المجلس الأعلى للبترول
Supreme Petroleum Council

أدنوك
ADNOC
شركة بترول ابوظبي الوطنية



Developing Our Natural Resources Responsibly

Abu Dhabi National Oil Company (ADNOC)
2010 Sustainability Report



"We are responsible for the care of our environment and the wildlife in it and its protection, not only for ourselves but also for our children. This is our duty, the duty of loyalty to our ancestors and our grandchildren as well."

The late Sheikh Zayed Bin Sultan Al Nahyan, founder of the UAE

About this Report

This is ADNOC's second sustainability report, disclosing our performance in the year 2010.

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 (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 2010 sustainability report, we further expanded the scope to include the requirements of the International Petroleum Industry Environmental Conservation Association/American Petroleum Institute (IPIECA/API) Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (April 2005) .

Process for defining report content

This report focuses on ADNOC's priority areas, which were identified through a process incorporating the principles of the GRI and IPIECA/API frameworks. These include:

Materiality

We believe the report covers the major issues that reflect ADNOC's significant economic, environmental and social impacts, as well as the issues that would substantially 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

We have attempted to make this report as complete as possible. The report pertains to ADNOC's 2010 performance, covering our operations in the United Arab Emirates unless stated otherwise. There are no specifically excluded operations.

Reporting Cycle

We will report on our sustainability progress annually.

Ensuring quality in our sustainability reporting

We recognize 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

This report provides comparative information for the period 2006-2010 and in some cases earlier years, where possible.

Accuracy and Reliability

Significant effort has been made to ensure that the performance data is as accurate as possible. In 2010, the Supreme Petroleum Council (SPC) commissioned a dedicated electronic data management system for the centralized collection, evaluation and storage of sustainability data, via secure internet interfaces, across ADNOC.

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

We have self-declared our reporting to be Application Level <A>.

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Message from the Secretary General

I am delighted to present our 2010 Sustainability Report for ADNOC and its Group Companies. This report serves as an important tool to help us chart our progress and improve our sustainability performance. It also helps to motivate our Group Companies to actively explore opportunities for improvement.

The oil and gas industry is faced with the global challenge of balancing growing energy demands and economic development against the national and international concerns surrounding energy security and climate change. In response to this growing challenge, ADNOC has made significant achievements to diversify Abu Dhabi's energy supply, with a particular emphasis in 2010 on enhancing natural gas production from our gas reserves. We are also investing heavily in expanding our gas supply network of pipelines, processing facilities and shipping fleet to enable consumption in both domestic and international markets.

At the same time, we have sought new technologies to enhance oil and condensate recovery from our existing fields. Throughout the implementation of our ambitious projects, we will maintain a strong commitment towards reducing our greenhouse gas emissions and overall environmental footprint. We will also look increasingly towards building capacity within our UAE national workforce through our Emiratisation policy, and shall maintain the highest of safety standards across our operations and work environments.

Ensuring the safety of our employees is of fundamental importance. Despite our untiring efforts to prevent accidents, there were four regrettable work-related fatalities amongst ADNOC and its Group Companies in 2010, affecting two employees and two contractors. At ADNOC, one fatality is one too many. To prevent such accidents from occurring in the future, we have thoroughly investigated the root causes of these incidents and we have implemented the necessary counter measures. Our 2010 Fatal Accident Rate (FAR) of 1.13 fatalities per 100 million man-hours is the lowest achieved since reporting began in 1997, and is significantly lower than the industry benchmark of 2.76 fatalities per 100 million man-hours (the International Association of Oil and Gas Producers (OGP) 2010 average).

ADNOC strives to develop its business in an environmentally, socially and economically responsible manner and we will continue to search for new, cost effective and efficient solutions to optimize resources so that we are better positioned to confront existing and future challenges.

We remain committed to demonstrate leadership in sustainability performance and will continue to play a key role in the sustainable development of the Emirate of Abu Dhabi.

Dr. Jauan Salem Al Dhaheri
Secretary General, Supreme Petroleum Council

"ADNOC strives to develop its business in an environmentally, socially and economically responsible manner."

About ADNOC

Abu Dhabi National Oil Company (ADNOC) was established on 27 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 competitive position through its 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 upstream and downstream petroleum industry, including crude oil and natural gas exploration, production, refining, processing, distribution, global marketing, and the manufacture of petrochemicals.

ADNOC's efforts in the exploration and production field have concentrated on assessing undiscovered reserves and optimizing hydrocarbon recovery by improving reservoir management. Today, ADNOC manages and oversees oil production of more than 2.7 million barrels per day (bpd), ranking it amongst the top ten oil and gas producing companies in the world.

In the last few years, significant achievements were made in the expansion and development of gas fields to meet the growing needs and development plans of Abu Dhabi, and in our bid to support the Abu Dhabi Economic Vision 2030 which seeks to diversify Abu Dhabi's energy supplies. We are also enhancing gas injection requirements in order to enhance oil and condensate recovery from the producing fields. In 2010, ADNOC saw to the production of over 7 billion standard cubic feet per day (scfd) of natural gas (wet gas).

ADNOC is committed to sustainable development and ensuring a harmonious balance between people's needs and the Earth's resources. Our track record in occupational health and safety and protection of the environment sets the standard for the oil and gas industry around the Arabian Gulf.

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

We are also 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 Supreme Petroleum Council

The Supreme Petroleum Council (SPC) was established under law No. 1 of 1988. The law clearly 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.

H.H. Sheikh Khalifa Bin Zayed Al-Nahyan, the president of the UAE and Ruler of Abu Dhabi, is the chairman of the SPC.

>7 billion

standard cubic feet per day
natural gas production (wet gas)

>2.7 million

barrels of crude oil per day

ADNOC Highlights in 2010

JAN FERTIL oversees work on the FERTIL-2 project, in which new Ammonia and Urea plants will be installed at FERTIL's fertilizer complex in Ruwais. »

15 ADNOC Group Companies

3 Independent Operators

3 ADNOC Academic Institutions

ADNOC's Organisational Structure

Supreme Petroleum Council General Secretariat

ADNOC CEO

Academic Institutions
- The Petroleum Institute
- ADNOC Technical Institute
- Glenelg School of Abu Dhabi

ADNOC Divisions/Departments
- Civil Projects Division
- Internal Audit Division
- Scholarship Department

Business Line Directorates

Exploration and Production Directorate
- **ADCO (60%)** Abu Dhabi Company for Onshore Oil Operations
- **ADMA-OPCO (60%)** Abu Dhabi Marine Operating Company
- **ZADCO (60%)** Zakum Development Company
- **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%)**
- **NDC (100%)** National Drilling Company

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%)** Ruwais Fertilizer Industry

Shared Services Directorate
- **ESNAAD (100%)**
- **IRSHAD (60%)** Abu Dhabi Petroleum Ports Operating Company

Other Directorates
- Finance Directorate
- Management Support Directorate
- Human Resources and 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

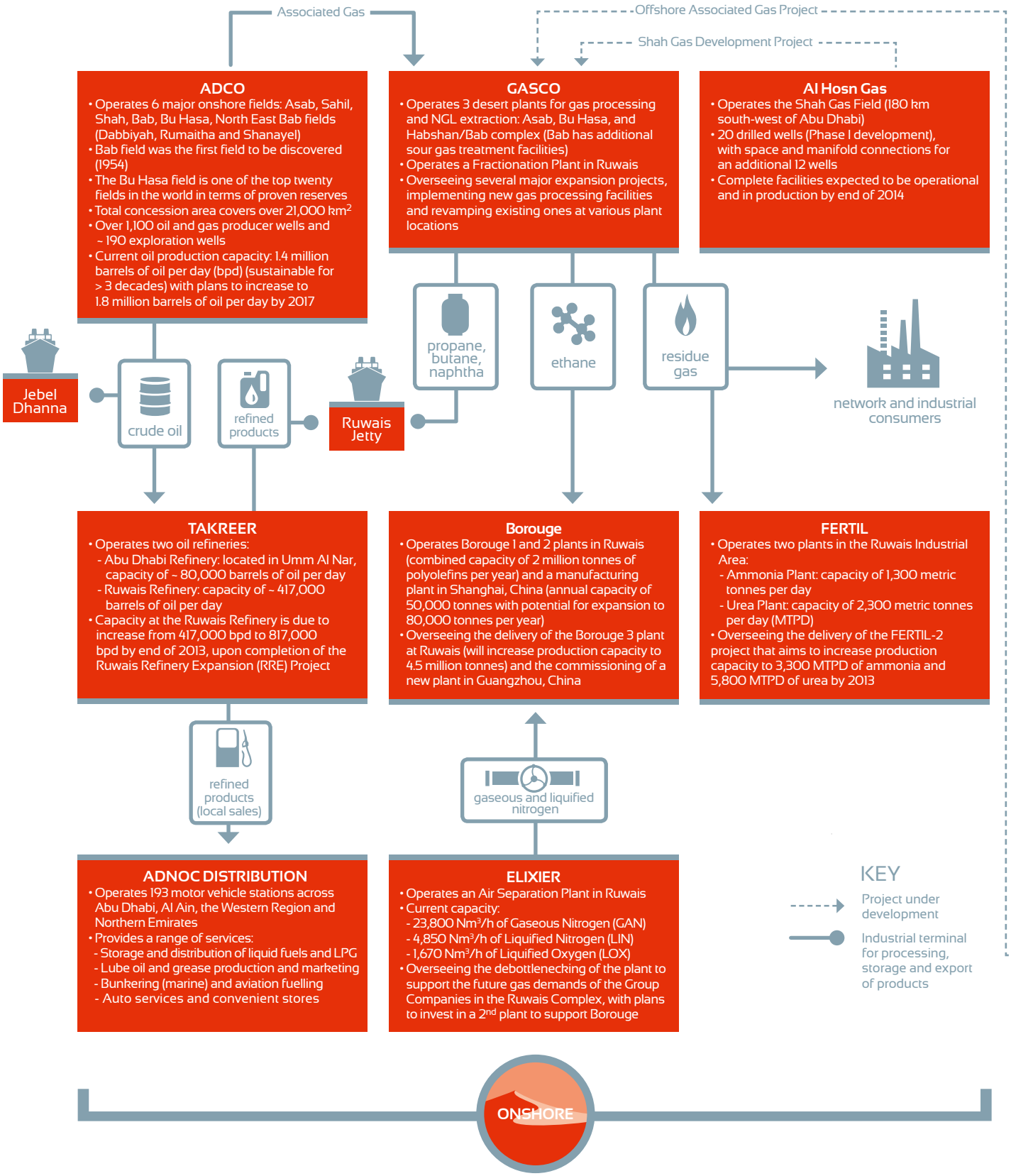
* Independent Operators operate under ADNOC/SPC directions for Health, Safety and Environment (HSE) matters

GASCO awards EPC contracts for two new major projects: Ruwais New Sulphur Terminal and Habshan Sulphur Granulation Plant. Both projects are expected to be completed by the end of 2013.

FEB

Al Hosn Gas was established by Emiri Decree 2010/3 to develop the sour Shah Gas Field.

ADNOC Group Companies



ADCO awards EPC contract for increasing production of the BAB Field in an initiative to raise production capacity to 1.8 million barrels of oil per day (bpd) by 2017.

ESNAAD receives three new state-of-the-art vessels to join its fleet in its bid to increase services to the oil sector in Abu Dhabi.

MAR

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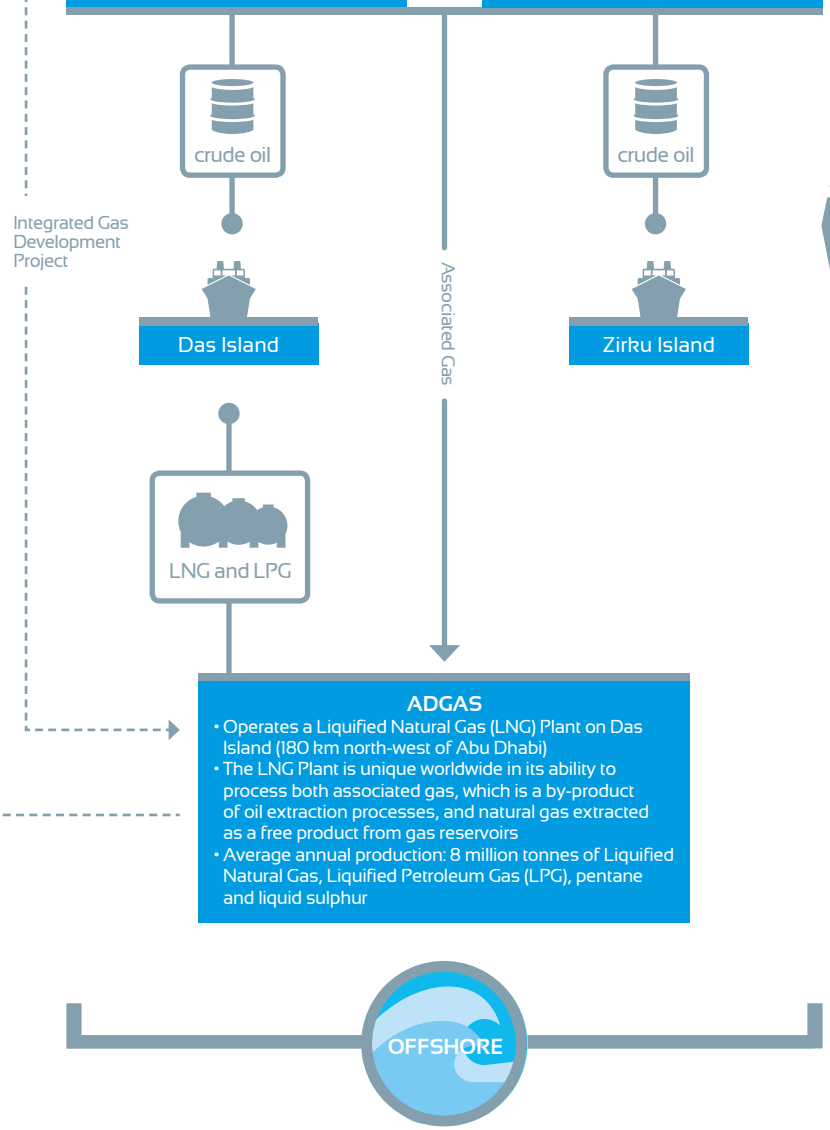
ADMA-OPCO

- Operates 2 offshore fields:
  - Umm Shaif: ~ 360 km² in size, located 150 km north-west of Abu Dhabi
  - Zakum: ~ 1,270 km² in size, located 65 km north-west of Abu Dhabi
- The Zakum field is the second largest offshore field in the Gulf and the fourth largest field in the world. It contains five separate zones which make up Lower Zakum and Upper Zakum. Field development has been centred on the lower zones in view of their superior productivity
- 37 platforms
- 335 oil and gas producer well heads (some of which are shared with ZADCO)

ZADCO

- Operates 3 offshore fields:
  - Upper Zakum (UZ): ~ 1,200 km² in size, located 84 km north-west of Abu Dhabi. UZ can accommodate 550 personnel making it one of the largest offshore living structures in the world
  - Umm Al Dalkh: ~ 178 km² in size, located 25 km north-west of Abu Dhabi
  - Satah: ~ 35 km² in size, located 200 km north of Abu Dhabi
- Oil operation centres on Zirku Island (140 km north-west of Abu Dhabi) and Arzanah Island (180 km north-west of Abu Dhabi)
- The first crude shipment was in 1983 from Zirku Island



ADGAS

- Operates a Liquified Natural Gas (LNG) Plant on Das Island (180 km north-west of Abu Dhabi)
- The LNG Plant is unique worldwide in its ability to process both associated gas, which is a by-product of oil extraction processes, and natural gas extracted as a free product from gas reservoirs
- Average annual production: 8 million tonnes of Liquified Natural Gas, Liquified Petroleum Gas (LPG), pentane and liquid sulphur

NDC

- Provides onshore and offshore drilling services to the ADNOC Group Companies
- Operates:
  - 10 offshore jack-up drilling rigs
  - 18 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
- Overseeing the delivery of 2 new offshore rigs and 7 new land rigs

ADNATCO & NGSCO

- Provides LNG, LPG, Crude, Oil Products, Bulk, Container and Ro-Ro shipping and chartering services to ADNOC Group companies
- Operates a fleet of 17 ships:
  - 8 LNG carriers (Total GRT*: 910,392)
  - 4 Tankers (Total GRT: 69,277)
  - 3 Bulk carriers (Total GRT: 62,838)
  - 2 Ro-Ro vessels (Total GRT: 15,634)
- Undergoing a "Fleet Expansion Plan" that is aimed at developing capacity and efficiency to meet ADNOC operational requirements

*Gross Register Tonnes

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
  - Material handling
  - Well services
  - Drilling fluids services
  - Specialised production chemicals
- Operates in the Mussafah Offshore Supply Base

IRSHAD

- Provides marine support services to all Abu Dhabi petroleum ports (Ruwais, Das Island, Jebel Dhanna, Zirku Island and Mubarraz)
- Services include:
  - Berthing/Unberthing of O&G tankers and the loading/unloading of oil products
  - Diving and maintenance of Single Buoy Mooring (SBM) Systems
  - Navigational aid in Abu Dhabi channels
- Operates a total fleet of 36 vessels of which 13 (7 Tug Boats, 4 Tail Back Boats, and 2 Pilot Boats) are ADNOC-owned

ADNOC Academic Institutions

- The Petroleum Institute (PI): offers engineering education and research in areas of significance to the oil, gas and broader energy industry
- ADNOC Technical Institute (ATI): produces entry-level technicians who proceed to work for the ADNOC Group Companies
- The Glenelg School of Abu Dhabi (GSAD): offers primary and secondary education to national and expatriate students

TAKREER inaugurates Central Environment Protection Facility (BeAAT). The multi-million dollar investment is the first of its kind in the region, and is designed for the treatment and disposal of hazardous waste generated by the ADNOC Group Companies.

