in the oil and gas sector. ADNOC provides housing for the majority of employees either through direct provision or a stipend.

ADNOC's impact on the economy extends beyond the value derived from our revenues and investments. Significant indirect economic impact is generated via ADNOC's commitment to developing local content through our Emiratisation efforts, long-term community investments, and our support for local suppliers and service providers in our procurement practices.

ADCO

Operation of Fujairah Export Terminal Under the Abu Dhabi Crude Oil Pipeline Project

The Abu Dhabi Crude Oil Pipeline Project (ADCOP) is a strategic project led by the Abu Dhabi Government that allows Abu Dhabi to export crude oil directly from Fujairah. This reduces dependency on oil terminals in the Arabian Gulf whilst enhancing the UAE eastern seaboard's oil export potential (larger vessels can be accommodated at Fujairah due to the relatively deep water at that location).

Under the ADCOP, a 48-inch diameter pipeline will carry crude oil from Habshan to the new Fujairah Export Terminal, whereby the pipeline and terminal are both operated by ADCO. Covering a total distance of 404 kilometres, the pipeline runs across the desert eastwards turning inland in southern Ra's al-Khaimah before turning eastwards again to cross the mountains to Fujairah.

Careful measures were taken in the pipeline's construction to ensure environmental protection and the protection of key archaeological sites along the pipeline route.

The pipeline is coated with 3 ply polyethylene and is buried underground throughout the desert and mountainous areas. In sabkha areas (flat saline areas of sand or silt), the pipeline has been elevated above the sabkha.

A leak detection system has been installed and other measures, such as cathodic protection and corrosion monitoring points, have been implemented to ensure the pipeline's integrity.

The pipeline is designed to transport 1.5 million barrels of crude oil per day, with the possibility of increasing this to 1.8 million barrels of crude oil per day through the use of drag-reducing agents. The first shipment from the Fujairah Export Terminal took place in July 2012.

Market Presence

During the four decades of our successful operation, ADNOC has developed strategic agreements with many of the largest international oil and gas companies and with governments around the world. To maintain our privileged position in the oil and gas business, ADNOC is executing a number of high profile, long-term and wide-ranging projects both onshore and offshore through our Group Companies, as discussed throughout this report.

Over the next few years, we look to strengthen our market presence through a strategic move towards increasing production from our oil and gas reserves, and expanding our network of distribution pipelines, processing facilities, service stations and shipping fleet to ensure stable supply to domestic and international markets. Our emphasis on natural gas production and consumption comes amidst the rising global concerns surrounding oil dependency and climate change.

Indirect Economic Performance

ADNOC's impact on the economy extends beyond the value derived from our revenues and investments. Significant indirect economic impact is generated via ADNOC's commitment to developing local content, which is achieved by our Emiratisation efforts, academic institutions and scholarship programmes, as well as our collaborations with local suppliers and contractors.

Local Partnerships and Collaborations

ADNOC has a well-documented procedure for supplier selection and bid evaluation. In addition to technical criteria (relating to HSE, Quality Assurance, ISO certification, experience etc.), ADNOC's procedure places great emphasis on developing the local supply chain to the oil and gas industry. Suppliers are also required to adhere to ADNOC standards with regard to accommodation, recreation, medical facilities, minimum salaries, air tickets, and end-of-service benefits.

ADNOC often requires foreign suppliers of goods and services to operate with a local sponsor. The sponsorship arrangement often requires the supplier to share a percentage of the contract with their sponsor, ensuring that at least some of the value of any contract leaving the country is realised locally.

Many of the larger contracts which are granted to leading engineering companies from around the world use local suppliers for the provision of supplies, labour and other services.

The definition of a locally based supplier used is a provider of materials, products and services that is based in the UAE. In 2012, approximately 73% of the procurement budget across the ADNOC Group Companies was spent on local suppliers. This amounts to approximately AED 16.6 billion.

Local Hiring and Competency Development

ADNOC is committed to the UAE Government's plan to create employment opportunities for UAE nationals, known as 'Emiratisation'. Recruitment of UAE nationals is one of ADNOC and our Group Companies' strategic priorities. The current five year target (from 2013-2017) is to achieve 75% Emiratisation across ADNOC Group Companies by the end of 2017. This five year plan is passed down to each of the Group Companies in the form of annual plans. Each company prepares the annual intake plan in the beginning of the year and the progress on recruitment is monitored on a monthly, quarterly and annual basis.

Since 1999, ADNOC has had the National Recruitment Committee (NRC), and the Group Nationals Recruitment Department (GNRD), both based at the ADNOC Head Office, oversee and facilitate the Emiratisation process. The GNRD applies an efficient strategy in its employment programme which matches the individual's qualifications with the needs of the Group Company.

In 2012, approximately 65% of governance body positions across ADNOC and the Group Companies were occupied by Emiratis. This represents 323 employees. ADNOC is also committed to enhancing the knowledge, technical skills and capabilities of our Emirati workforce. This is achieved through our flagship educational institutions and scholarship programmes, Competency Assurance Management System (CAMS) programme, and through various on-the-job training opportunities.