»

ADCO awards EPC contract for the development of Phase I of the new Qusahwira Field (a new undeveloped field that was discovered in 1975). Once completed, the Qusahwira Phase I is expected to add sustainable 30,000 barrels of oil per day (bpd) in 2013.

ADNOC Key Projects

In 2010, ADNOC Group Companies shared a common focus of increasing natural gas production to meet the growing needs and development plans of Abu Dhabi, as well as maximising oil and condensate recovery from existing fields. Some of the key projects under development include:

Gas Production

Integrated Gas Development (IGD) and Offshore Associated Gas (OAG) Projects

This is a mega offshore and onshore initiative that involves ADMA-OPCO, ADGAS and GASCO. As part of this undertaking, ADMA-OPCO will drill additional oil and gas wells at its offshore Umm Shaif field. The gas will be transferred to ADGAS's new facilities on Das Island via a 46-inch diameter pipeline (38 kilometers). With the new facilities, ADGAS will be able to process an additional 1 billion standard cubic feet per day (scfd) of high pressure gas. The gas will then be sent through a 30-inch diameter pipeline (200 kilometers) to GASCO's Habshan plant for further processing.

Shah Gas Development (SGD) Project

The SGD Project, implemented by Al Hosn Gas is a technically-challenging project that aims to produce one billion standard cubic feet per day (scfd) of well fluid from the Shah Field. The well fluid contains 23% hydrogen sulphide (H_2S) and 10% carbon dioxide (CO_2). Due to the major hazards associated with handling very sour well fluid, state-of-the-art technology, the highest engineering standards, optimal construction practices, and operation and maintenance practices focused on reliability and safety have to be utilised. The sulphur will be granulated and then transferred by rail network to the Ruwais Industrial Area for export to international markets.

Crude Oil Production

Bab & Qusahwira Projects

In pursuit to continuously develop its onshore fields, ADCO aims to raise production capacity from 1.4 to 1.8 million barrels of oil per day by 2017, by initiating production from three new oil fields: Bida Al Qemzan, Bab and Qusahwira, and by raising production at the North-East Bab oil field.

Upper Zakum Re-development (UZ750) Project

This project, led by ZADCO, aims to increase production at the Upper Zakum field from 550,000 to 750,000 barrels of oil per day by 2015, sustainable for 25 years. The project is unique in its application of artificial islands and its utilization of several technological "firsts", including Extended Reach Drilling and Maximum Reservoir Contact technologies.

In 2010, we focused on natural gas production and maximised oil and condensate recovery from our existing fields

Zakum Central Super Complex (ZCSC) De-mothballing Project

This project is part of the overall ADMA-OPCO Lower Zakum 100,000 barrels of oil per day program aimed at enhancing the oil production capacity from the Zakum Field progressively from the year 2012 onwards. In order to achieve the additional surface facilities required for this objective, ADMA-OPCO is de-mothballing and re-commissioning the production facilities at the Zakum Central Super Complex.

Ruwais Refinery Expansion (RRE) Project

TAKREER's mega RRE project aims to support refined product demand growth and increase refining capacity at Ruwais from 417,000 to 817,000 barrels of oil per day by end of 2013.

APR

Borouge plans new Innovation Centre in Abu Dhabi for developing innovative plastics solutions for the pipe, auto-motive and high tech packaging industries.

MAY

ESNAAD opens a brine plant capable of producing up to 3,000 tonnes per day that will serve the offshore drilling activities of ADMA-OPCO and ZADCO. The new brine plant produces various types of brine including sodium chloride and calcium chloride, with surplus capacity to produce heavier brines as well.

»

ADNOC DIST and GASCO inaugurate the first Compressed Natural Gas (CNG) filling station in Khalifa City A. This is part of a wider project that involves a national network of 17 CNG refilling stations that are to be built in strategic locations across Abu Dhabi.

ADNOC Products and Markets

Crude Oil and Condensate

ADNOC's equity of crude oil and condensate is sold in both international and local markets. The main onshore grade is Murban, and the other offshore grades include Umm Shaif, Lower Zakum and Upper Zakum.

In addition, ADNOC produces two grades of condensate: Uweinat and Thamama.

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 East Africa. ADNOC's main aim is to maintain good business relationships with existing and potential end-users and to ensure reliable supply.

Crude Oil and Condensate Exported in 2010 ('000 bbl)

Destination	Total*
Far East	175,180
Japan	165,673
Indian subcontinent	87,592
Africa	601
Oceania	1,707
Total	**430,753**

*ADNOC share

ADNOC exported 430,753,000 bbl of crude oil and condensate in 2010

Gas and Sulphur

Although oil will continue to provide the majority proceeds to sustain economic growth and social services in the coming years, gas will play an increasingly important role in the UAE's development.

Gas and Sulphur Exported in 2010 ('000 tonnes)

Destination	LPG	Sulphur
Africa	5	695
Asia	4,404	868
Europe	72	-
N&S America	-	192
Australia	47	-
Total	**4,527**	**1,756**

Gas will play an increasingly important role in the UAE's development

Plastics and Resins

In 2010, Borouge facilities produced 966,113 tonnes of plastics (polyethylene and polypropylene), ethylene and resins.

Plastics and Resins Produced in 2010 ('000 tonnes)

Facility	Production
Ruwais Polyethylene, Polypropylene and Ethylene	960.5
Shanghai Resins	5.5
Total	**966**

ADMA-OPCO awards EPC contract for Zakum Central Super Complex (ZCSC) De-mothballing Project. The project is part of overall ADMA Lower Zakum 100,000 barrels per day programme aimed at enhancing the oil production capacity from Zakum Field progressively from 2012 onwards. The project is scheduled for completion by the end of 2012.

JUN

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). In addition, ADNOC markets its 68% equity share of Paraffinic Naphtha produced by GASCO.

Ammonia and Urea

In 2010, FERTIL produced 472,000 tonnes of ammonia and 688,000 tonnes of urea.

Lubricants and Grease

ADNOC's lubricants include a comprehensive range of specialty and conventional engine oils, industrial and hydraulic oils, and greases. All our products are formulated to meet the highest international specifications.

In 2010, ADNOC sold approximately 37 million litres of lubricant and grease to the domestic market. A further six million litres was exported to our consumers worldwide.

Refined Products Exported in 2010 ('000 tonnes)

Destination	Fuel Oil 380 CST	Gas Oil	Jet A-1	Naphtha*
Africa	-	313	158	-
Far East	90	-	-	5,534
Europe	-	-	3,061	-
Middle East	-	327	-	-
Indian subcontinent	31	39	-	290
Total**	**121**	**679**	**3,219**	**5,824**

* Naphtha includes low sulphur naphtha, paraffinic naphtha, and naphtha.
**ADNOC share

ADNOC DIST and Borouge sign a joint agreement to provide consumer waste segregation and collection facilities at ADNOC service stations across the UAE, for the recycling of paper, metal and plastic products.

JUL

NDC awards contract for the construction of two offshore oil drilling jack-up. The signing of this contract comes within context of NDC's plan to double its fleet of onshore and offshore rigs to support ADNOC's operations.

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

Exhibitions and Conferences in 2010

Event	Date	Budget (AED)
World Future Energy Summit (WFES) - Abu Dhabi, UAE	January 2010	1,200,000
Gas Arabia - Abu Dhabi, UAE	January 2010	Participation only
9th Middle East Geosciences (GEO) Conference and Exhibition - Manama, Bahrain	March 2010	500,000
Oil and Gas West Asia (OGWA) Exhibition and Conference - Muscat, Oman	April 2010	700,000
Hanover International Fair - Hanover, Germany	April 2010	400,000
The World Expo - Shanghai, China	May-October 2010	1,000,000
Organization of the Petroleum Exporting Countries (OPEC) 50th Anniversary Exhibition - Riyadh, Saudi Arabia	September 2010	927,000
Abu Dhabi International Petroleum (ADIPEC) Exhibiton and Conference - Abu Dhabi, UAE	November 2010	4,545,000
Abu Dhabi Geographic Information System (GIS) Day - Abu Dhabi, UAE	November 2010	50,000

Sponsorships in 2010

Event	Date	Budget (AED)
Al Dhafra Festival	January 2010	1,000,000
Annual Camel Race Festival	March 2010	500,000
Liwa Dates Festival	July 2010	1,750,000
UAE National Day Celebrations	December 2010	1,000,000
Educational and Public Institutions	Throughout	3,300,000
Sports and Recreational Institutions and Activities	Throughout	2,340,000

In 2010, ADNOC and its Group Companies spent more than AED 18 million in support of high profile exhibitions, conferences and sponsorships of key community events, as outlined to the left

AUG

ZADCO observes the appearance of sand above the high water level at the southern part of the Upper Zakum. This is a milestone achievement for the UZ750 Project, and a key event in the company's transition from wellhead platform tower-based facilities and jack-up rig drilling to island-based facilities and land rig-based drilling.

»

Borouge opens its Borouge 2 facility that triples the manufacturing capacity of the Ruwais facility to 2 million tonnes of polyefins per year.

Our Stakeholders and Engagement Practices

Stakeholders	Engagement
Customers	• 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	• Regional supplier conferences • Technology-based financial risk management • Supplier development • Supplier Health, Safety and Environment (HSE) requirements and standards during the tender process • Audits
Employees	• Employee satisfaction surveys and suggestion scheme • Training and development programs, 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	• Annual meetings of shareholders • Annual Sustainability Report • Facility tours • Conference calls to discuss business updates • Access to company information and data
Public/Community	• Supporting educational and public institutions across Abu Dhabi • Career and recruitment fairs • Employee volunteerism and local contribution programs • Monthly ADNOC Newsletters • Sponsorship of community events in Abu Dhabi and the Western Region e.g. National Day and National Environment Day celebrations, Liwa Date Festival and Al Dhafra Camel Festival
Government Organisations	• Conferences, seminars and exhibitions e.g. ADIPEC 2010, WFES 2010, GEO 2010 • Membership with trade/industry groups and associations, including Abu Dhabi Sustainability Group (ADSG), Oil and Gas Producers Association (OGP), Abu Dhabi Emergency Support Committee for Offshore Operators (ADESCO)
Press/Media	• Press releases in newspapers and magazines • Visits and interviews • Conferences, seminars and exhibitions

SEP

Borouge opens a new Marketing and Sales Company in Beijing. Through the opening of this company it will further its strategic objectives, become better positioned to serve its customers throughout the region, as well as strengthen the economic ties between China and the UAE.

Key Stakeholder Issues: The Materiality Test

ADNOC's solid commitment to stakeholder engagement was emphasized at the Abu Dhabi International Petroleum Exhibition & Conference (ADIPEC), which was held in November 2010.

The event successfully brought together all of ADNOC's stakeholder groups in one professional space and provided ADNOC and its Group Companies with a unique opportunity to showcase their efforts across the industrial and academic aspects of the oil, gas and petrochemical sectors.

The conference focussed on three major themes: subsurface operations, surface operations and the vision related to surface operations. These themes were communicated to stakeholders through a variety of research papers, posters, panels and interactive sessions.

The panels were titled:
- Technology and Innovation in the Energy Sector
- Sustainability and Development of Human Capital
- Carbon Management in the Energy Sector
- New Frontier Challenges: Light Gas, Sour Gas, Heavy and Unconventional Oil
- Delivering Mega-Projects in a Changing/ Challenging Environment

The exhibition also allowed the staff from ADNOC's Exploration and Production Directorate to visit important vendors of software and hardware for geological well correlations, seismic interpretation and other subsurface analysis, and to attend live demonstrations and new technology updates.

The diverse attendance observed at the ADIPEC conference presented ADNOC with a prime opportunity to engage its internal and external stakeholders on another level, whereby participants were encouraged to complete a "sustainability materiality test". Participants were asked to rank 29 sustainability issues, covering a wide range of health, safety, environmental, economic and social aspects, in the order of importance.

ADIPEC 2010
Key Facts
- 60,000 square metre exhibiting area
- 45,000 visitors
- 4,300 delegates
- 1,500 exhibiting companies
- 50 countries represented
- 260 speakers from across the ADNOC Group Companies, presenting 52 research papers and 92 posters, and hosting 37 interactive sessions
- 200 job applications to ADNOC

The list of issues was selected by ADNOC in accordance with relevance to the petroleum sector's activities and their inclusion in ADNOC's Statement of Commitments, HSE Policy and HSE Objectives. All the issues are considered by ADNOC to be important and stakeholders were therefore specifically requested to rank the issues relatively rather than independently.

A total of 200 surveys were collected, 100 from each of the internal and external stakeholders. The consolidation of data according to these two outlooks made it possible to build the Materiality Matrix shown on the right. The participants represented the following segments:

Internal Stakeholders:
- Employees
- Contractors
- Suppliers
- Management Team
- Shareholders

External Stakeholders:
- Business & Trade Organisations
- Professional Associations
- Educational Institutions
- Investment Community

OCT

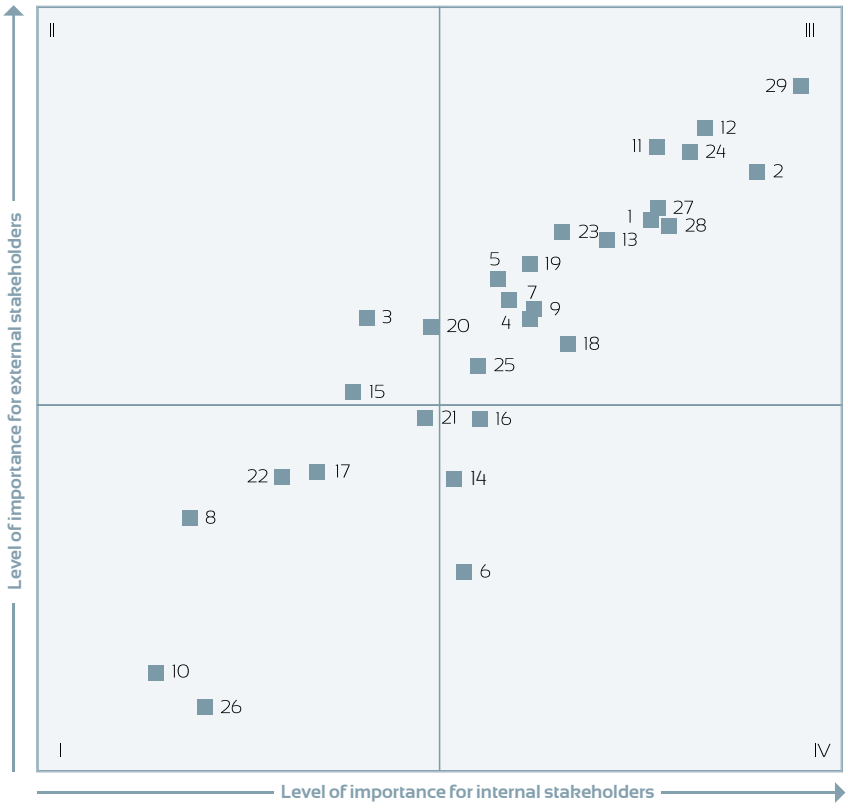
IRSHAD receives the ASD-Escort tugboats "Al Qubah" and "Mezyad" to join IRSHAD's multi-purpose fleet. ASD tugs are superior in the design of their shapes and propulsion systems, enabling them to produce almost equivalent power in all directions and rapidly change the force of pull or push.

- Media
- Government/Regulators
- Non-Government Organisations
- General Public/Community
- Customers

To reflect this valuable stakeholder feedback in our 2010 ADNOC Sustainability Report, we have made an emphasis on addressing most of the topics that appear in quadrants II, III and IV of the Materiality Matrix and some of those in quadrant I.

ADNOC thanks everyone who participated in this constructive exercise which helped make this a more objective report. We will continue to support our stakeholder views throughout our operations.

Materiality Matrix



Sustainability Issues

1. Use of water
2. Preventing environmental pollution
3. Climate change
4. Air emissions
5. Use of renewable energy
6. Waste and effluent control
7. Consumption of natural resources
8. Conservation of biodiversity
9. Compliance with laws and regulations
10. Stakeholder engagement and dialogue
11. Worker rights
12. Occupational health and safety
13. Energy efficiency
14. Use of Best Available Technology
15. Transparency
16. Sustainability awareness
17. Recycling
18. Reputation
19. Impacts on the UAE economy
20. Impacts on the UAE community
21. Maintaining cultural integrity and values
22. Profitability & competitiveness
23. Employee satisfaction & motivation
24. Healthcare
25. Education & empowerment of women
26. Emiratisation
27. Research and development
28. Quality of products
29. Training and education

NOV

ADGAS inaugurates Offshore Associated Gases Project in Das Island. This Project is composed of two major new pipelines that will be added to three existing ADGAS pipelines, in addition to an offshore 30 inch wide pipeline that expands from Das Island to Habshan field facilities in Ruwais.

ADNOC Governance and Strategy

The Supreme Petroleum Council (SPC) is the regulatory body for Health, Safety and the Environment (HSE) for the oil and gas industry in Abu Dhabi and provides oversight of ADNOC's overall operations.