Other Indirect Impacts

In line with the integral role ADNOC plays in the UAE economy, ADNOC is deeply committed to the growth of the UAE community. ADNOC sponsors a number of events on an annual basis, and makes significant contributions to the community such as the Ministry of Labour and Social Affairs, Children with Special Needs Centre, hospitals, the Red Crescent, educational organisations such as Zayed University, Higher Colleges of Technology, and Abu Dhabi Educational Zone as well as cultural and sports clubs. In 2012, ADNOC and our Group Companies contributed over AED 106 million towards community initiatives.

ADNOC and our Group of Companies help to build and maintain roads, hospitals, mosques and schools

ADNOC DISTRIBUTION

Fuel Tanker Leasing to Boost Joint Public-Private Collaborations

ADNOC DISTRIBUTION launched a Community Support Service (CSS) scheme that encourages socio-economically disadvantaged UAE nationals to purchase fuel tank trailers, which are then leased to ADNOC DISTRIBUTION over a 36 month period. During this time, the UAE national receives an assured and substantial monthly income. After the 36 month period, the well-maintained fuel tanker is returned to the investor for resale.

To encourage these collaborations, ADNOC DISTRIBUTION arranges the bank finance on behalf of the beneficiary and also bears the expenses of registration, insurance and maintenance of the fuel tanker over the duration of the contractual period.

A total of 147 UAE families have benefited from the scheme by 2012. ADNOC DISTRIBUTION aims to add an additional 30 beneficiary families to the scheme in 2013, and replace 60% of company-owned fuel tankers by tankers leased under the CSS scheme by 2018. ADNOC DISTRIBUTION also aims to replicate the CSS model for LPG and NGV distribution.

for the benefit of local communities in Abu Dhabi. The indirect impacts are difficult to quantify because of their wide-ranging scale and diversity. ADNOC also provides humanitarian aid and relief assistance towards international causes around the world.

ADNOC and our Group of Companies are also playing an active role in the development of the Western Region. In addition, resources, vacancies and training opportunities are generously made available for UAE nationals, and the region's companies are given priority to provide contracting and supply services and to execute projects within their fields of specialisation. Overall, ADNOC serves as the primary engine for the organic growth of Abu Dhabi and has plans to invest billions of Dirhams annually into the local economy, in line with the Abu Dhabi 2030 Plan for the development and growth of the Emirate.



THE ADNOC HSE AWARD
PROGRAMME WAS
INITIATED IN

1997

AND HAS SINCE EVOLVED
REMARKABLY

4 AWARD
GROUPS

TO RECOGNISE
OUTSTANDING PROJECTS,
LEADERSHIPS, AND
PARTNERSHIPS

228
SUBMISSIONS

RECEIVED IN 2012
ACROSS THE ADNOC
GROUP COMPANIES AND
INDEPENDENT OPERATORS

ADNOC HSE AWARD

ADNOC has an annual internal awards programme known as the ADNOC HSE Award. The purpose of the ADNOC HSE Award is to recognise outstanding achievements, promote knowledge sharing pertaining to best practice, and foster an atmosphere of friendly competition amongst the ADNOC Group Companies and our Independent Operators in their quest for sustainable development.

ADNOC HSE Award

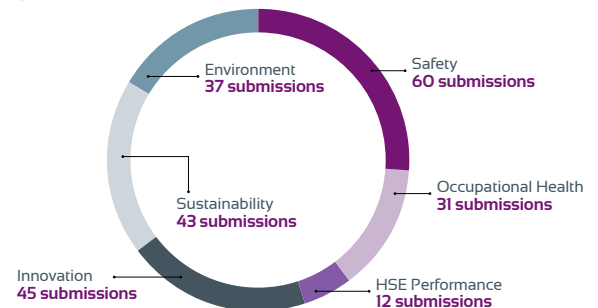
The ADNOC HSE Award programme was created in 1997 and has since evolved remarkably. Submissions were accepted then under one category, HSE Performance, only. Today the system has expanded to include four main award groups:

- **Group 1: PROJECTS** – awarded across five categories: Innovation, Safety, Occupational Health, Environment, and Sustainability;
- **Group 2: CORPORATE PERFORMANCE AND LEADERSHIP** – awarded across two categories: HSE Performance and HSE Champion;
- **Group 3: SPECIAL RECOGNITION** – Awarded to companies who submitted high quality projects that scored within the top five in their category but did not get either first or second prizes in any of the main categories;
- **Group 4: GROUP COMPANY AND CONTRACTOR PARTNERSHIPS** – awarded to the top two contractors and their respective Group Company for an outstanding partnership in HSE implementation.

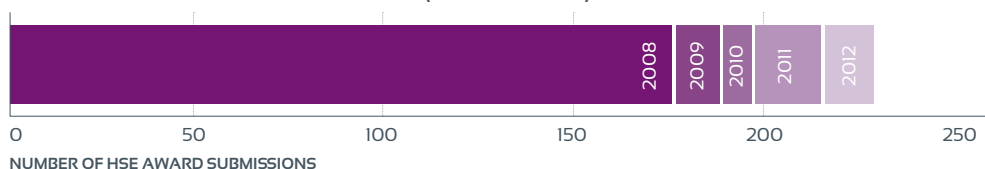
Submissions are evaluated by an independent judging panel, whose recommendations inform a second round of judging that is performed by ADNOC Senior Management. Awards are then distributed in an annual ceremony to commemorate the participants' efforts and achievements.