ADNOC aims to have a sustainability performance of which it can be proud. We aim to be a good neighbour, contributing to sustainable development both internally and throughout our surrounding communities, and to earn the confidence of customers, joint venture partners and the society at large. To do so, ADNOC has established the following HSE Policy and Statement of Commitment.

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 Possible (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 policy.

Statement of Commitment

ADNOC and its Group Companies are committed to:

- Pursue the goal of no harm to people and community
- Reduce greenhouse gas emissions in order to mitigate climate change
- Promote the use of renewable energy in business
- Protect the environment and biodiversity
- Promote Corporate Social Responsibility and report on sustainability performance
- Develop and use energy and water 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 employees share this commitment
- Be transparent in the public reporting of the Group's HSE performance.

Strategic HSE Objectives

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
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
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

DEC

ADNATCO & NGSCO takes delivery of the 73,700 MT Motor Tanker Bani Yas, the second of 15 vessels to be delivered over the following 10 months, making ADNATCO-NGSCO one of the major shipping operators in the region and a key employer of UAE nationals seeking to pursue careers in the shipping industry.

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 Abu Dhabi 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.

Our latest Code of Practice, which came into effect in December 2010, is titled "Safe handling and working with hydrogen sulphide". It was developed in response to the prominent dangers of working in oil and gas fields with high sulphur content. This is particularly the case for the Shah Gas Field (23% hydrogen sulphide).

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

ADNOC HSE Steering Committee
- Review and develop HSE standards, policies and ADNOC Codes of Practice.
- Consult with Group Companies on any proposed changes to the workplace, practices of procedures that could affect HSE functions
- Create a collaborative approach amongst the Group Companies and coordinate efforts to maintain efficiency across their operations.

SPC EH&S Division
- Develop ADNOC HSE policy and strategy and maintain overview of corporate HSE performance.
- Verify compliance by the ADNOC Group Companies with the corporate HSE standards , policies and the ADNOC Codes of Practice
- Liaise with Federal and Abu Dhabi HSE authorities on behalf of ADNOC Group Companies

Individual Group Company HSE Divisions
- Responsible for all managerial and operational aspects of HSE.
- The individual Group Company HSE divisions report directly to their respective companies but co-ordinate with the Supreme Petroleum Council on all HSE matters.

HSE Impact Assessments

At ADNOC, we place great emphasis on the identification and mitigation of HSE risks at every stage of our operations.

Group Company activities, including new project developments and major modifications to existing facilities, are subjected to compulsory HSE 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 then thoroughly reviewed by the Supreme Petroleum Council EH&S Division and the ADNOC HSE Steering Committee, and must ultimately be approved by the ADNOC HSE Steering Committee before project execution can proceed.

HSEIAs approved in 2010

ADNOC Directorate/ Division/ Affiliate		HSEIA Title
Exploration & Production Directorate	ADCO	• Bab Gas Compression Project - Phase II • Asab FFD (New CDS) Project - Phase II • Sahil and Shah FFD Project - Phase II • Rumaitha And Dabbiya EPS Facilities - Phase IV • ADCO Existing Facilities • ADCO MF-2 Well (Mirfa Area)
	ADMA-OPCO	• Umm Shaif Gas Injection Facility Project- Phase II • Appraisal Drilling & Testing In TOTAL ABK Field • Zakum Gas Processing Facilities Project - Phase II • Nasr Development Project - Phase I • Umm Lulu Development Project- Phase I • Zakum Water Injection Pressure Upgrade & New Water Injection Plant - Phase I • IGDP US-WHT - Phase II
	Al Hosn Gas	• Shah Gas Development Project Well Operations - Phase I
	GASCO	• Existing Facilities, sites and operations - Phase III • Asab Lean Gas Pipeline Project - Phase II & IV • Habshan Flare Gas Recovery Project - Phase II • Habshan Gas Complex 5 Project Integrated Gas Development - Phase II • Habashan Gas Complex Expansion Project - Phase III • Shah Habshan Railway Granulated Sulphur Transportation and Management Project (I) - Phase I • Shah Habshan Railway Granulated Sulphur Transportation and Management Project (2) - Phase I • Asab 3 Project - Phase II • Integrated Gas Development Storage Tanks Projects - Phase II • Integrated Gas Development Ruwais Train 4 Plant - Phase II • Asab Gas Development Project - Phase III • Natural Gas Distribution - Phase II
	ZADCO	• Upper Zakum Facilities Replacement Of 18" West Oil Trunk Line - Phase II • Gas Injection Topsides Facilities Project - Phase I • Zakum Field Facilities New Main Oil Line EPC Works - Phase II & III • Satah Full Field Development Project - Phase I
	ELIXIER	• Air Separation Unit Ruwais - Phase III
Marketing & Refining Directorate	ADNOC DIST	• Multi Product Depot Mussafah - Phase III • Liquified Petroleum Gas Bottling Plant Mussafah - Phase III
	TAKREER	• Group III Base Oil Production Facility Project - Phase I • General Utilities Plant Expansion Project - Phase III
Petrochemicals Directorate	Borouge	• Borouge II Project - Phase III • Borouge III Project - Phase I
	FERTIL	• Urea De-bottlenecking Project - Phase II
Independent Operators	ADOC	• Sour Gas Booster Compressor & Sour Gas Dehydration Project at Mubarraz Island - Phase I & II • Mubarraz Pipeline Project - Phase I and II
	TOTAL ABK	• Existing Onshore and Offshore Facilities and Associated Operations - Phase III
ADNOC Civil Projects Division		• Upper Zakum Artificial Islands Dredging and Land Reclamation Project

HSE Management Systems

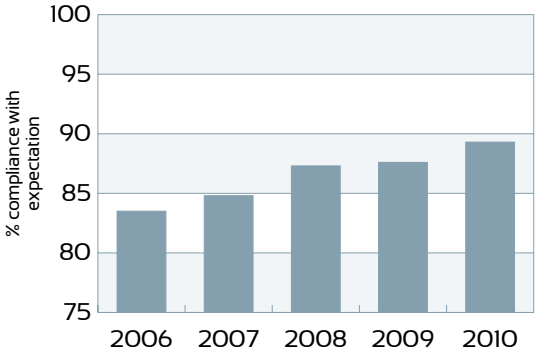
The ADNOC Codes of Practice provide structured guidance for the development of a comprehensive HSE Management System (HSEMS), covering all aspects of company employee and contractor activities. The HSEMS is intended to serve as an engine driving ADNOC policy implementation and continuous improvement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

The ADNOC Group Companies and Independent Operators 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 SPC, with representation from the Supreme Petroleum Council, 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 SPC EH&S Division.

Implementation across the HSEMS elements for the ADNOC Companies has shown a steady increase over the last five years, from 83% in 2006 to 89% in 2010.

The ADNOC HSEMS framework is comprised of eight integral elements. The overall 2010 performance of the ADNOC Group Companies and Independent Operators against each element is presented below.

HSEMS Overall Implementation Trend



The ADNOC Companies are also encouraged to obtain international certifications on their HSEMS, including ISO and OHSAS certifications. The status of this practice in 2010 is presented below:

Company	ISO 14001	ISO 9001	OHSAS 18001
ADCO	✓	✓	✓
ADGAS	✓		
ADMA-OPCO	✓		✓
ADNATCO & NGSCO	✓	✓	
ADNOC DIST		✓	
Borouge	✓	✓	
ESNAAD		✓	
FERTIL	✓	✓	✓
GASCO		✓	
IRSHAD		✓	
NDC	✓		
TOTAL ABK	✓		
ZADCO	✓		

Environmental Performance

Emissions

ADNOC's HSE 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 having zero losses of halons and chlorofluorocarbons (CFCs), whilst gradually phasing them out.

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, for monitoring the ambient air quality in the vicinity of the Group Companies' operating sites, as well as continuous stack monitoring of major sources 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:

- Publish an Air Quality Index (AQI) on a monthly basis, which is a measure of overall air quality
- Compare actual ambient air quality with air quality objectives
- Provide an information and simulation tool to develop and implement an air quality management program
- Forecast potential changes in air quality resulting from proposed business development projects and to develop abatement strategies, if required, in an efficient and cost-effective manner.

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 over the next two years
- Publish the Air Quality Index online, in order to have instant readings of the AQI available to ADNOC Group Companies.

Emission Reduction Initiatives in 2010

- **ADCO** has an ongoing Enhanced Oil Recovery (EOR) pilot project in collaboration with MASDAR in the Rumaitha Field. The aim of the project is evaluate the impact of CO_2 injection on hydrocarbon recovery. To date the project has injected approximately 384 million standard cubic feet per day (MMSFD) of CO_2 (approximately 21,120 tonnes) into the reservoir.

- **ADNOC DISTRIBUTION** has significantly reduced emissions associated with its operations through the use of vapor recovery systems on petroleum storage tanks at depots and service stations.

- **GASCO** has a comprehensive in-house Leak Detection and Repair (LDAR) program for fugitive emissions control. GASCO uses an infra-red-based optical imaging device to help efficiently detect and record gas leaks from equipment.

ADNOC established an Air Quality Monitoring System in 2007 and is now able to publish an Air Quality Index on a monthly basis

- **IRSHAD** replaced five old tugs in its fleet in 2010 with new tugs complying with the latest MARPOL requirements. These new tugs have significantly lower GHG emissions.

- **NDC** phased out nine of its old engines which resulted in a significant emissions reduction.

- **PI** has implemented a personal carbon foot print calculation and tracking system to help its carbon footprint reduction measures.

- **TAKREER**'s Green Diesel Project aims to produce ultra-low sulphur content gas oil (maximum sulphur of ten parts per million). This project is a major undertaking because it requires the redevelopment of current process units, utilities and offsite facilities, in addition to the construction of new units. Upon the completion of the project, TAKREER will be able to provide a product to customers in the UAE and around the world with a significantly lower environmental impact. The capacity is expected to be 84,000 bpd.

Flaring

The reduction of flaring that has been achieved across ADNOC's operations is one of ADNOC's greatest achievements. Despite undergoing considerable expansion in both the nature and scale of our operations, ADNOC has observed a reduction of 74.5% in the amount of hydrocarbons flared since 1995, due to the combined and successful efforts of our Group Companies and affiliate Independent Operators.

In 2010, flaring increased by approximately 1.9 MMSCFD (equivalent to 0.05 million cubic meters per day) compared to 2009. This was expected considering the number of start-up operations that took place across our business directorates over this period.

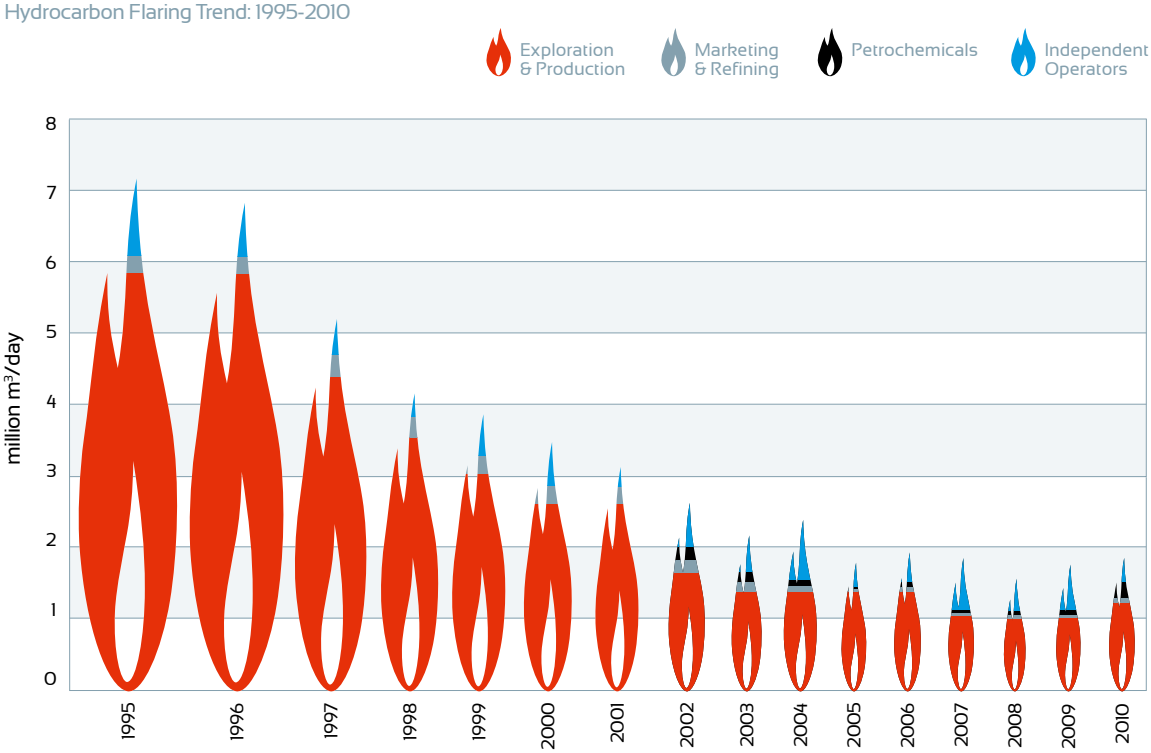
The increase in flaring in 2010 is in part the cause for the increased emissions of greenhouse gases, oxides of nitrogen (NO_x) and oxides of sulphur (SO_x).

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. Existing assets are being retrofitted to optimise efficiency through sour gas separation and re-injection into reservoirs and the implementation of Best Available Technologies (BAT).

Due to the nature of their operations, the companies operating under the Exploration and Production Directorate, as well as our affiliate Independent Operators, account for the majority of ADNOC's overall flaring emissions.

In 2010, the Exploration & Production companies represented approximately 64% of ADNOC's total flaring emissions, followed by the Independent Operators (23%), Petrochemicals Directorate (11%) and the Marketing and Refining Directorate (2% - attributed solely to TAKREER's crude oil refining operations).

Hydrocarbon Flaring Trend: 1995-2010



Flaring Reduction Initiatives in 2010

- **ADCO** implements the zero flaring philosophy, except for pilot gas burning during normal operations, in its fields and new projects. Smokeless design flare systems with 99% destruction efficiency are considered in all new projects and facility upgrades. As part of the Shah, Asab and Sahil (SAS) Full Field Development project, the overall gas flaring volume will reduce to less than three MMSCFD by 2013.
- **ADMA-OPCO** is reducing gas flaring by modifying existing flare pilot ignitions, regular monitoring and replacing hydrocarbon purge gas with nitrogen purge gas.
- **Borouge** developed an improved start-up procedure with environmental friendly nitrogen cool down that reduced the hydrocarbon flaring by up to 30,000 tonnes during Borouge 2 start-up.
- **TAKREER** implemented a flare gas recovery project at its Ruwais Refinery (Hydro-cracker block), where the recovered gas is utilised as a fuel in the refinery. The facility is designed to handle 1,000 Nm^3/hr of gas at full capacity.
- **TOTAL** used a novel approach to replace two flare tips using a helicopter instead of the conventional barge and crane method. The replacement of the flare tips resulted in a reduction of 550,000 tonnes of CO_2 equivalent (90,000 tonnes of CO_2 equivalent after the replacement, compared to 640,000 of CO_2 equivalent before the replacement). The helicopter approach also proved to be highly cost effective, being one third the cost of the barge and crane operation.

The ADNOC Group Companies and Independent Operators have made significant progress in reducing their flaring since 1995 as evidenced below.

Group Company/Independent Operator	1995 MMSCFD	2010 MMSCFD	Reduction
ADCO	28.0	5.50	80%
ADGAS	24.0	9.20	62%
ADMA-OPCO	48.0	5.55	88%
ADOC	15.0	0.62	96%
Borouge*	7.3	7.02	4%
GASCO	23.5	18.80	20%
TAKREER	9.4	1.95	79%
TOTAL ABK	53.0	12.6	76%
ZADCO	59.0	2.69	95%

*The base year is 2002 not 1995

Despite undergoing considerable expansion in both the nature and scale of our operations, ADNOC has observed a reduction of 74.5% in the amount of hydrocarbons flared since 1995

GHG, NO_x, SO_x and VOC Emissions

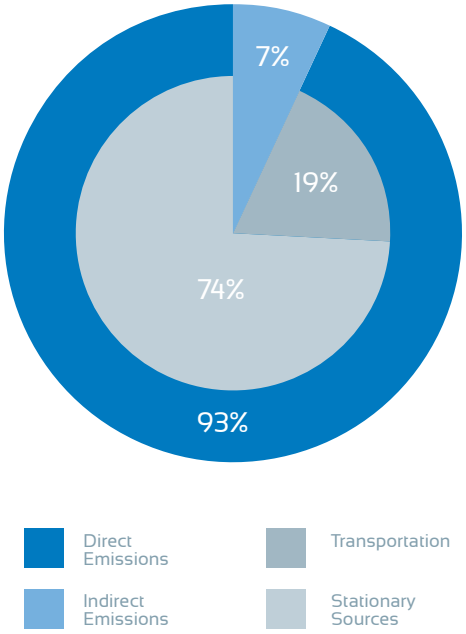
Emissions data are based on direct measurements and, where direct measurements are not available, on engineering calculations and estimations. For greenhouse gas (GHG) reporting, the Intergovernmental Panel for Climate Change (IPCC) fourth assessment report 2007 CO_2 equivalent conversions factors (20 year time horizon) were used.

At ADNOC, it has been standard practice to report on the GHG emissions that arise from our stationary sources alone, as these contribute the most towards our overall GHG emissions. In 2010, and following a series of measures implemented at ADNOC Group level to improve data completeness and reporting accuracy, we have broadened the scope to also include the direct emissions that arise from our transportation-related activities and the indirect emissions caused by our energy consumption. We have estimated the GHG emissions from mobile sources and indirect emissions for the years 2006-2009, where this reporting method was not applied.

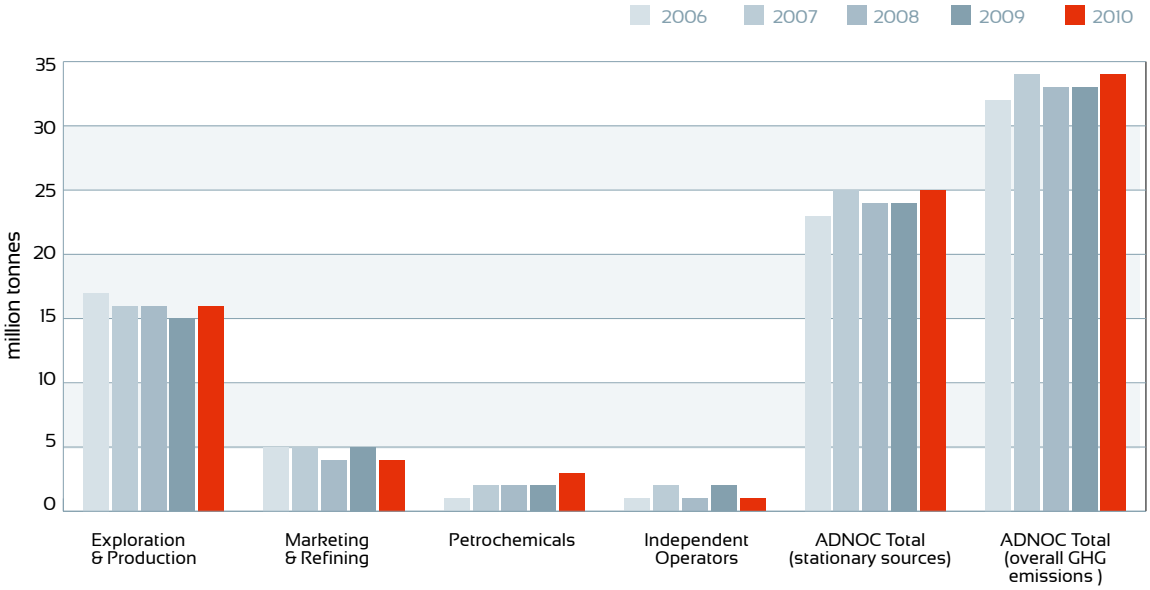
In 2010, our overall GHG emissions amounted to approximately 34 million tonnes, of which 93% is direct emissions (attributed to our stationary sources and transportation-related activities) and 7% is indirect emissions.

Overall, GHG emissions increased in 2010 relative to 2009 by approximately one million tonnes. This is predominantly attributed to plant commissioning and start-up activities.

2010 Breakdown of Overall GHG Emissions



GHG Emission Trend



FERTIL

Case Study:

Installation of a CO_2 recovery unit

Background: FERTIL installed a Carbon Dioxide (CO_2) Recovery Unit (CDR) at their ammonia plant in Ruwais to recover CO_2 from flue gas. The selected CDR technology that was selected has a low heat input requirement and a low chemical consumption.

Approach: The key stages of the process involve flue gas cooling, CO_2 absorption, solvent regeneration and CO_2 compression and transfer. A waste heat boiler is used for the regeneration process. Rich solvent from the absorber is steam-stripped by heating the solution in the re-boiler. The overhead vapour is cooled by the regenerator's condenser and supplied to the reciprocating compressor which compresses the CO_2 and sends it for use in the urea plant.

Outcome / Future: The flue gas CO_2 recovery unit has been commissioned and is in full service. 400 Metric Tonnes Per Day (MTPD) of CO_2 are currently recovered. 144,300 tonnes of CO_2 was recovered in 2010. Of this, 130,000 tonnes was consumed as feedstock in the urea production process.

Since 2006, NO_x emissions have decreased in the Exploration and Production sector and across our affiliate Independent Operators, both of which have the largest contribution to ADNOC's overall NO_x emissions.

However, NO_x emissions have increased in the Marketing and Refining sector due to growth in services, as well as in the Petrochemicals sector. The latter was largely due to the launch of the Borouge 2 facility which came on stream in August 2010. Overall, NO_x emissions have risen by 1.8% from 2009 levels.

ADNOC's overall SO_2 emissions have increased by 18% from 2009, but still remain lower than our 2006 levels. The increase is largely due to the expansion of operations across the Exploration and Production sector. This sector has the largest contribution towards ADNOC's overall annual SO_2 emissions.

Our Volatile Organic Compound (VOC) Emissions increased by 7% from 2009 levels. This increase is also largely attributed to the expansion of operations across the Exploration and Production Sector.

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.

At the end of 2010, all of the ADNOC Companies reported to be completely halon-free except for two, ZADCO and ADMA-OPCO, who are actively pursuing viable alternatives that are appropriate for their complex offshore operations. The halon stock remaining in use is approximately 23 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 Company developments and facility upgrades.

The table below provides a breakdown of the ozone depleting substance (ODS) emissions and the corresponding CFC-11 equivalent emissions for our operations in 2010.

	ODS Emissions (tonnes)	CFC-11 Equivalent (tonnes)
Halons	20	200
CFCs	23	23
HCFCs	13	1
Total	**56**	**224**

Energy

Case Study:

Green IT Initiatives

Background: A dedicated ADCO task force examined the environmental impacts of their IT equipment, which consists of more than 3,000 desktop computers, 300 printers and 100 photocopiers. They then implemented a number of green IT initiatives.

Approach: Power settings on computers and printers were adjusted to go into standby mode automatically when not in use. The duplex setting on all networked printers was manually enabled as the default. The procurement of energy efficient IT equipment was made mandatory. An internal awareness campaign was conducted to promote the use of teleconferencing and video-conferencing and staff were encouraged to switch off non-essential equipment after office hours. The taskforce also considered the management of e-waste, which was sent to approved recyclers or taken back by the manufacturers.

Outcome / Future: The implementation of the various green IT initiatives have resulted in a significant reduction of energy and paper consumption and helped to extend life of the IT equipment. ADCO estimated that the green IT initiatives campaign has reduced electricity consumption by 5.5%, saving 1.2 million kWh, compared to 2009.

In 2010, the ADNOC Companies reported consuming approximately 279.5 million Gigajoules (GJ) in direct energy and 21 million GJ in indirect energy. Over 208,000 GJ of the direct energy consumed came from renewable sources.

Following the implementation of numerous energy conservation and energy efficiency-related initiatives, an estimated 13 million GJ is reported to have been saved across ADNOC's Companies in 2010. ADNOC's Companies operate in remote locations where connections to the power grid are impractical, if not impossible, such as offshore platforms and remote fields in the desert. In these locations, combustion of produced fluids or gas is often the primary source of energy although solar power is increasingly being looked at as an alternative.

Renewable Energy and Energy Saving/Efficiency Initiatives 2010

- ADCO standardised the installation of solar systems for their well head control panels, cathodic protection wells and domestic water heating applications
- ADMA-OPCO launched a Green Office Campaign to reduce energy, paper and water consumption and minimize waste production
- GASCO established a guideline document for sustainable buildings which incorporated green building standards
- ELIXIER conduted a plant efficiency review to explore the oportunity for improving overall plant efficiency and maximise product output
- NDC switched to more efficient diesel engines and saw a 10% reduction in diesel consumption compared with 2009
- TAKREER initiated a project that recovers heat from steam fin-fan coolers, that otherwise would have been released to the atmosphere, for makeup-water for process facilities
- ZADCO installed five 100W solar power generating systems at five well head platforms in the Upper Zakum field to replace the thermo electric generators supplying power.

Transport

Since its first introduction as a reporting requirement in 2009, the ADNOC Group Companies and Independent Operators have significantly increased their efforts in monitoring the environmental impacts of product, service and employee transportation. The available transportation statistics are presented in the adjacent tables.

Our most significant transportation impacts are from ADNATCO & NGSCO, who are responsible for shipping our products across the world. The key sustainability goals that ADNATCO & NGSCO are currently focusing on are:

- The continued roll out of the Ballast Water Management Plan across the fleet
- Focus on zero spills
- A boiler management programme aimed at proper maintenance and replacement if necessary to reduce fuel consumption, minimise emissions and water consumption
- Reduce the amount of freon gas lost to the atmosphere and to source a more environmentally friendly replacement
- Continue the reduction of NO_x and SO_x emissions by better scheduling of vessels
- A pro-active approach to engine and equipment maintenance
- Pro-active education of staff, suppliers and contractors
- Encouraging the reduction in the use of consumables.

Ship Vetting System

Stemming from the commitment to protect the environment and preserve the marine life in Abu Dhabi, and to further enhance the way ADNOC conducts its shipping business, ADNOC implemented a Ship Vetting System in 2005. The Ship Vetting System policy states that all ADNOC vessels must be approved by the International Convention for the Prevention of Pollution from Ships (MARPOL).

ADNOC Transportation Statistics in 2010

	Vehicles	Number of Company Responses
Kilometres travelled	151,609,956	18
Energy use (GJ)	3,684,243	16
Emissions of NO_x (tonnes)	2,614	17
Emissions of SO_x (tonnes)	379	16
Emissions of CO_2 (tonnes)	59,010	18
Total hydrocarbon spills (m^3)	54	20

	Planes	Number of Company Responses
Kilometres travelled	26,590,590	18
Energy use (GJ)	9,339,792	15
Emissions of NO_x (tonnes)	98	15
Emissions of SO_x (tonnes)	23	14
Emissions of CO_2 (tonnes)	13,433	17
Total hydrocarbon spills (m^3)	0	20

	Helicopters	Number of Company Responses
Kilometres travelled	4,513,441	16
Energy use (GJ)	511,199	16
Emissions of NO_x (tonnes)	141	16
Emissions of SO_x (tonnes)	88	16
Emissions of CO_2 (tonnes)	35,943	16
Total hydrocarbon spills (m^3)	0	20

	Vessels	Number of Company Responses
Kilometres travelled	4,044,737	17
Energy use (GJ)	20,170,434	16
Emissions of NO_x (tonnes)	30,829	16
Emissions of SO_x (tonnes)	13,042	16
Emissions of CO_2 (tonnes)	1,936,712	16
Total hydrocarbon spills (m^3)	0	20

The Ship Vetting System policy states that all ADNOC vessels must be approved by MARPOL International Convention for the Prevention of Pollution from Ships

Case Study:

Natural gas for vehicles

Background: ADNOC DISTRIBUTION and GASCO are leading the way to expand the use of Natural Gas for Vehicles (NGV). This project has significant health, safety, environmental, social and economic benefits.

Natural gas is considered widely to be an inherently safe fuel. It is lighter than air, so in the case of an accident it escapes to atmosphere. Its ignition temperature is high and it has a narrow flammability range, reducing the danger of accidental and spontaneous ignition. It has a very specific fuel to air ratio which reduces the potential for explosion. It is not toxic or corrosive.

There are significant reductions in emissions from natural gas fuelled vehicles when compared to petrol fuelled vehicles, for example; carbon dioxide 20-25%; carbon monoxide 50-80%; nitrogen oxides 25-60% and non-methane hydrocarbon 50-80%.

Natural gas burns cleanly resulting in less wear and tear on the engine and has a lower maintenance cost than petrol engines.

Approach: Phase 1 of the NGV Project involves the installation of Natural Gas (NG) infrastructure at 16 ADNOC DISTRIBUTION Stations in the UAE, 10 in Abu Dhabi, two in Al Ain and four in Sharjah, with a capacity to fill 10,000 cars per day. Through qualified contractors, ADNOC DISTRIBUTION is carrying out conversions of petrol vehicles to run on both NG and petrol (bi-fuel) with the facility to switch over to either fuel by a simple touch of a button located on the dashboard. Nine conversion centers are planned with a retrofitting capacity of 20,000 vehicles per year. The commissioning of a number of the stations and conversion centers has already commenced.

Natural gas is cheaper than gasoline at the filling stations. There is a cost for converting vehicles to natural gas; however, there are incentives available to help offset these costs.

Outcome / Future: After the completion of the first phase, which focuses on light vehicles, the plan is to expand the project to include heavy vehicles and the local bus system.

Initiatives to Reduce Transport Impacts in 2010

- **ADNOC** Companies typically provide company buses to transport staff to and from their place of work, encourage car sharing and minimize business-related travel through the use of video - and teleconferencing.
- **ADCO** is in the process of converting light petrol driven vehicles to use natural gas and intends to convert 20% of its total fleet. ADCO provides a daily shuttle bus service, for the commuting workforce from Abu Dhabi to the fields.
- **ADNATCO & NGSCO** improved the planning and scheduling of their Liquid Natural Gas (LNG) vessels and saw a reduction in fuel consumption. The LNG fleet conducted five voyages more in 2010 compared to 2009, while using almost 1,000 tonnes less bunker fuel.
- **ADNOC DISTRIBUTION** will soon be significantly reducing the use of road tankers for the transportation of products from the refineries as the Inter Refinery Pipeline II (IRP -II) comes into service.
- **ADOC** carefully schedules helicopter trips by combining and therefore minimizing them.
- **Borouge**'s procurement and logistics departments are working together to promote packaging improvement initiatives to optimize product transportation. Borouge uses returnable containers for efficient sea freight loading and is working to optimize loading efficiency. Borouge actively selects environmentally-conscious logistic service providers. An action plan was developed in 2010 to comply with Responsible Care Distribution Code, with the objective to reduce the risk of harm posed by the distribution of chemicals to employees, general public and the environment.
- **FERTIL** has minimized plant employee commuting by changing the shifts from an 8-hour to a 12-hour system. Employee commuting by private cars is discouraged by limiting the number of passes to the Ruwais Industrial area.
- **NDC** has a transport division in the head office that carefully manages its car pooling.

Materials

As an oil and gas producer, the majority of ADNOC's products are hydrocarbon products extracted from the ground and refined for consumers. A relatively small amount of input materials are required. Our primary material consumption comes from necessary support activities. Material consumption is not as significant as other environmental indicators. We started examining this in 2009 and Group Companies are in the process of developing more reliable material data tracking systems.

Case Study:

Substituting hazardous chemicals with environmentally friendly alternatives

Background: In 2010, TOTAL put in place an innovative programme to reduce its environmental impacts from the use of hazardous chemicals with a high toxic risk to the aquatic environment. The initiative aimed to substitute these chemicals with harmless, non-irritant and non-corrosive chemicals.

Approach: A thorough evaluation was performed to identify, review and phase out the toxic chemicals and substitute them with eco-friendly alternatives. The first key phased-out chemical was a degreasing agent used in the mechanical workshop, which was substituted with a 100% vegetable-based alternative. Domestic cleaning agents, such as kitchen cleaners, bathroom cleaners and sanitary products, were the second target group of chemicals replaced by physio-sanitary products containing enzymes and bacteria capable of digesting vegetables, animal grease, sugars and proteins.

Outcome / Future: This programme has resulted in the substitution of hazardous chemicals with environmentally friendly alternatives containing vegetable or soya-based biodegradable materials. The performance of the new chemicals has been tested and found to be just as effective.

In 2010, approximately 44.1 million tonnes of input materials were consumed across the ADNOC Group Companies, of which nearly 7% (approximately three million tonnes) came from renewable sources and over 2.3% (1.02 million tonnes) from recycled input materials. The total amount of direct materials is 33.1 million tonnes.

Approximately 36,600 tonnes of materials were reported to have been recycled, reused or reclaimed across the ADNOC Companies in 2010. These materials predominantly include scrap metal, plastic, glass, paper and drums. ADCO saved 11,700 barrels of mud in 2010 by reusing water base drilling mud.

Material Saving Initiatives in 2010

- ADCO used environmentally friendly equipment on the ASAB development including space-saving, low-voltage switchgear, which uses aluminium and zinc coated materials in the frames and subdivisions to reduce chemicals used in the coating process
- ADMA-OPCO conducted an awareness campaign, to coincide with World Environment Day 2010, to raise awareness about the environmental issues associated with plastic bags. ADMA OPCO took the initiative to phase out its use of plastic bags in 2010 and replace them with bio-degradable alternatives
- ADOC had a paper recycling campaign throughout 2010 which resulted in the recycling of seven tonnes of paper
- ESNAAD re-utilized 12,422 tonnes of steel for internal projects
- NDC achieved a 6% reduction in material consumption compared with the previous year
- PI implemented a project to recycle spent toner cartridges
- TAKREER installed a wireless vibration monitoring system on selected pumps in isolated tank farms at the Ruwais Refinery, with the aim of measuring the integrity of the pumps. The wireless transmitter continuously sends the information directly to the control room removing the need for cables and trenching across existing assets.

Waste

ADNOC's hazardous wastes are treated at BeAAT (Central Environment Protection Facilities), a state of the art waste treatment facility. BeAAT was designed specifically to safely receive, manage, treat and dispose of hazardous waste generated by ADNOC, its Group Companies, and independent oil and gas operators.

BeAAT is an integrated hazardous waste treatment facility, combining a range of specific treatment processes on 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. The plant includes the following waste management options:

- Solidification: for the immobilisation of highly contaminated inorganic wastes
- Centrifugation: for the separation of oil/water phase and solids
- Thermal Desorption: for the thermal treatment of organic refinery wastes
- Incineration: for the thermal destruction of highly toxic and carcinogenic wastes
- Physical / Chemical Treatment: for the oxidation of ultra-toxic cyanides, reduction of carcinogenic chromates
- Mercury Distillation: for the recovery of mercury;
- Oil/Water Separation: for the recycling of oil-contaminated process water by Dissolved Air Flotation
- Landfills: class I and II landfills with geocomposite lining systems for disposal of certified materials
- Recycling: safe recycling of waste oils, empty drums and containers, batteries, transformers and capacitors.