In 2012, a total of 228 submissions were received under the ADNOC HSE Award programme. The breakdown of submissions by category is provided below.

Breakdown of 2012 ADNOC HSE Award Submissions



ADNOC HSE Award Submissions (5-Year Trend)



The success of our ADNOC HSE Award programme is marked by the annual increase in the number of award submissions that have been received since the programme was created in 1997. The programme also serves as an important driver towards adopting more sustainable practices across our participants' operations.



WINNER

TAKREER with entry 'Protecting the Pig's Intelligence - Innovative Pipeline Piggings Pipelines assets have special risk as they traverse through public areas'. Inspection with Intelligent Piggings is the only means to assess the integrity of a pipeline. TAKREER completed a challenging piggings on a thermally insulated 223 km pipeline carrying hot residue oil. Cold batches of gasoil were used to maintain optimum pig performance temperature. The optimum slug size for piggings was designed with thermal models, while maintaining normal pipeline operation with hot product.

PROJECTS

INNOVATION

Winner: **TAKREER**

RUNNER-UP

ZADCO with entry 'Proactively Eliminating off-specs Metal Alloys to Avoid HSE Risks'. Despite the well-defined QA/QC systems used by materials suppliers and contractors, mix-up of materials within extended supply chain is still possible. The use of wrong metal alloys caused and still can cause major HSE risks to ZADCO and other operators worldwide. ZADCO managed to intercept wrong materials by upgrading its QA process that includes the use of hand-held non-destructive positive material identification (PMI) testing at multi levels from receiving site to life operating plants.



WINNER

GASCO with entry 'Innovative Solution for Managing Thermally Stressful Environments. GASCO is the first company in the region to implement the Thermal Work Limit (TWL) as an effective way for managing risk of heat stress. GASCO completed TWL project by developing and testing a comprehensive, practicable and reliable risk assessment strategy for monitoring TWL, development of TWL Forecast Programme, developing design specifications for shelter and implementing 'Waterman' for promoting hydration culture.

PROJECTS

OCCUPATIONAL HEALTH

Winner: **GASCO**

RUNNER-UP

ESNAAD with entry 'Occupational Health Improvement Project for Mobile Equipment Operators'. Mobile equipment operators are exposed to numerous health hazards including: whole body vibration, awkward posture, static sitting, heat, noise, dust, diesel exhaust and psychosocial hazards. As a result of general health risk assessment in ESNAAD this project was initiated. Approximately one hundred equipment operators involved in material handling were covered in the project. Consequently, work condition of mobile equipment operators has significantly improved and health risk reduced to an acceptable level.

PROJECTS

SAFETY

Winner: **NDC**

RUNNER-UP

Borouge with entry 'Implementation of Alarm Management Programme'. The push for operational excellence in plants today is driving the need for more effective alarm management. Plants are operating closer to their limits than ever before, and are continuously looking for new ways to improve by reducing downtime, increasing productivity, and implementing real time performance management strategies. Effective alarm management strategies are a key component in achieving all of these goals. The alarm management initiative was launched by Borouge in June 2010.



WINNER

NDC with entry 'Automated Pipe Handling: Eliminating the Human Intervention'. NDC has adopted the automated and mechanized pipe handling systems on all its new build rigs. This has resulted in numerous HSE benefits. These include getting the derrickman out of the derrick thus eliminating working at heights, elimination of repetitive stress injuries due to manual handling, elimination of human-equipment interface and accident/incident reduction, elimination of hand/fingers injuries. Performance enhancement and financial benefits through offline activity are the other benefits that have ensued from this initiative.

PROJECTS

ENVIRONMENT

Winner: **ZADCO**

RUNNER-UP

ADNOC DIST with entry 'An Eco-Friendly Fuel'. ADNOC Distribution has commissioned 17 Natural Gas Vehicle (NGV) filling stations in Abu Dhabi, Al Ain and Sharjah, as well as 5 vehicles conversion centres to facilitate vehicle conversion from petrol to natural gas. A total of 2,700 vehicles have been converted into NGV since the project began in 2010, providing an estimated gross reduction of 111 tonnes of carbon dioxide (CO₂) and 282 tonnes of carbon monoxide (CO), in addition to a reduction in other noxious gases.



WINNER

ZADCO with entry 'Innovative Rig-less Solution for Restoring the Integrity of Downhole Safety Valve System'. Downhole safety valves (DHSVs) play a critical role in preventing environmentally harmful oil spills from offshore wells. However, DHSV seating area can become worn and lose responsiveness to surface remotes for automatic shutdown. Following research, ZADCO identified and successfully utilized special seals following rig-less procedure which prevented hazardous sludge, pipe waste and significant GHG emissions in addition to dramatic saving in shutdown time and repair cost to restore well integrity and extend well life cycle.