In 2010, BeAAT launched a new waste management practice for the storage, treatment and safe disposal of 700 metric tons of drill cuttings generated from offshore rigs. Through this treatment process 140 metric tonnes of well drilling fluid was recovered, saving AED 5 million.

In 2010, ADNOC generated a total of 72,388 tonnes of hazardous waste, compared to 13,581 tonnes in 2009. In 2010, 441,319 tonnes of non-hazardous waste was generated, compared to the reported 210,679 tonnes in 2009.

This significant increase in hazardous and non-hazardous waste compared to 2009 is considered to be partially attributed to a more complete recording of the waste in 2010.

2010 breakdown of hazardous waste	tonnes
Generated	72,388
Transported*	79,290
Treated	20,283

* Includes some of the hazardous waste that was generated in 2009 and kept in storage

Case Study:

Desert and coastline cleanup campaigns

Background: ADCO and its contractors have had a desert and coastline cleanup campaign running for many years in which waste is collected, segregated and disposed of appropriately. It has become an integral part of the fields and terminals ongoing housekeeping programme.

Approach: ADCO conducted many significant clean up campaigns in 2010. Some of the main examples are presented below:

In the Bab field, the desert cleanup campaign was carried out every Friday from November to December. The cleanup focused on the road and surroundings from Tarif to the Bab Accommodation Complex covering approximately 28 kilometers. The cleanup generated 520 cubic metres of general waste.

In the Southeast (SE) field, a total of 123 participants from ADCO and 406 participants from ten contractors conducted a desert cleanup generating approximately 110 cubic metres of general wastes.

In the Bu Hasa field, ADCO carried out two desert cleanup campaigns generating 24 cubic metres of general wastes.

In the North East Bab (NEB) field, 12 desert cleanup campaigns were conducted every Friday, throughout the field, generating 6,420 tonnes of wastes.

In the Jebel Al Dhanna terminal, a clean up campaign removed 418 tonnes of scrap metal which was sent for recycling.

In Habshan, a desert cleanup was conducted in December that collected 779 tonnes of waste.

Outcome / Future: ADCO plans to continue with its highly successful desert and coastline clean up campaigns in the future.

Waste Reduction Initiatives in 2010

- **ADNOC DISTRIBUTION** has moved from providing standard plastic bags to biodegradable bags at its ADNOC Oasis convenience stores. ADNOC DISTRIBUTION calculated that it issues an average of approximately 18 tonnes of bags per year from its outlets

- **BUNDUQ** currently incinerates non-hazardous solid waste generated at its offshore complex such as plastic water bottles, cartons, and other packaging materials which can be recycled if transported back onshore. As a part of a waste management initiative, BUNDUQ has procured waste compressors which will compress the waste to 20% of its original size for easy transportation onshore. Incineration will be discontinued offshore upon successful installation and operation of the waste compressors in 2011

- **ESNAAD** issued an e-waste management procedure to manage their electronic waste

- **FERTIL** has an ongoing pilot project using reed beds to bio-remediate process waste water prior to discharge to the sea

- **GASCO** reused demolition materials from old pipelines, fencing and concrete crash barriers and used them in maintenance and construction activities significantly reducing the volume of waste that would have alternatively been land-filled

- **PI** has an ongoing paper recycling campaign that recycled 11 tonnes of paper in 2010. In 2010 they initiated a plastic and car battery recycling campaign

- **TAKREER** initiated a voluntary beach cleaning campaign on the east and west side of the marine jetty at the Ruwais Refinery. Approximately 250 cubic metres of waste was collected.

BeaAAT's new waste management practice for drill cuttings resulted in the recovery of 140 metric tonnes of well drilling fluid and a saving of AED 5 million

Spills

In 2010, a total of 177 cubic metres of hydrocarbons (i.e. petroleum products) were reported as spilt in six significant incidents onshore. The spills were promptly cleaned up and their impacts mitigated in compliance with ADNOC Codes of Practice. A further two cubic meters of non-hydrocarbons were reported to have been spilt in Ruwais in one separate incident involving caustic soda. For the purpose of reporting, ADNOC considers spills larger than one cubic metre to be significant.

Emergency Preparedness and Response

The unfortunate events that unfolded in the Gulf of Mexico following the tragic explosion on the Deepwater Horizon Drilling Rig have spurred the Supreme Petroleum Council and ADNOC to intensify our existing efforts to ensure that such accidents are prevented from happening across our operations, and that our ability to respond effectively to incidents, large or small, continues to improve.

We have two major oil spill response centres, one in Mussafah and the other in Ruwais. The well-trained teams based at these locations are capable of providing support to the teams already established at each of the operating companies, and are equipped to deploy quickly with significant stockpiles of equipment to respond to larger Tier 2 oil spills.

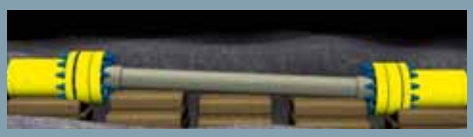
Plans are now being implemented to develop a network of Tier 2 oil spill response centres across the Emirate, as well as to enhance the Tier 1 response capabilities of the ADNOC Companies. In 2010 we have stepped up the recruitment of high calibre individuals and have undertaken a busy program of training, not only in the handling of oil spills, but also in the handling of hazardous materials and related courses. A significant proportion of the training is run internally and our oil spill response programs have been accredited by the Nautical Institute of the UK to meet the requirements of the International Maritime Organization (IMO).

Another focus for training is the development of teams of surveyors that are being equipped and deployed to provide detailed shoreline protection plans and tactics sheets for the entire coastline of Abu Dhabi.

We are looking to rationalize our oil spill response equipment so that there is uniformity across the Group. This will serve to enhance the capability for mutual aid, as well as to improve maintenance programmes and provide some 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 expansion of our fleet will enable response teams to deploy quickly to the scene of an incident and even to locations with difficult access.

Plans are being implemented to develop a network of Tier 2 oil spill response centres across the Emirate, as well as to enhance the Tier 1 response capabilities of the ADNOC Companies

Thankfully, the oil spill response centres have not been required to deploy to serious incidents during the year. Teams have however been placed on standby on several occasions, the most serious of which involved the rollover of a tug in an area adjacent to an environmentally sensitive area. However, due to the prompt action of the agencies involved no spill occurred. Additionally, we have deployed a team of technicians with specialist skills



Case Study:

A new rapid subsea repair technique

Background: ADMA-OPCO has over 1,600 kilometers of subsea pipelines (transmission and flow lines) and these lines are exposed to corrosion in the subsea environment. In the event of a subsea pipeline oil leak due to corrosion, drive defects or damages, the old method of pipeline repair was hyperbaric welding, which took a minimum of two to three months.

The Integrity Division of the Subsea Team has now deployed an innovative and effective new subsea repair technique that rapidly responds to subsea leaks, reducing the leak exposure time and ensuring a quick return of the pipeline back into service.

Approach: When a leak is reported, the Subsea Team responds quickly and either cuts or plugs the leak. The damaged section is cut out and a replacement spool is installed. Smart Flange Mechanical Connectors (SFMC) are deployed and the repair is completed. Repair work can be completed within five to seven days.

Outcome / Future: The utilization of SFMC has changed the way subsea pipelines repairs are conducted. The new repair technique has significant HSE benefits that stem from the reduction in leak exposure time and the safe manner in which this pipeline repair method can be conducted, since no major welding habitats and lifting frames, each weighting between 20-40 tonnes, are required. The safety of divers is therefore improved as these items are typically lowered to the sea bed while divers are in the water.

The technique also has cost advantages. Where previously the repair cost for a pipeline leak could be AED 17 million, the same leak can now be repaired at a cost of AED 910,000 using the new technique.

in the handling of hazardous wastes, to help recover a quantity of acid and other materials that were stored on various vessels that had been impounded in the Abu Dhabi Free Port.

In 2010, we participated in a personnel exchange program with one of the leading Oil Response Companies in South Africa. ADNOC also participated in major exercises in Egypt along with other national oil companies and response agencies. Throughout the year, we actively engaged in conferences both in the UAE and overseas, and our personnel were invited to take part in the International Observer Programme that was launched following the tragic Gulf of Mexico oil spill.

Under the direction of the Maritime Areas Supreme Security Committee (MASSC), the Emirate of Abu Dhabi is currently engaged in a process of creating and implementing a Maritime Strategy with the vision of developing a safe, secure and sustainable maritime domain for all users. The Supreme Petroleum Council and ADNOC are committed to this process and continue to participate in various working groups to develop this strategy, including the group dedicated to the goals and initiatives concerned with Emergency Preparedness and Response.

Water and Effluent

In 2010, approximately four billion cubic meters of water were extracted to meet operational requirements across the ADNOC Companies.

Water source	Volume extracted (m^3/year)
Surface water (including ocean)	3,958,160,591
Ground water	4,241,942
Waste water from another organization	351,877
Municipal water	8,462,127
Production water	11,189,469
Total	**3,982,223,080**

Water/Effluent Discharge

Over 95% of the total water requirement is for non-contact cooling water. One of ADNOC's key environmental objectives is to re-inject offshore produced waters and other effluents, unless their discharge is compatible with the marine environment and can be discharged, in line with the UAE Cabinet Regulation for the Protection of Maritime Environment.

For offshore platforms, where the oil content exceeds 40 parts per million (ppm) on average within a calendar month, or reaches a maximum of 100 ppm, it is not permitted to be discharged to the sea. Oil based drilling muds, plastic materials and wastes are not permitted to be discharged to the sea. Food waste can only be discharged to the sea 12 nautical miles from shore.

الحصن للغاز
Al Hosn Gas

Case Study:

Innovative mobile vehicle washing station

Background: The mobile vehicle washing station is an innovative solution, being used on the Shah Gas Development Project, to deal with the challenge of water scarcity in the desert region.

Approach: The system applies the simple engineering concept of screening large particles, the sedimentation of small sand particulates and the change in density for the oil/water separation to recycle water without the need for complex waste water tratment.

Outcome / Future: The system has proven to be a major success with a water recycling rate in excess of 70% (approximately 427,000 litres per year of fresh water savings). The system is highly cost effective when compared to regular washing methods. It reduces the energy demand, manpower and emissions resulting from transporting fresh water, wastewater, and equipment to and from the desert. Renewable energy is being considered to power the system.

The technology has the potential to be used offshore following minor modifications.

Onshore, ADNOC Group Companies reuse millions of cubic metres of water a year for irrigation and dust suppression.

Discharge	Volume (m^3/year)
Process effluent	799,701,317
Process water	1,055,005,810
Cooling water	3,914,883,516

Approximately 4.2 million cubic meters of water were recycled or reused in 2010.

Across the Group Company operations, there is one water body that may be significantly affected by the withdrawal of water and the discharge of water and run-off. This water body is the Marawah Marine Protected Area, located 100 km west of Abu Dhabi, and lies within ADOC's offshore concession area. The overall area of the Marawah Marine Protected area is approximately 4,255 km^2.

4.2 million

cubic meters of water were recycled / reused in 2010

Water Saving Initiatives in 2010

- ADCO installed water flow regulators in Abu Dhabi offices and estimated water savings of 8%
- Borouge initiated a water footprint study in 2010 with the objective to address water usage, efficiency and conservation
- NDC improved the management of water consumption on its rigs and achieved a 3% reduction
- TAKREER has conserved water use at the Abu Dhabi Refinery by diverting blow down water from its utility boilers, which would have gone to process drains, to the refinery's crude de-salter wash water system. The successful implementation has resulted in a reduction of 22,000 cubic metres of water use per year.

Biodiversity

The terrestrial and marine ecology of the UAE is rich and diverse and is home to several International Union for Conservation of Nature (IUCN) 'Red Data List' species such as the Arabian Oryx, the Dugong, the Green Turtle, the Hawksbill Turtle, the Greater Spotted Eagle and the Saker Falcon.

Operating in Ecologically-sensitive Environments

Across ADNOC's operations, there are a total of six activities that are located in or near areas of high biodiversity value. These include:

- ADCO's North East Bab (NEB) field is located in an environment that includes deserts, mangroves, salt marshes, sea grass meadows, coral reefs, and sabkha; each supporting diverse wildlife species. To address the challenges of operating in such an environmentally-sensitive area, ADCO prepared a detailed Biodiversity Action Plan and adopted a number of new technologies and approaches which include well clustering and the creation of pipeline corridors

- ADOC has processing facilities on Mubarraz Island. Mubarraz Island lies in the Marawah Marine Protected Area, which is home to important marine and coastal ecosystems including sea grass meadows, coral reefs and mangroves. ADOC has undertaken a number of investigation and monitoring projects which have led to the conservation and protection of species and ecosystems within their concession areas. In 2010, ADOC spent more than AED 1.25 million on their Mangrove Plantation Campaign, which has been implemented on the island since 1983. No significant impacts from ADOC's operations in the area were reported in 2010

- ZADCO has oil and gas processing facilities on Zirku Island. Zirku Island is home to Hawksbill Turtles, which are listed as critically endangered species on the IUCN Red List. As a result, the coast of Zirku Island was self-declared by ZADCO as a protected exclusion zone to preserve the nesting area for the turtles. Trained volunteers have been selected to carry out annual monitoring of the turtles.

Number of Species Identified Across ADNOC's Operations

	IUCN Red List	Abu Dhabi Emirate Red List
Critically Endangered	5	8
Endangered	8	9
Vulnerable	23	11
Near-threatened	13	6
Least Concerned	175	14

Protection and Enhancement of the Marine Environment

The waters of Abu Dhabi are rich in coral reefs, mangrove forests and sea grass meadows. These biologically diverse marine ecosystems support the diverse marine species living in the coastal areas of Abu Dhabi, such as dugongs, dolphins and turtles, as they provide the necessary food, shelter and protection against coastal erosion.

ADNOC takes a proactive approach to marine environment protection in the HSEIA planning stage that precedes project execution. We also have a dedicated team of marine specialists whose role is to complement the marine protection process by restoring, rehabilitating and enriching Abu Dhabi's marine environment.

Some of our key projects in 2010 are listed below.

Mangroves

The mangroves of Abu Dhabi are represented by only one species, Avicennia marina, or, the grey mangrove. In 2010, efforts have been made to introduce other species of mangroves in a total of six new mangrove nurseries across our concession areas (Zirku Island, Mubarraz Island, Dabaia, Sas Al Nakhl, and the Western Region), where over one million seedlings have been planted. We aim to have more than five million seedlings by the end of 2011.

Coral Reef Ecosystems

The health of coral reefs continues to decline throughout the world and the Arabian Gulf is one of the areas most severely affected due to the

extremely high sea water temperatures. In 2010, an artificial reef site was established in Zirku Island by treating the surfaces of the concrete pipelines and covering them with a mixture of marine extracts of algae species and marine plants.

We also deployed over 87 artificial reef structures on Mubarraz Island and Zirku Island. After one year of monitoring, the sites are continuing to show an improved ecosystem that is attracting schools of coral reef fishes and invertebrates and on which algae growth and live coral are settling.

Seagrass

Seagrass beds serve as forage and nursery grounds for endangered species (such as dugong and sea turtles), fishes 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 fishery species such as snook, sea trout and shrimp.

In 2010, we conducted two seagrass plantation projects in Mubarraz Island and in Dabbiyah. We shall continue with our mangrove plantation scheme and aim to have more than 5 million seedlings in place by the end of 2011. In the northern reef of Mubarraz Island, we implemented the "Coral Reef Reproduction" technique. We also conducted a workshop on Arzanah Island to build and construct artificial reef structures of different shapes and sizes. Four artificial reef sites were established in Arzanah by the deployment of these artificial reef structures.

>1 million

mangrove seedlings were planted in 2010

Health and Safety Performance

Occupational Safety

Providing a safe working environment for our employees and contractors is of fundamental importance to ADNOC. Occupational safety across our operations is managed at an organisational level through the relevant ADNOC Codes of Practice.

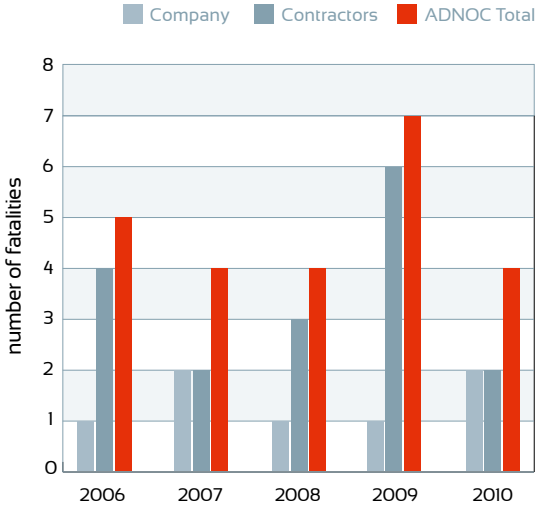
The responsibility for ensuring the proper implementation of these operational standards and the availability of trained and suitably qualified personnel rests with senior company management. The Supreme Petroleum Council also conducts periodic site visits and audits. The responsibility for safety extends to all our employees, who are required to ensure that all governing safety rules and operating procedures are followed.

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 from two to 29 depending on size, number of operating sites and the level of risk. The majority of these committees have joint management / labour representation.