WINNER

ZADCO with entry 'Artificial Islands - ZADCO's New Approach to Field Development and Enhanced HSE Performance'. ZADCO aims to increase oil production from the Upper Zakum field from 600,000 to 750,000 barrels per day by utilizing artificial islands as drilling and production centres instead of traditional steel-structure well head platform towers (WHPTs). The HSE benefits of artificial islands compared to WHPTs include long term enhancement of marine biodiversity, reduced spill potential to the sea, a reduction of waste discharges, reduced personnel transportation risks and a lower emergency evacuation risk.

CORPORATE PERFORMANCE AND LEADERSHIP



DR. ALI OBAID AL-YABHOUNI, ADNATCO & NGSCO CEO

The HSE Champion Award was received by Dr. Ali Obaid Al Yabhouni, Chief Executive Officer of ADNATCO & NGSCO, for his visible efforts and active commitment towards HSE affairs in 2012. The HSE Performance Award was received by ADMA-OPCO to commemorate their efforts in adhering to and upholding ADNOC standards and international best practice.

PROJECTS

SUSTAINABILITY

Winner: **ZADCO**

RUNNER-UP

ADMA-OPCO with entry 'Proud Volunteers for Port Clean-Up'. ADMA-OPCO took the lead in organising clean-up of the Abu Dhabi Terminal Ports: Mina Zayed, Free Port, New Free Port, and Musaffah Port through an innovative campaign called "Dive together to clean our capital ports". The programme demonstrated social responsibility and focused on sustainability towards protection of Abu Dhabi's marine environment, which is facing threat from pollution, waste, and urban development. Hundreds of local divers and public volunteers from government and private sectors were involved.

SPECIAL RECOGNITION AWARDS

- **ADCO:** Creative Methods – Replacement of Surface Controlled Subsurface Safety Valve (ScSSV) without Rig and Restoring Well Integrity
- **Al Hosn Gas:** HSE Champions League Management Competition
- **ADGAS:** Hearing Protection – A Sound Investment for Future
- **ADNATCO & NGSCO:** Managing Dry Bulk Ships Cargo Holds Washing Water and Cargo Residues
- **TOTAL ABK:** TOTAL ABK Academy – Building the Future

PARTNERSHIP AWARDS

- Taisei Corporation (TAISEI) and Fuyo Ocean Development & Engineering Co. Ltd (FODECO) through ADOC: Nurturing Marine Ecosystems.
- The Kanoo Group through Borouge: Fugitive Emissions Management.



2012 ADNOC HSE AWARD WINNERS

GRI INDEX

GRI	INDICATOR DEFINITION	PAGE / DESCRIPTION
STRATEGY AND ANALYSIS		
1.1	Statement from the most senior decision-maker of the organization.	4, 5
1.2	Description of key impacts, risks, and opportunities.	4, 5, 10 - 13, 19
ORGANIZATIONAL PROFILE		
2.1	Name of the organization.	6
2.2	Primary brands, products, and/or services.	14, 15
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	6 - 9
2.4	Location of organization's headquarters.	6
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	14, 15
2.6	Nature of ownership and legal form.	6, 63
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	14, 15
2.8	Scale of the reporting organization.	6, 8, 9, 14, 15, 53, 54, 60, 61, 63
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	12, 13
2.10	Awards received in the reporting period.	66 - 71; ADNOC reports on the ADNOC HSE Awards only, as this is a prestigious internal awards programme that serves as an important driver for adopting more sustainable practices across our participants.
REPORT PARAMETERS		
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	1 January - 31 December 2012
3.2	Date of most recent previous report (if any).	15 July 2012
3.3	Reporting cycle (annual, biennial, etc.)	Annual
3.4	Contact point for questions regarding the report or its contents.	sustainability@adnoc.ae
3.5	Process for defining report content.	2; the ADNOC Sustainability Report 2012 has been guided by stakeholder feedback as received under the Materiality Test that was performed in 2011 (details of which can be found on page 18 - 19 of the ADNOC Sustainability Report 2011, available at www.adnoc.ae).
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	2
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	2
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	2
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	2
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/ periods, nature of business, measurement methods).	Any restatements have been identified within the report
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Any restatements have been identified within the report