Our overall safety performance over the last five years is shown in the table below. No permanent or partial disabilities were reported across ADNOC's workforce in 2010. Regrettably however, there were 15 fatalities. Four of these (of which two were ADNOC employees and two were contractors) were work-related and therefore recordable.

ADNOC's 2010 Fatal Accident Rate (FAR) of 1.13 fatalities per 100 million man-hours reflects a decrease of 49.3% from that reported in 2009, and is the lowest achieved on record. Furthermore, our FAR is lower than the industry benchmark of 2.76 fatalities per 100 million man-hours worked in 2010 (the International Association of Oil and Gas Producers (OGP) average).

Work-related Fatalities



Safety Statistics

	2006	2007	2008	2009	2010
Exposure Hours	191 x 10^6	230 x 10^6	298 x 10^6	313 x 10^6	355 x 10^6
Fatality	5	4	4	7	4
Fatal Accident Rate (FAR)	2.62	1.74	1.34	2.23	1.13
Fatality (Non-recordable)	8	5	9	7	11
Disability	0	2	2	1	0
Lost Time Incident (LTI)	57	58	68	75	66
Lost Days	1,645	2,081	1,663	2,372	1,450
Lost Time Incident Frequency (LTIF)	0.30	0.25	0.23	0.24	0.19
Total Recordable Incident Rate (TRIR)	1.08	1.09	0.79	0.68	0.76

Lost Time Injuries (LTI)

Our 2010 Lost Time Injury Frequency (LTIF) of 0.19 injuries per million man-hours worked is the lowest achieved on record since reporting began in 1997. It is also significantly lower than the OGP industry average of 0.42 per million man-hours worked in 2010.

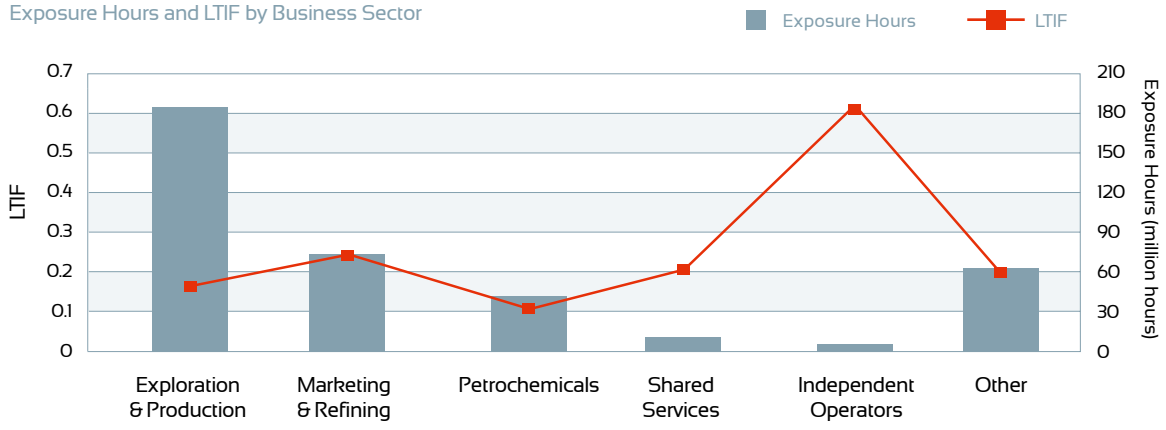
The breakdown of LTIFs and exposure hours by business sector for our 2010 operations is presented below. The highest LTIF was reported by the Independent Operators, who accounted for 1.3% of the exposure hours. The lowest LTIF was reported by the Petrochemicals sector. The Exploration and Production sector accounted for 49% of the exposure hours, and had the second lowest LTIF.

Lost Time Injury Analysis

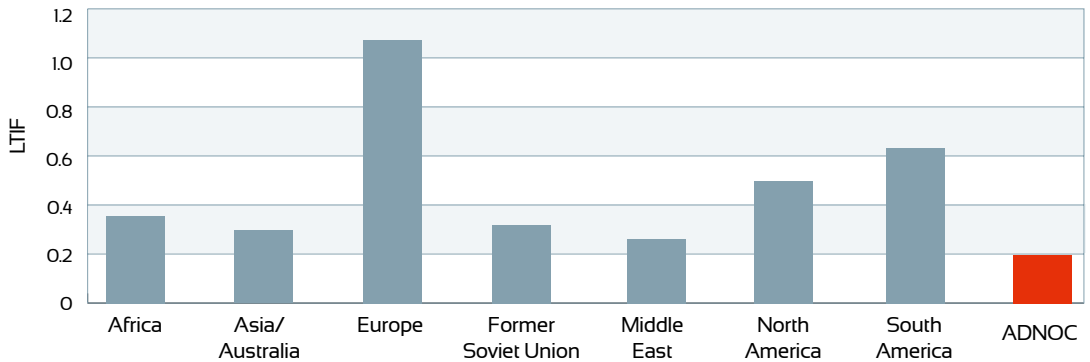
The following observations have been made in relation to our lost time injuries (LTIs) by:
i- Accident category: Construction activities accounted for 30% of our LTIs in 2010, followed by plant operation and maintenance (27%) and transport and material handing (23%). Marine, drilling and other minor operations accounted for the remaining 20% of our LTIs.
ii- Accident type: The majority of the injuries sustained were as a result of slip, trips and falls (25%), being struck by an object (18%), being caught between (18%) and during transportation (22%).

Another analysis of our LTIs, by causation, shows that 63% of our LTIs in 2010 were attributed at a personnel level to skill level and behaviour. On an overall job level, the majority of LTIs were attributed to inadequate supervision, training and work planning. We recognise the need for improvement in these areas and are committed to delivering better training in hazard recognition to our workforce and improved safety leadership by the supervisors.

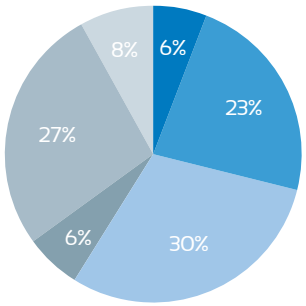
Exposure Hours and LTIF by Business Sector



LTIF by Region (ADNOC vs. OGP 2010 Data)

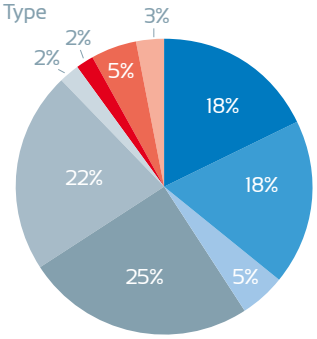


LTI Accident Category



- Marine Operations
- Drilling/Work-over Operations
- Transport (Road) and Material Handling
- Plant Operations and Maintenance
- Construction
- Other

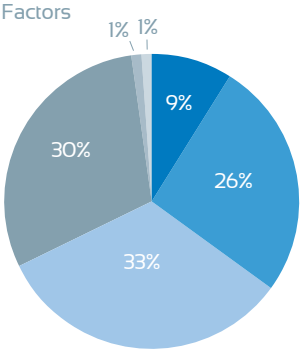
LTI Accident Type



- Caught Between
- Fall, Slip or Trip
- Cuts/Bruises/Breaks
- Struck by (Head/Body)
- Transport Accidents
- Contact with Radiation, Caustics, Toxic and Noxious Substances
- Explosion/ Burns
- Contact with Electricity
- Lifting, Pulling, Pushing

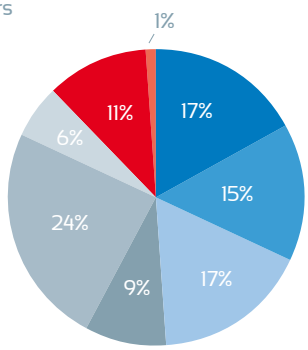
We are committed to delivering better training in hazard recognition to our workforce and improved safety leadership by the supervisors

LTI Personal Factors



- Physical Capability
- Skill Level
- Mental State
- Mental Stress
- Behaviour
- Other

LTI Job Factors

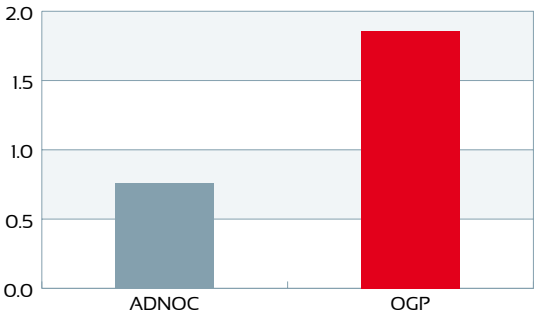


- Training/Knowledge Transfer
- Management/Supervision/ Employee Leadership
- Work Planning
- Engineering/Design
- Tools and Equipment
- Work Rules/Policies/ Standards/Procedures
- Communication
- Other

Total Recordable Incidents

Our Total Recordable Incident Rate (TRIR) of 0.76 recorded incidents per million man-hours worked has increased by 0.08 from the previous year, however remains lower than the OGP average of 1.86 in 2010.

ADNOC TRIR in 2010

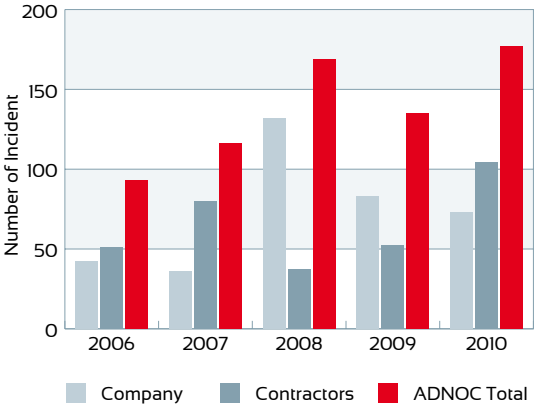


Road Safety

Despite the considerable efforts of ADNOC's Companies to improve road safety, a total of 177 road-traffic accidents were reported in 2010. Compared to 2009, the accidents reported by the ADNOC Companies have reduced from 83 to 73, whilst those reported by our contractors have doubled from 52 to 104.

The ADNOC Companies will continue to work to improve road safety for our staff and contractors by trying to change the behaviour of the workforce to comply with the strict company rules regarding speed limits and the use of seat belts. Some ADNOC Companies have started implementing in-vehicle monitoring systems for their vehicles.

Road Traffic Incidents



Case Study:

Harmonising the Health, Safety and Environment (HSE) programmes at two refineries

Background: TAKREER identified an improvement opportunity and launched a new method to harmonise the Health Safety and Environment (HSE) programmes for its two refineries

Approach: A study was carried out to establish the items that needed to be addressed as part of the Harmonisation Project. A series of workshops were conducted between the Harmonisation Main Committee and the Harmonisation Subcommittee to discuss, verify, align, recommend and approve amendments required to develop a consistent harmonisation approach.

Outcome / Future: The Harmonisation Project allowed for the implementation of a standardisation system that has enhanced safety and environmental protection by instituting industry best practices and consolidating the HSE infrastructure. This has helped define, establish and integrate HSE responsibilities and accountability.

Security programmes and issues are also planned to be addressed in the second phase of harmonization.

Process Safety

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 apply industry 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.

Annual reporting of process safety incidents at a corporate level was not mandatory until 2010. In 2010, 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). The data has been compiled and the results are as follows:

Process Safety Incidents

	Rate
Tier 1 Performance Indicator - Process Safety Events (T-1 PSE) [1]	0.014
Tier 2 Performance Indicator - Process Safety Events (T-2 PSE) [2]	0.031

Tier 3 Performance Indicators - Challenges to Safety Systems [3]	Number of events
Safety Instrumented System (SIS) activations	256
Mechanical trip activations	67
Tier 3 Pressure Relief Device (PRD) discharges to the atmosphere via a downstream destructive device	10
Loss of primary containment (LOPC) events not counted as Tier 1 or Tier 2 PSEs	447

Tier 4 Performance Indicators - Operating Discipline and Management System Performance
Operating discipline - Ten process safety indicators were selected as an example for 2010. The response received was mixed and could not be compiled due to a lack of coherent data. This issue will be addressed by the ADNOC Companies in 2011.
HSE Management System - refer to the HSEMS performance section at the front of this report.

Notes:

[1] Two companies did not participate due to a lack of proper record keeping for Tier 1, 2, 3 and 4.

[2] Two companies did not participate due to a lack of record keeping for Tier 3 and 4 performance indicators.

[3] Five companies did not participate due to a lack of record keeping for Tier 4 performance indicators.

Case Study:

Implementing monthly safety tests on wellheads

Background: In 2010 a choke valve on one of BUNDUQ's wells failed and none of the three safety valves could be activated by the remote control hydraulic panel. A supervisor and an operator had to use breathing apparatus to shut down the well manually.

Approach: BUNDUQ stepped up their existing wellhead testing procedure by implementing a monthly safety function test for all wellheads to avoid such high risk incidents from occurring again in the future. Valves that had a slow response were inspected and treated with grease.

Outcome / Future: BUNDUQ intends to continue with monthly wellhead testing to reduce future risks.

Case Study:

Anti-collision safety tests on cranes

Background: GASCO identified a new anti-collision technology for cranes following a near-miss investigation, where the boom of a tower crane came into contact with the load line of another crane.

Approach: The crane operator support system uses devices which detect the proximity of another boom, alerts the operators and intervenes automatically to avoid a collision or a prohibited zone. The system can control up to 14 cranes with a maximum of ten cranes working in the same interference zone.

Outcome / Future: This approach sets a new benchmark in safety performance serving to eliminate incidents where collision risks are present.

Health and Safety Initiatives in 2010

- **ADCO** produced a film, 'Complacency Kills', based on the event which occurred in the Shah Field in 2009, which resulted in multiple fatalities following exposure to high concentrations of hydrogen sulphide (H_2S). This video has been used in H_2S training programs and shared with all the Gulf Cooperation Council (GCC) Safety Committee members. The security pass issuance is linked with the completion of the H_2S training program to ensure personnel are trained in H_2S risks and mitigation measures prior to working in the fields.

- **Borouge** carried out intensive, externally-led, incident investigations to identify common system causes. The leadership team adopted a systematic and holistic approach, using brainstorming techniques and considered a wider perspective of concerns and ideas, in order to prepare for the hazards and risks that would be faced during the intensive Borouge 2 start-up period throughout 2010. The outcome was a series of leadership intervention programs

- **BUNDUQ** conducted a detailed noise survey at its offshore complex which identified high noise zones

- **ESNAAD** launched a hearing conservation program to monitor noise and raise employee awareness of noise hazards

- **TAKREER** installed a new foam skid and heat sensor system at the Ruwais Refinery to protect floating roof tanks from fire. The system can come online within 10 seconds, triggering an alarm and an extinguishing system. The new approach is considered to be the latest in fire control protection systems

- **TOTAL** launched 'Safety Stand Downs' in 2010, during which site operations, other than those critical to on-going safety, are shut down for a period (normally two hours) so that management can speak directly with front-line workers. After sharing the HSE messages, the management and the site workers work together to hunt for hazards and anomalies. Rewards were given for the best observations. More than 500 people participated and more than 1,500 observations and anomalies were identified.

Occupational Health

Occupational health hazards, such as toxic materials, chemicals, noise, radiation and heat stress are suitably controlled across ADNOC's operations through our effective oversight of worker training needs, line supervision and the relevant working procedures and guidelines.

Healthcare and Medical Treatment

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

The Medical Services Division is ADNOC's umbrella organization 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 three medical centres, 16 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 two hospitals in Ruwais, one of which was newly established in 2010, and two mobile health units that were newly established in 2010.

In parallel to service expansion, the Medical Services Division has upgraded its medical equipment, facility capacity and vehicle capacity across its units. Arrangement with the Abu Dhabi Police is also underway to provide medical helicopter evacuation services for onshore and offshore locations.

To ensure the quality of the healthcare services provided by the Medical Services Division, clinical staff are hired in conformity with stringent licensing directives from Abu Dhabi's Health Authority.

To maintain the competency of staff regarding recent developments in the medical community, the Medical Services Division provides two core programmes, Continuing Medical Education and Continuing Professional Development, which are targeted at clinical staff across a range of disciplines.

These programmes include a variety of lectures and training sessions that are in keeping with local requirements and the requirements of the respective international accrediting bodies. MSD's training centre has been certified by the American Health and Safety Institute.

In 2010, the Continuing Professional Development programme conducted 49 training sessions in Abu Dhabi, with attendance from 6,836 employees, and 33 training sessions in Ruwais, with attendance from 1,604 employees.

In 2010, the Medical Services Division also launched an internal programme, titled "Healthy Workplace Environment", which promoted the phase out of mercury-based medical devices and pharmacy plastic bags which were replaced with biodegradable materials.