GRI	INDICATOR DEFINITION	PAGE / DESCRIPTION
3.12	Table identifying the location of the Standard Disclosures in the report.	72 - 78
3.13	Policy and current practice with regard to seeking external assurance for the report.	This report has not been externally assured.
GOVERNANCE, COMMITMENTS, AND ENGAGEMENT		
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	6, 7, 63
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	The Supreme Petroleum Council (SPC) functions as ADNOC's governing board and oversight committee. H.H. Sheikh Khalifa Bin Zayed Al-Nahyan, the president of the UAE and Ruler of Abu Dhabi, is the Chairman of the SPC.
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	6; the list of SPC members is available at www.adnoc.ae
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	No formal mechanisms in place.
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	ADNOC endeavours to provide additional transparency on this indicator in our future reports.
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	ADNOC's Legal Division is responsible for ensuring ADNOC's operations and activities are in compliance with the law and that any conflicts of interest are avoided.
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	ADNOC does not have individual investors or shareholders. The Supreme Petroleum Council (SPC) functions as its governing board and oversight committee. H.H. Sheikh Khalifa Bin Zayed Al-Nahyan, the president of the UAE and Ruler of Abu Dhabi, is the Chairman of the SPC.
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	17, 18
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	17, 18
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	ADNOC endeavours to provide additional transparency on this indicator in our future reports.
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	19
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	In 2009, ADNOC launched the ADNOC Sustainability Performance Initiative - an ongoing initiative that aims to: <ul style="list-style-type: none"> • Improve our understanding and awareness of sustainability and our corporate vulnerabilities and strengths; • Make informed decisions to develop and implement sustainability policies and programs; and • Apply our sustainability strategy to ADNOC's management frameworks with the overall goal to treat our employees well, to respect the communities in which we operate, to develop sound corporate governance, to ensure environmental preservation, and to actively support philanthropy, human rights and economic prosperity. This initiative continued to guide our operations in 2012. Further information on this initiative can be found in our inaugural ADNOC 2009 Sustainability Report.

GRI	INDICATOR DEFINITION	PAGE / DESCRIPTION
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	20, 21
4.14	List of stakeholder groups engaged by the organization.	20, 21
4.15	Basis for identification and selection of stakeholders with whom to engage.	20, 21
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	20, 21
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	20 - 21; the ADNOC Sustainability Report 2012 has been guided by stakeholder feedback as received under the Materiality Test that was performed in 2011 (details of which can be found on page 18 - 19 of the ADNOC Sustainability Report 2011).
ECONOMIC		
Disclosure on Management Approach		63 - 65
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	63, 64
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	No formal ADNOC-wide study of the implications of climate change to our operations has been conducted.
EC3	Coverage of the organization's defined benefit plan obligations.	63
EC4	Significant financial assistance received from government.	63; ADNOC receives little direct support from the government. Its operations, new capital investments and major developments are funded primarily from the company's own cash flow.
EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	63; the UAE has no minimum wages. ADNOC's entry level wage is highly competitive with market rates in the oil and gas sector.
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	64, 65
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	65
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	57 - 59, 65
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	57 - 59, 64 - 56
OG1	Volume and type of estimated proved reserves and production.	Volume of estimated proved reserves is considered commercially sensitive to ADNOC and our Group Companies and is therefore not disclosed in this report.
ENVIRONMENT		
Disclosure on Management Approach		23 - 39
EN1	Materials used by weight or volume.	32
EN2	Percentage of materials used that are recycled input materials.	32
EN3	Direct energy consumption by primary energy source.	28
EN4	Indirect energy consumption by primary source.	28
EN5	Energy saved due to conservation and efficiency improvements.	28
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	29, 30

GRI	INDICATOR DEFINITION	PAGE / DESCRIPTION
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	29, 30
EN8	Total water withdrawal by source.	31
EN9	Water sources significantly affected by withdrawal of water.	30
EN10	Percentage and total volume of water recycled and reused.	30
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	33, 34
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	33, 34
EN13	Habitats protected or restored.	33, 34
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	33, 34
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	35
EN16	Total direct and indirect greenhouse gas emissions by weight.	24, 25
EN17	Other relevant indirect greenhouse gas emissions by weight.	Effort is underway to disclose data on this indicator in our future reports.
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	29
EN19	Emissions of ozone-depleting substances by weight.	27
EN20	NOx, SOx, and other significant air emissions by type and weight.	24, 25
EN21	Total water discharge by quality and destination.	30, 31; water discharges across ADNOC's operations are in compliance with ADNOC discharge limits.
EN22	Total weight of waste by type and disposal method.	32, 33
EN23	Total number and volume of significant spills.	36, 37
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	No hazardous waste was imported or exported by ADNOC across international borders in 2012.
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	31
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	60, 61
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	Effort is underway to disclose data on this indicator in our future reports.
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	No fines or non-monetary sanctions for non-compliance with environmental laws and regulations were received in 2012.
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	38, 39
EN30	Total environmental protection expenditures and investments by type.	39
OG2	Total amount invested in renewable energy.	28
OG3	Total amount of renewable energy generated by source.	28
OG4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored.	33; biodiversity action plans are in place across all operating sites located in or adjacent to (within a 50 km radius) protected areas or areas of high biodiversity value.
OG5	Volume of formation or produced water.	31
OG6	Volume of flared and vented hydrocarbon.	24, 26

GRI	INDICATOR DEFINITION	PAGE / DESCRIPTION
OG7	Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal.	32
OG8	Benzene, Lead and Sulfur content in fuels.	27, 60
LABOUR PRACTICES AND DECENT WORK		
Disclosure on Management Approach		41 - 46, 49 - 51, 53 - 55
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	53, 54
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	54
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	63; benefits provided to full-time employees that are not provided to temporary or part-time employees differ by Group Company and have been excluded from the scope of this report.
LA4	Percentage of employees covered by collective bargaining agreements.	Zero; employee associations, such as unions and collective bargaining, are not permitted in the UAE under Federal Law.
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	55
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	41
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	42 - 45, 49; we do not currently disclose on the Absentee rate. Efforts are underway to ensure disclosure in our future reports.
LA8	Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	50, 51
LA9	Health and safety topics covered in formal agreements with trade unions.	Trade unions do not exist and are illegal in the UAE.
LA10	Average hours of training per year per employee by gender, and by employee category.	54; breakdowns by employee category cannot be reported at ADNOC level as employee categories differ across our reporting entities. This does not allow for aggregation of comparable data.
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	54
LA12	Percentage of employees receiving regular performance and career development reviews, by gender.	55
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	65
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	53, 54
LA15	Return to work and retention rates after parental leave, by gender.	This data is not reported at ADNOC level as differing employment type and contracts across our reporting entities do not allow for aggregation of comparable data.
HUMAN RIGHTS		
Disclosure on Management Approach		41 - 46, 49 - 51, 53 - 55
HRI	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	64; all suppliers to ADNOC and our Group-wide operations are required to adhere to ADNOC's ethical policies, which address human rights issues, and are screened on a regular basis (particularly in the case of our major projects) to ensure compliance with ADNOC's zero tolerance stand on human rights violations.

GRI	INDICATOR DEFINITION	PAGE / DESCRIPTION
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	64; all suppliers to ADNOC and our Group-wide operations are required to adhere to ADNOC's ethical policies, which address human rights issues, and are screened on a regular basis (particularly in the case of our major projects) to ensure compliance with ADNOC's zero tolerance stand on human rights violations.
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	Zero; ADNOC does not at this point offer any training on human rights issues.
HR4	Total number of incidents of discrimination and corrective actions taken.	No significant incidents of discrimination (alleged and subsequently found to be of substance with disciplinary actions necessary) were reported to ADNOC in 2012.
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	Zero; employee associations, such as unions and collective bargaining, are not permitted in the UAE under Federal Law. ADNOC takes extensive steps to engage employees individually and collectively, as outlined on page 55 of this report.
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	56
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	56
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	Security for ADNOC's onshore and offshore facilities is provided by the Critical Infrastructure and Coastal Protection Authority (CICPA), which was established in 2007 to ensure the safe and uninterrupted operation of assets critical to the economy of Abu Dhabi. The CICPA is responsible for upholding the UAE's policy towards promoting and protecting human rights.
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	No incidents or complaints in respect of indigenous peoples were recorded in 2012.
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	No human rights reviews and/or impact assessments performed in 2013. Plans to perform such reviews and assessments are underway in 2013.
HR11	"Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms."	No grievances related to human rights were received in 2012.
OG9	Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place.	ADNOC does not have operations in areas where indigenous communities are present or could be affected.
SOCIETY		
Disclosure on Management Approach		41 - 46, 49 - 51, 53 - 55
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	57; all operations are subject to a structured Health, Safety and Environment Impact Assessment (HSEIA) process that covers the duration of the operations' lifecycles.
SO2	Percentage and total number of business units analyzed for risks related to corruption.	56
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	There is no formal anti-corruption training programme for ADNOC employees as of current.
SO4	Actions taken in response to incidents of corruption.	56
SO5	Public policy positions and participation in public policy development and lobbying.	20
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	ADNOC does not provide financial support or in-kind contributions to any political parties.
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	56; no cases of anti-competitive behaviour, anti-trust, and monopoly practices were received in 2012.

GRI	INDICATOR DEFINITION	PAGE / DESCRIPTION
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	No fines or non-monetary sanctions for non-compliance with laws and regulations were received in 2012.
SO9	Operations with significant potential or actual negative impacts on local communities.	57; ADNOC's operations in 2012 did not result in any significant potential or actual negative impact on local communities.
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	Zero; no operations were identified to have significant potential or actual negative impacts on local communities in 2012.
OG10	Number and description of significant disputes with local communities and indigenous peoples.	Zero; no disputes with local communities took place in 2012.
OG11	Number of sites that have been decommissioned and sites that are in the process of being decommissioned.	Zero; no sites were decommissioned nor in the process of being decommissioned in 2012.
OG12	Operations where involuntary resettlement took place, the number of households resettled in each and how their livelihoods were affected in the process.	No operations involving voluntary or involuntary resettlement took place in 2012.
OG13	Number of process safety events, by business activity.	47
PRODUCT RESPONSIBILITY		
Disclosure on Management Approach		41 - 46, 49 - 51, 53 - 55
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	60
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	No incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle took place in 2012.
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	60; each of the concerned Group Companies (ADNOC DISTRIBUTION, Borouge, FERTIL and TAKREER) implements its own product labelling practices in accordance with the applicable regulations and with the requirements of local, regional and international associations to which the respective Group Company subscribes.
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes.	No incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling took place in 2012.
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	61
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	61; it is the responsibility of each of the concerned Group Companies (ADNOC DISTRIBUTION, Borouge, FERTIL and TAKREER) to regularly review the relevant laws, standards and codes related to marketing communications, as applicable to their operations.
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	No incidents of non-compliance with regulations and voluntary codes concerning marketing communications took place in 2012.
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	No substantiated complaints regarding breaches of customer privacy and losses of customer data were received in 2012.
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	No fines for non-compliance with laws and regulations concerning the provisions and use of products and services were received in 2012.
OG14	Volume of biofuels produced and purchased meeting sustainability criteria.	No biofuels have been purchased or produced by ADNOC in 2012.