In parallel to service expansion, the Medical Services Division has upgraded its medical equipment, facility capacity and vehicle capacity across its units. Arrangement with the Abu Dhabi Police is also underway to provide medical helicopter evacuation services for onshore and offshore locations

Health Awareness and Disease Prevention

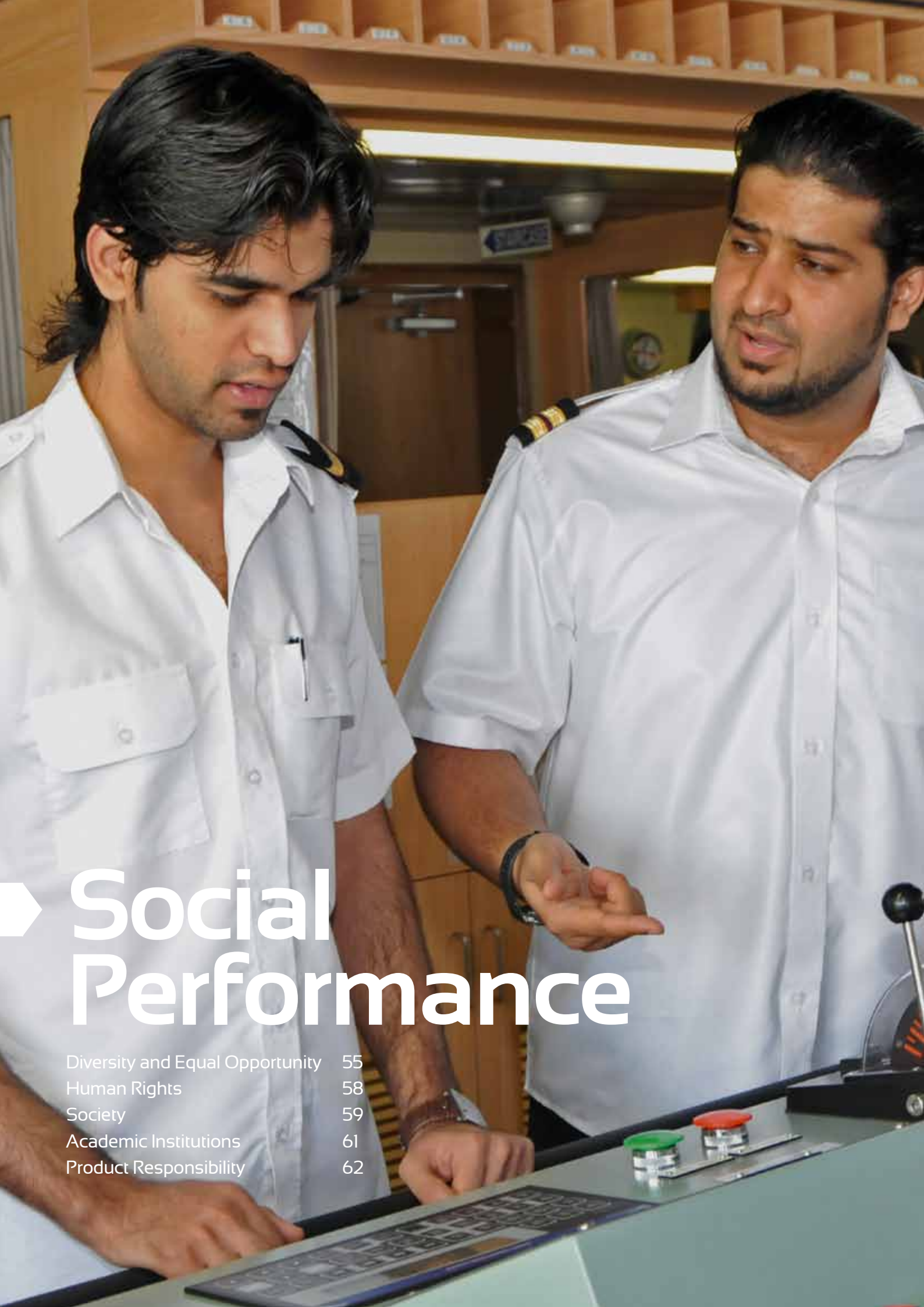
Providing patients with quality and affordable healthcare is one of ADNOC's main priorities. However, the Medical Services Division is also focused on increasing health awareness and disease prevention throughout the community.

In 2010, the Medical Services Division and the Group Companies conducted a wide-range of awareness campaigns covering topics such as breast cancer, obesity, diabetes, dental health, physical fitness and heat-induced stress.

ADNOC's Medical Services Division also collaborated with public institutions including the UAE Genetic Disease Association and the Abu Dhabi Blood Bank for the purpose of organizing a blood donation campaign and also for screening against blood diseases, including the hereditary Thalassemia blood disease.

Disease immunization is also an emerging focus of the Medical Services Division's operations. The following programmes were implemented in 2010:

- Varicella (chickenpox immunization) was integrated in the routine immunization schedule for children 12 months of age starting from September 2010. The activity has vaccinated 32 children in Abu Dhabi and 57 in the Western Region
- Seasonal Influenza vaccination, which is not included in the regular national immunization schedule, was offered due to perceived need. In 2010, 250 children and adults received the vaccination in Abu Dhabi and 487 in the Western Region
- Meningococcal immunization was provided for employees participating in Hajj and Umrah.



Social Performance

Diversity and Equal Opportunity

The total number of operational employees in ADNOC and its Group Companies in 2010 was approximately 32,000 of which 98% work on a full-time basis.Our total workforce is made up of 6% female employees and recently more women have started to serve as engineers in our fields.

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 management positions; and grades 20 and above are senior management positions.

Total workforce	50,350
Total Number of employees	32,000
Total number of supervised contractors	18,350

Percentage of employees per contract type	
Permanent	92
Fixed Term/Temporary	8

84%

of management positions across ADNOC Group Companies were occupied by Emiratis in 2010

ADNOC applies a fair remuneration system, whereby male and female salaries across all ADNOC job grades are largely equivalent.

The table below presents the breakdown of ADNOC employees.

Category	Composition (%)	Turnover rate
Gender		
Male	94	7
Female	6	8
Age		
<30 years old	27	6
30-50 years old	54	6
>50 years old	19	10

In 2010, the rate of employee turnover was approximately equal between men and women. Turnover by age reflected expected trends. Approximately 6% of employees under 50 years of age departed whereas turnover for employees over 50 years was higher at 10%. The later is largely attributed to retirement.

Emiratisation

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 the top strategic priorities of ADNOC and its Group Companies. The current five year target (2010-2014) is to achieve 75% Emiratisation by the end of 2014.

This five year plan is then 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 Division (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 2010, 84% of management positions across ADNOC and the Group Companies were occupied by Emiratis. This represents 447 employees. From 1999 to 2010, the GNRD has managed to raise the overall national workforce in ADNOC and its Group Companies from 23% to over 45%.

The remainder of our workforce comes from around the world, primarily Asia, Europe and other Arab countries.We are proud of our diverse workforce; we have employees from around the world and we value them and their contributions.

Training and Development

In 2010, ADNOC and its Group Companies spent more than AED 47.5 million to deliver in excess of 775,000 man-hours of employee training. These training sessions covered a wide range of technical (operation-specific) and non-technical programmes (organizational development, project management, coaching and mentoring, IT skills, first aid etc) that were 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.

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

Case Study:

Cadetship Programme

Background: In keeping with its commitment to employ UAE Nationals in key positions throughout the Company, ADNATCO & NGSCO runs a Cadetship Programme which takes around 40 young UAE Nationals interested in a challenging and rewarding career in a dynamic marine environment every year.

Approach: Cadets usually start by spending a few weeks at sea on a familiarization voyage. They then attend an English language course at an international location such as Australia, Singapore or the United Kingdom. This is followed by maritime training as either Deck or Engineering Officers. Upon completion of the basic study (typically three to four years), the cadet is appointed to a position on a vessel in accordance to his specialization. While the career progression of a Deck Officer peaks when he becomes a Captain, an engineer's ultimate target is to become Chief Engineer. Both positions will require more than eight to ten years of additional experience.

Outcome / Future: The Programme has trained more than 220 Nationals since it began, and this number will increase in line with ADNOC's Emiratisation targets and as the ADNATCO-NGSCO fleet expands.

775,000

man-hours of employee training in 2010

ADNOC Job Grade	Training (Hours)	Training (AED)
Grade 17 and above	15,710	3,897,365
Grade 14 - 16	169,526	9,438,537
Grade 11 - 13	300,193	20,335,036
Grade 10 and below	290,070	13,689,707

Case Study:

Use of an operator training simulator

Background: The ADGAS Operator Training Simulator (OTS) is a highly effective training tool, providing a safe and cost effective means to train operations personnel on how to start up and shut down a unit, respond to upsets and emergencies, troubleshoot issues and optimize units.

Approach: The OTS provides a controlled learning environment. Responses to operator actions are provided instantaneously and trainee performance can be measured by using an OTS performance tool.

Outcome / Future: The major benefits of OTS training will be realized though the adoption of best operator strategies that improve the reliability, integrity and efficiency of plant operation, providing greater up time and optimization of the plant units, reducing incidents and emissions.

Labour/Management Relations

The ADNOC Group Companies are at various stages of implementing a structured corporate strategy for employee engagement. They recognize the importance of developing and maintaining good working relationships between employees and their management. A combination of measures are applied across the Group Companies to ensure employee performance, career development and that underlying concerns are suitably addressed. These include open forums, workshops, employee satisfaction surveys and regular performance appraisals. Approximately 81% of employees across the ADNOC Group received a performance review in 2010.

ADCO has an initiative known as 'Breakfast with the Boss'. Once a month a group of randomly selected employees are invited to join one of the Executive Team members for breakfast and engage in an open, candid and informal dialogue to exchange views and ideas.

Borouge runs an annual 'Innovation Award' to recognize excellence and reward employees for their innovative ideas.

Management of Change

Management of change is an integral component of the ADNOC HSEMS Audit Programme. In 2010, the ADNOC Group of Companies had an overall compliance score of 82% 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 Group 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.

Non-retaliation and Grievance

The ADNOC Group Companies implement their own management approach towards non-retaliation and confidential employee grievance. This is normally embedded within their HR Policy, and is in compliance with the requirements of the UAE Federal Labour Law. In 2010, a total of 297 issues were raised across the ADNOC Group 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

ADNOC has established a committee specifically to focus on the labour conditions of suppliers, contractors and workers employed by contractors on ADNOC projects. The committee refers to the UAE labour laws, international best practice, and ADNOC Codes of Practice as reference to define the 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. Employee labour associations and collective bargaining agreements are not permitted in the UAE under Federal Law. However, the principle of 'Decent Work' is central to our relations with our employees and Group Companies have various approaches to conduct regular engagement with staff members individually and collectively.

ADNOC does not currently offer training on human rights issues to its employees or security personnel, but fully adheres to the UAE Labour Law in its operations and practices. HR 6 and HR 7 Forced, compulsory and child labour is strictly forbidden under this law and ADNOC takes a firm stance on ensuring no violations of this kind take place amongst its workforce. ADNOC does not hire anyone under the legal working age of 15. In 2010, no ADNOC operations were identified as having significant risk for incidents of child, forced or compulsorily labour.

Non-discrimination

Discrimination based on origin, religion or gender is not acceptable within ADNOC.

Corruption and actions taken in response to incidents of corruption

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 the issue 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 2010.

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.

Security

ADNOC is committed to ensuring the security of its personnel, facilities, property and information. Security for ADNOC's oil and gas facilities is provided by the Critical National Infrastructure Authority (CNIA), which was established in 2007, to ensure the safe and uninterrupted operation of assets critical to the economy of Abu Dhabi.

ADNOC employs experienced professionals to routinely evaluate its IT risks and controls, and to determine the adequacy of system security, IT continuity and disaster recovery plans.

Society

Our petrochemical and refining industries are in close proximity to communities at Ruwais and Abu Dhabi.

With the exception of the community of Bida Zayed, which is approximately 20 kilometers from the main processing facility in the Bab Field, no communities are located adjacent to onshore exploration and production activities. Regardless of location, we take great care to ensure impacts are minimised and that we remain a good and involved neighbour.

Impacts on the nearby communities are assessed through Health, Safety and Environmental Impact Assessments (HSEIA) studies which include baseline surveys on physical, biological, social environments and archaeology. HSEIAs assess and manage the impacts of operations on communities, including entering, operating and exiting. Furthermore the project risk assessments evaluate risk to society and develop mitigation measures to reduce them to a level that is 'As Low As Reasonably Practicable' (ALARP). Regular environmental monitoring is performed during project operations.

Working with the Community

ADNOC is committed to working side-by-side with the community of Abu Dhabi and the UAE overall. We recognize that our value lies in the value of those around us, and have extended our support towards the academic, professional and recreational pillars of our society.

We also feel a strong responsibility towards fostering the cultural values of our national heritage. In 2010, ADNOC and its Group Companies were the proud Golden Sponsor of the annual Al Dhafra festival. The ten-day festival brings together nationals, expatriates and tourists with the aim of introducing and preserving the authentic camel breeds of Asayil and Majaheem, celebrating the UAE's longstanding bedouin culture, reviving the role of poetry and its influence on UAE culture, situate the Western Region as an international tourist destination and ultimately activate the region's economic growth.

ADNOC and its Group Companies have also brought together members of the community through their sponsorship of the annual Camel Race Festival, annual Liwa Dates Festival and annual National Day (2nd December) celebrations.

Social Initiatives in 2010

- **ADCO** participates in Western Region Development Committee meetings as a way to involve the public and identify opportunities for improvement regarding their activities in the area. The engagement of the local communities includes arranging visits for the public and school children; emergency response training; provision of medical services and employment priority for the western region residents

- **Borouge** undertook several large projects within the Water for the World programme in 2010, including renewing water supply systems destroyed by floods in Pakistan; providing clean drinking water to small towns in rural Vietnam; providing continuous water supply to the residents of Bhaktapur, Nepal; and providing a sustainable water system for the Swami Maheshwaranande Ashram Centre in India

- **ZADCO** supported the Abu Dhabi Industry Award organized by the Higher Colleges of Technology. The purpose of the award is to encourage UAE National students in their pursuit of academic excellence in technical and specialized disciplines within the industrial sector in the UAE

ADNOC and its Group Companies also provide employees and their families with facilities for a wide range of sports such as football, volleyball, basketball, swimming and tennis. ADNOC encourages its employees to participate in sports events and organises tournaments and competitions, including bowling and football championships, for their recreation.

Case Study:

A community waste collection and recycling programme

Background: ADNOC DISTRIBUTION and Borouge joined forces to provide consumer waste segregation and collection facilities for the purpose of recycling at ADNOC service stations in the UAE. This programme was initiated on 5 June 2010, the United Nations Environment Programme's World Environment Day.

Approach: The scheme initially included the segregation, collection and recycling of plastics, metal and paper / cardboard, and was piloted at several service stations during the second half of 2010. It aims to establish recycling facilities at all ADNOC service stations, establish a long term partnership with a local recycling logistics company, introduce assurance processes that support long-term effectiveness of the programme, and raise public awareness about the benefits of waste recycling.

Outcome / Future: The programme is intended to advance the standard of consumer waste recycling throughout the UAE and encourage companies to establish similar recycling programmes in the region.

Academic Institutions

Realizing that the future of any successful company relies on the development of its people, ADNOC and its Group Companies established and support a number of educational institutions which contribute to the advancement of young UAE nationals. ADNOC's family of learning institutions includes the Petroleum Institute (PI), ADNOC Technical Institute (ATI), the Glenelg School of Abu Dhabi (GSAD), the Achiever Oasis Programme (AOP) and the ADNOC Scholarship programme.

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 in areas of significance to the oil and gas and the 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. The institute has a current capacity of approximately 1,200 students (800 males and 400 females in 2010). Since its establishment, the institute has trained more than 500 engineers and petroleum geoscientists. About 80% of these graduates are Emiratis. PI graduates go on to join ADNOC Group Companies.

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. In 2010, the institute graduated 120 pupils who then proceeded to work for the ADNOC Group Companies. 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

The Glenelg School of Abu Dhabi (GSAD) was founded in 2008 by ADNOC in collaboration with the Glenelg Country School in Maryland, USA. The Glenleg mission is to offer primary education as well as world-class secondary education to national and expatriate students, that prepares them to join prestigious universities worldwide. The GSAD graduated its first class of 1,007 pupils in 2010. The school has two campuses, one in Abu Dhabi and the other in Ruwais, with a combined capacity of approximately 1,450 students (750 males and 700 females in 2010). A new campus will open in Madinat Zayed, Abu Dhabi, for the academic year 2011 - 2012.

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, enroll 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.

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 specialize 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 testament to the programme's success.

Product Responsibility

Across the ADNOC Group Companies there are four companies that have the most significant obligation towards product responsibility as they manufacture and deliver products directly to consumers. These are TAKREER, BOROUGE, FERTIL and ADNOC DISTRIBUTION.

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. Products are endorsed and certified by the respective international authority.

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 subjected to stringent health and safety impact assessments prior to market entry. Three out of our four product manufacturing companies consider the use and end-of-life impacts 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 and labels.

No incidents of non-compliance with health and safety impacts, labelling requirements and use of our products and services were reported in 2010.

An example of a new product that has recently entered the local market is Natural Gas for Vehicles (NGV).

Case Study:

Award for excellence in purchasing policies and procedures

Background: ZADCO was the first organization in the Middle-East to be awarded the certificate for 'Achieving the Standard of Excellence in Purchasing Policies and Procedures' in November 2004 by the Chartered Institute of Purchasing and Supply.

Approach: A procurement audit was carried out in January 2010 to ensure the re-certification of this prestigious award. The review was conducted to ensure that purchasing and supply management policies and procedures were up -to-date and working effectively throughout the organisation.

Outcome / Future: On 19 May 2010 the Chartered Institute of Purchasing and Supply awarded ZADCO the certificate for achieving the standard of excellence in procurement policies and procedures. ZADCO was found to have significantly improved since the last review, particularly with regards to the full implementation of its electronic purchase/ contract ordering system and the development of internal tracking systems.

ZADCO's 2011 target is to consider the Chartered Institute of Purchasing and Supply Gold Strategic Procurement Capability Certificate.