Statement GRI Application Level Check

GRI hereby states that **Abu Dhabi National Oil Company** has presented its report "ADNOC 2012 Sustainability Report" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines. For methodology, see www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 28 August 2013

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative



The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance.
www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 23 August 2013. GRI explicitly excludes the statement being applied to any later changes to such material.

ACRONYMS & ABBREVIATIONS

A&AD	Audit and Assurance Division
ADAA	Abu Dhabi Accountability Authority
ADCOP	Abu Dhabi Crude Oil Pipeline Project
ADESCO	Abu Dhabi Emergency Support Committee for Offshore Operations
ADIA	Abu Dhabi Investment Authority
ADIC	Abu Dhabi Investment Council
ADNOC	Abu Dhabi National Oil Company
ADRPBF	Abu Dhabi Retirement Pensions and Benefits Fund
ADSG	Abu Dhabi Sustainability Group
ADWEA	Abu Dhabi Water and Electricity Authority
AED	Arab Emirates Dirham
AGHSESC	ADNOC Group HSE Steering Committee
ALARP	As Low as Reasonably Practicable
AOP	Achievers Oasis Programme
APC	Advanced Process Control
API	American Petroleum Institute
API RP	American Petroleum Institute Recommended Practice
AQI	Air Quality Index
AQMS	Air Quality Management System
ASA	Advertising Standards Authority
ASD	Azimuth Stern Drive
ATI	ADNOC Technical Institute
BAP	Biodiversity Action Plan
BAT	Best Available Technique
bbl	Barrel
BMI	Body Mass Index
BMP	Best Management Practice
BNT	Borealis Nucleation Technology
boe	Barrel of oil equivalent
BOP	Blowout Preventer
BPD	Barrels Per Day
CAMS	Competence Assurance Management System
CCP	Corporate Crisis Plan
CCS	Carbon Capture and Storage
CCT	Corporate Crisis Team
CDM	Clean Development Mechanism
CEO	Chief Executive Officer
CFC	Chlorofluorocarbon
CME	Continuing Medical Education
CMP	Crisis Management Plan

CMT	Crisis Management Team
CNG	Compressed Natural Gas
CICPA	Critical Infrastructure and Coastal Protection Authority
CO	Carbon Monoxide
CO₂	Carbon Dioxide
CoP	Code of Practice
CPD	Civil Projects Division
CSR	Corporate Social Responsibility
CSS	Community Support Service
CSU	Condensate Stabilisation Unit
DHSV	Downhole Safety Valve
E&P	Exploration and Production
EOR	Enhanced Oil Recovery
ExRAY	Emergency Exercise Risk Assessment Utility
ERD	Extended Reach Drilling
FAR	Fatal Accident Rate
FODECO	Fuyo Ocean Development & Engineering Co. Ltd
FRP	Facility Response Plan
G3	Generation 3 (GRI indicators)
G3.1	Generation 3.1 (GRI indicators)
GASTECH	Gastech Conference & Exhibition
GDP	Green Diesel Project
GEO	Geoscience Conference & Exhibition
GHG	Greenhouse Gas
GNRD	Group Nationals Recruitment Department
GPS	Global Petroleum Show
GRI	Global Reporting Initiative
GSAD	Glenelg School of Abu Dhabi
GSM	Global System for Mobile (Communications)
H₂S	Hydrogen Sulphide
HAAD	Health Authority of Abu Dhabi
HAZOP	A Hazard and Operability study
HCFC	Hydrochlorofluorocarbon
HP	High Pressure
HR	Human Resources
HSE	Health, Safety and Environment
HSEIA	Health, Safety and Environment Impact Assessment
HSEMS	Health, Safety and Environment Management System
HVAC	Heating, Ventilation and Air Conditioning
IADC	International Association of Drilling Contractors

IGD	Integrated Gas Development
IGD – HAP	Integrated Gas Development Project – Habshan Platform
ILO	International Labour Organisation
IMO	International Maritime Organisation
IMT	Incident Management Team
IPCC	Intergovernmental Panel for Climate Change
IRP	Inter Refineries Pipeline
ISO	International Standards Organisation
IUCN	International Union for Conservation of Nature
KPI	Key Performance Indicator
km	Kilometre
km²	Square kilometre
kWh	Kilowatt hour
LDAR	Leak Detection and Repair
LDPE	Low Density Polyethylene
LNG	Liquefied Natural Gas
LOPC	Loss of Primary Containment
LP	Low Pressure
LTI	Lost Time Incident
LTIF	Lost Time Incident Frequency Rate
m³	Cubic metre
MARPOL	International Convention for the Prevention of Pollution from Ships
MASDAR	Abu Dhabi Future Energy Company
MMSCF	Million Standard Cubic Feet
MMSCFD	Million Standard Cubic Feet per Day
MRC	Maximum Reservoir Contact
MSBPD	Million Standard Barrels Per Day
MSD	Medical Services Division
MSDS	Material Safety Data Sheet
MWh	Megawatt hour
NA	Not Applicable
NCEMA	National Emergency Crisis and Disaster Management Authority
NGL	Natural Gas Liquid
NGO	Non Governmental Organisation
NGV	Natural Gas for Vehicles
NO_x	Nitrogen Oxides
NORM	Natural Occurring Radioactive Material
NRC	National Recruitment Committee
OBM	Oil Based Mud
ODR	Occupational Disease Rate

ODS	Ozone Depleting Substance
OGP	Oil and Gas Producers (Association)
OGSS	Oil and Gas Sector Supplement
OHRA	Occupational Health Risk Assessment
OTC	Offshore Technology Conference
PCB	Poly Chlorinated Biphenyls
PI	Petroleum Institute
PP	Polpropylene
ppm	Parts per million
RAMS	Remote Area Medical Services
RC	Responsible Care
REBA	Rapid Ergonomic Body Assessment
RHC	Ruwais Housing Complex
RHD	Ruwais Hospital Division
RSMT	Road Safety Monitoring Teams
RULA	Rapid Upper Limb Assessment
RWDC	Restricted Work Day Case
SAS	Sahil, Asab and Shah Fields
SCADA	Supervisory Control Data Acquisition System
SCOT	Shell Claus Off-gas Treatment
SGD	Shah Gas Development
SHR	Shah and Habshan Rail
SO₂	Sulphur Dioxide
SO_x	Sulphur Oxides
SOL	Safe Operating Limit
SPC	Supreme Petroleum Council
SRU	Sulphur Recovery Unit
TEAI	Triethylaluminium
TLD	Thermo-luminescent Dosimeters
TRIR	Total Recordable Incident Rate
TWL	Thermal Work Limit
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America
UZ	Upper Zakum
VMD	Vehicle Monitoring Devices
VOC	Volatile Organic Compound
WBM	Water Based Mud
WFES	World Future Energy Summit
WHPT	Well Head Platform Tower
WVMS	Wireless Vibration Monitoring System
XLPE	Cross-linkable Polyethylene

REPORT

CONTRIBUTORS

Exploration and Production Directorate

ADCO	Abu Dhabi Company for Onshore Oil Operations
ADMA-OPCO	Abu Dhabi Marine Operating Company
NDC	National Drilling Company
ZADCO	Zakum Development Company

Gas Directorate

ADGAS	Abu Dhabi Gas Liquefaction Company Ltd.
Al Hosn Gas	Abu Dhabi Gas Development Company Ltd.
GASCO	Abu Dhabi Gas Industries Ltd.
ELIXIER	ADNOC Linde Industrial Gases Company Ltd.

Marketing and Refining Directorate

ADNOC DISTRIBUTION	
TAKREER	Abu Dhabi Oil Refining Company
ADNATCO & NGSCO	Abu Dhabi National Tanker Company & National Gas Shipping Company

Petrochemicals Directorate

Borouge	Abu Dhabi Polymers Company Ltd.
FERTIL	Ruwais Fertilizer Industry

Shared Services Directorate

ESNAAD	
IRSHAD	Abu Dhabi Petroleum Ports Operating Company

Independent Operators

ADOC	Abu Dhabi Oil Company (Japan) Ltd.
BUNDUQ	BUNDUQ Company Ltd.
TOTAL ABK	Total Abu Al Bukhoosh Company

Academic Institutions

PI	The Petroleum Institute
ATI	ADNOC Technical Institute
GSAD	Glenelg School of Abu Dhabi

Other

CPD	Civil Projects Division
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READER'S SURVEY

As an ongoing endeavour to engage stakeholders and to improve performance, we welcome your feedback on the ADNOC Sustainability Report 2012.

Please fill out the questions below and return to:

Sustainability & Social Responsibilities Department
Health, Safety & Environment Division
Abu Dhabi National Oil Company (ADNOC)
P.O. Box 898, Abu Dhabi, UAE
Office: +971 (0)2 602 4740
Fax: +971 (0)2 666 8089
E-mail: sustainability@adnoc.ae

Please tell us about yourself (optional)

Name: _____

Organisation: _____

Email address: _____

Country of residence: _____

1) What are your reasons for reading this report?

- ☐ I wanted to understand specific sustainability issues of ADNOC
- ☐ I wanted a more general understanding of ADNOC
- ☐ I used it for research
- ☐ Other: _____

2) Has this report changed your views of ADNOC?

- ☐ Yes, I view ADNOC more positively now
- ☐ Yes, I view ADNOC more negatively now
- ☐ No Change

3) Do you have any suggestions to improve this report?

4) What issues are you most interested in regarding ADNOC's performance?

- ☐ Environmental impact
- ☐ Labour relations
- ☐ Social impact
- ☐ Economic performance
- ☐ Other: _____

5) Did this report adequately address your concerns?

- ☐ Yes
- ☐ No
- ☐ Please explain: _____