This certificate is awarded to

Zakum Development Company (ZADCO)

for achieving the standard of excellence in procurement policies and procedures

CIPS CERTIFICATION

ADNOC DISTRIBUTION is currently in the process of establishing conversion centres to retrofit vehicles and is upgrading its service stations to supply natural gas fuels to consumers. ADNOC DISTRIBUTION is targeting fleet vehicles in the first stage to raise the initiative's profile and maximise the positive environmental impact of this new product, which is the reduction in associated emissions compared to petrol.

Customer 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 engages with its customers at its convenience stores and also for its bulk services such as aviation fuel. It has a telephone hot line specifically established for customer feedback and complaints.

Borouge has been conducting annual customer satisfaction surveys since 2003. In 2010, Borouge surveyed 256 existing and potential customers about their opinion of Borouge in terms of technical and product performance, supply chain performance, commercial and marketing performance and general relationship.

The customers were interviewed by a third party consultant by telephone, and their feedback for 18 service attributes was collected. Customers in all four business units were covered: Film and Moulding, Pipe, Wire and Cable and Mobility. The customers surveyed correspond to a representative sample of the Borouge customer base and were distributed across the Indian Subcontinent, North East Asia, South East Asia, the Middle East and Africa regions. The results were analyzed by region, by product and by business unit and identified recommendations for improvement. These recommendations were reviewed by management to design concrete actions for follow-up and implementation.

FERTIL engages with its customers regularly to understand their perceptions of the company. Over the last two years, 92% of customers stated that they were satisfied with FERTIL's products and services.

Our customer surveys are complemented with other methods such as performing regular customer visits, product trials and technical follow-ups where possible. No major product-related concerns, incidents of loss of customer data, or breaches of customer privacy were reported by Group Companies in 2010. Furthermore, there have been no unplanned disruptions to the supply of ADNOC's products and services to the market.

Marketing Communications

The Group Companies' individual marketing departments strictly adhere to the provisions of signed customer agreements, and adhere to applicable laws and standards related to advertising, promotion and sponsorship. There have been no incidents of non-compliance reported with regard to advertising, promotion and sponsorship in 2010.

Economic Performance

Economic Performance

ADNOC has a first class balance sheet. Its financial metrics typically equal or exceed the 'super major' oil and gas companies. ADNOC's economic performance directly impacts the fiscal health and reputation of the Emirate and Nation as a whole and is a major contributor to Abu Dhabi's credit rating and sovereign debt perception.

ADNOC does not have individual investors or shareholders. The Supreme Petroleum Council functions as its governing board and oversight committee. Details of ADNOC's financial performance are regarded as highly confidential under both ADNOC and Abu Dhabi protocols. ADNOC reports directly to the Supreme Petroleum Council 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.

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.

ADNOC reinvests back into the local oil and gas industry. Two of the major investments in 2010 include the Integrated Gas Development and Offshore Associated Gas projects, both of which are a collaborative effort between ADMA-OPCO, ADGAS and GASCO. Other significant publicised investments include the Zakum Central Super Complex De-mothballing project led by ADMA-OPCO, the Shah Gas Development project led by Al Hosn Gas, the onshore Bab and Qusahwira projects led by ADCO, the construction of the 'Borouge 3' ethane cracker unit led by Borouge, and ZADCO's Upper Zakum Re-development (UZ750) project.

Studies conducted in 2010 show that ZADCO's UZ750 project will be more cost-effective than traditional marine wellhead towers. The main concept underlying the project is artificial island based drilling and production. Artificial islands provide a more flexible and robust development base for the redevelopment of the Upper Zakum field. This will significantly reduce life-cycle development costs and will enable long-term maximum recovery levels to be achieved. The UZ750 project is also the first in the region to use various technology "firsts", including Extended Reach Drilling and Maximum Reservoir Contact technologies, both of which will contribute towards effectively developing the entire Upper Zakum field.

In 2010, the Group Company total gross manpower costs were around AED 10 billion. 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.

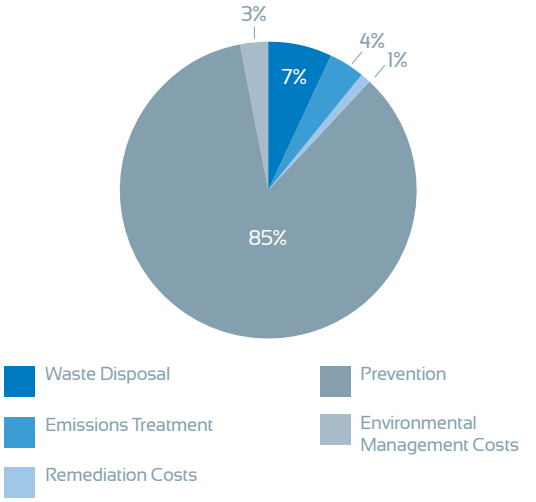
National employees receive their pension entitlements, in accordance with the provisions of the statutory pension scheme. For UAE nationals of all pay grades, the company contributes to a pension programme managed by the government. Expatriate employees receive the company's end of service benefits, 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.

In 2010, the ADNOC Companies' total gross manpower costs were around AED 10 billion

Environmental Expenditure

While no study of the financial implications of climate change on ADNOC operations has been conducted, we are investing heavily in a wide-range of technologies and environmental practices in an effort to minimise our contributions. The following diagram illustrates our 2010 environmental expenditure.

Environmental Expenditure by Type in AED



In 2010, ADNOC Companies spent more than AED 1.7 billion in environmental expenditures

ADNOC Companies spent more than AED 1.7 billion on environmental expenditures in 2010. The major part, 85%, was spent on prevention. This expenditure is largely attributed to the Green Diesel Project by Takreer. Waste disposal accounted for 7%, emissions treatment for 4%, environmental management for 3%, and remediation 1%. The small percentage spent on remediation is due to the fact that our fields are still relatively young.

Market presence

ADNOC has developed strategic agreements with many of the largest international oil and gas companies, and with governments around the world.

Seventy percent of the total annual production of ADNOC's refined products is exported. The remaining refined products are sold domestically through a fast-expanding distribution network. ADNOC has more than 190 motor vehicle stations in Abu Dhabi, Al Ain, the Western Region and the Northern Emirates and provides aviation re-fuelling services to more than 50 airlines at regional airports.

ADNOC reinvests back into the local oil and gas industry. Over the next few years, we look to strengthen our market presence through a strategic move towards increasing production from our extensive gas reserves, and expanding our distribution network of 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.

الحصن للغاز
Al Hosn Gas

Case Study:

A significant investment in the Shah Gas Development Project

Background: Work has now commenced on the AED 36.67 billion Shah Gas Development project (SGD). ADNOC holds a 60% interest in the Abu Dhabi Gas Development Company (Al Hosn Gas), a UAE company formed in 2010 to manage and operate the Shah Project. Occidental Petroleum is the remaining 40% shareholder and together with ADNOC will jointly exploit the sour gas.

The SGD Project is a critical infrastructure project for Abu Dhabi's energy sector and the realization of Abu Dhabi's 'Economic Vision 2030'. The new SGD facilities will be designed to process approximately one billion standard cubic feet per day (1 BSCFD) of gas. From this feed gas stream, the project will provide 500 MMSCFD of clean natural gas for the Abu Dhabi market. The project is on track for completion in September 2014. One of the project's work packages includes an AED 7.5 billion (approximately) sulphur storage and export facility at the port of Ruwais.

The SGD facilities will be located approximately 180 kilometers southwest of Abu Dhabi city. The footprint of the facility will cover an area of about 5.4 square kilometers.

Approach: The sourness of the feed the gas, containing as much as 23% hydrogen sulphide, along with the magnitude of processed gas and produced sulphur will set a new benchmark for the world gas processing and treating industry. Due to the major hazards associated with the sour well fluid, it was clear that to successfully develop, construct, operate, and maintain the Shah field, state-of-the-art technology, the highest engineering standards, optimal construction practices, and operation and maintenance practices focused on reliability and safety had to be utilised. To eliminate, reduce, mitigate, and manage Hydrogen Sulphide (H_2S) risks associated with feed stream, Al Hosn Gas has required an early and sustained focus on all aspects of Health, Safety, and the Environment during the development, assessment, and implementation of the plant design, construction execution strategy, and operability assurance program for the SGD Project.

Outcome / Future: A well thought out risk management strategy encompassing the life of the Shah Gas Development Project has resulted in a high quality design that has applied the principals of inherent safety such as providing large separation distance between the parts of the process containing high concentrations of H_2S and the non-process areas, the use of premium quality corrosion resistant alloys (CRAs) for metal components such as pipes and vessels and the installation of fixed breathing air system in Red Zones (High H_2S process areas) that enable operators to work safely and efficiently under air. A major risk reduction measure during the build phase is the decision to commission and thus test the integrity of the plant with sweet gas from existing ADNOC gas supplies. This will greatly reduce the risk to personnel by removing the risk of H_2S exposure at source during this critical period. The innovative short-form HSEIA methodology developed by Al Hosn Gas HSE Division, in close cooperation with the Supreme Petroleum Council EHS Division, also provides a clear statement of intent to deliver another ADNOC world class facility.

At the same time, we are constantly seeking new technologies to enhance oil and condensate recovery from our existing fields, the latest of which involves nitrogen gas and carbon dioxide gas injection into our heterogeneous oil reservoirs. We are also initiating oil production from new onshore and offshore fields, with the aim of producing 3.5 million barrels per day by 2018.

To support the growth of our operations, we have initiated the process of increasing our domestic refining capacity from 417,000 to 817,000 barrels of oil per day at our Ruwais refinery. This is expected to be complete in 2013. The Ruwais refinery is also implementing the Green Diesel project that aims to produce ultra-low sulphur content gas oil for the UAE and international market, a product with a significantly lower environmental impact to conventional fuel. The capacity for this product is expected to be 84,000 barrels per day.

ADNOC is also enhancing its petrochemical production capacity. This shall be realised with the opening of the Borouge 3 facility (Borouge will have a total capacity of 4.5 million tonnes of polyolefins per year) by mid-2014, and the completion of the FERTIL-2 project (FERTIL will have a combined capacity of 3,300 and 5,800 metric tonnes per day of ammonia and urea respectively) in 2013.

Throughout the implementation of our ambitious projects, we will continue to uphold our Emiratisation policy and look towards building capacity within our national UAE workforce.

Locally-based Suppliers

There is a well-documented procedure for the selection of suppliers and the evaluation of bids. This includes technical criteria and several mandatory requirements that comprise factors relating to HSE, Quality Assurance and ISO Certification. Generally, the selection of suppliers is based on the greatest value offered on a balance of quality, timeliness and price.

ADNOC often requires that foreign suppliers of goods and services 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 percentage of the value of any contract leaving the country is directly 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 2010, over 75% of the procurement budget across the Group Companies was spent on local suppliers. This amounts to approximately AED 13.4 billion.

Indirect Economic Impacts

ADNOC creates talent for the oil and gas industry and beyond through its flagship educational institutions; the ADNOC Technical Institute, the Petroleum Institute, the Glenelg School of Abu Dhabi and the Achievers Oasis Programme as well as its Scholarship Programme and training centres within Group Companies. The overall aim of these initiatives is to enhance the knowledge, skills and capabilities of ADNOC's Emirati workforce.

In line with the integral role ADNOC plays in the UAE economy, we are 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 organizations such as Zayed University, Higher Colleges of Technology, and Abu Dhabi Educational Zone as well as cultural and sports clubs.

ADNOC 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

ADNOC and its Group Companies help to build and maintain roads, hospitals, mosques and schools 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 and its Group Companies are also playing an active role in the development of the Western Region through the application of the highest international standards for environmental safety in all areas of operations. 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 specialization.

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.

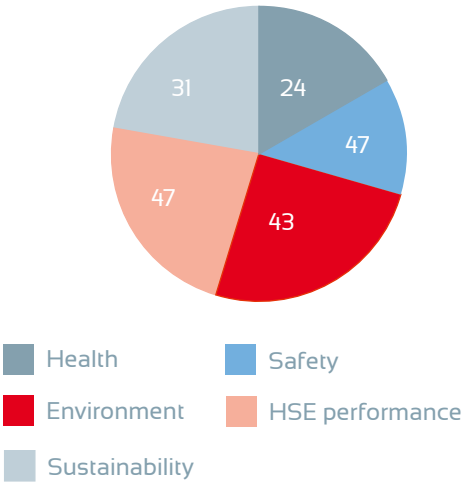
Annual HSE Awards

Annual HSE Awards

ADNOC has an internal awards system known as the Annual HSE Awards. The purpose of the awards is to recognize outstanding accomplishments, enable knowledge sharing pertaining to best practice, and foster an atmosphere of friendly competition amongst the ADNOC Companies.

The Annual HSE Awards system 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 six categories: HSE Performance, Environment, Health, Safety, Sustainability and Innovation. Submissions are evaluated by an independent judging panel and then by the ADNOC CEO and Directors. The awards are presented in a ceremony that takes place every May.

2010 ADNOC HSE Award Submissions



In addition to the six award categories, the following awards were also presented in 2010:

Group Company/Contractor Partnership Awards were presented to the following Companies:

- Abu Dhabi National Hotel Compass through ADMA-OPCO - Trim Trax Food Waste Management System
- Intergulf General Contracting Company through GASCO - HSE Management Initiatives - An Effective Tool for Behavioural Change

Special Recognition Awards were presented to the following Group Companies:

- GASCO - Occupational Health Hazards Awareness Programme
- NDC - Traffic Lights: A Snapshot of Asset Health
- TAKREER - Risk Specific Pipeline Integrity Management for Enhanced Public Safety
- The Petroleum Institute - The Renewable Energy Group (REG)
- BUNDUQ - Save Your Years for Years Program.

HSE Champion Award was awarded to Mr Ali Rashed Al Jarwan, Chief Executive Officer of ADMA-OPCO, for his visible efforts and active commitment to HSE matters.

HSE Champion, Mr. Ali Rashed Al Jarwan, Chief Executive Officer of ADMA-OPCO

Innovation

Winner: ADCO

1st place: ADCO with entry 'Electromagnetic Surface-Controlled Sub-Surface Safety Valve: An Immediate Solution to Secure ADCO Wells with Damaged Control Lines'. ADCO utilized the electromagnetic waves technology in a first of its kind pilot project in the Middle East to replace physical control lines. Two "Control Line Free Electromagnetic" Subsurface Safety Valves (SSSVs) were installed at dual completion well. The pilot was successful and eliminated the need for work-over or shutdown and minimized HSE risk. The implementation of this technology in 87 problematic wells will save AED 385 million, more than 75 days well downtime, 3.4 rig years and huge operating costs.

Runner-up: ADMA-OPCO with entry 'Keeping the Oil in the Pipeline'. ADMA - Subsea Team introduced and deployed an innovative subsea repair technique that utilises mechanical connectors and flanged spool pieces to quickly repair damaged / ruptured subsea pipelines and immediately return them back into service, with the added benefit of reducing the duration of the oil spill. The technique has replaced the old method, which relied on a technology called "Hyperbaric Welding Techniques", that was excessively costly and took over two months to mobilize and complete a repair. The new technique can be mobilized within the first 24hrs of a subsea incident and repairs can be completed in days using ADMA in-house resources.

Environment

Winner: Borouge

1st place: Borouge with entry 'Borouge 2 Cracker Successful Start Up with Environmental Friendly Nitrogen Cool down'. Borouge and Linde engineering jointly implemented an innovative and well-researched approach that uses nitrogen to cool down the Borouge-II ethane cracker in order to reduce the high anticipated flaring during the start up and subsequent stabilization phase of the plant. The approach applied key learning's from the previously successful Borouge-I flare reduction initiative. The implementation of this approach resulted in a flaring reduction of 30,000 tonnes of hydrocarbon and an overall saving of AED 60 million.

Runner-up: ESNAAD with entry 'Abu Dhabi Offshore Vessels "Go Green"'. ESNAAD is currently upgrading its existing fleet, through which it is proactively implementing the high standards of Clean Notation with Green Passport/ IHM. ESNAAD also has plans to purchase only Clean Design vessels going forward. In doing so, ESNAAD is going beyond minimum industry requirements to ensure that its ships utilise highly recyclable materials in the construction process where possible, generate less pollution and smaller overall environmental impacts during their operation, and can be recycled in such a way that does not pose unnecessary risks to the environment when they become obsolete.

Health

Winner: ADMA-OPCO

1st place: ADMA-OPCO with entry 'New Methods to Beat the Heat'. Management of heat stress is one of the main challenges faced due to the extreme weather conditions during the summer. ADMA-OPCO HSE & QA team proactively prepared a cohesive heat management plan to ensure zero first aid and medical treatment cases arise due to heat stress. The plan included several approaches such as developing HSE guidelines for the control of heat stress, developing pre-job heat stress management checklists, developing a Heat Index Calculator and linking the findings with the Permit to Work (PTW) System, conducting training and refresher courses throughout the summer season and adopting robust and coordinated awareness programmes.

Runner-up: ADNATCO & NGSCO with entry 'Ergo Port: Your Ergonomic Port of Call'. Ergo-Port is a comprehensive ergonomics management programme that that has been built on the principles of proactiveness and empowerment at four progressive levels: education, identification, prevention and management. The programme has been designed in-house and launched as an interactive online educational tool for the purpose of promoting self-help and problem solving for both office staff and offshore sea staff, and for preventing and managing discomfort, pain and injury.

Safety

Winner: ZADCO

1st place: ZADCO with entry 'Personnel Tracking System for Enhancing Employee Safety in Upper Zakum Site'. The applied Personnel Tracking System automatically detects and provides counts of personnel in each of predefined zones within the site without the need for manual head counting. Being able to produce instantaneous counts is particularly advantageous for locating personnel working in danger zones, where time is crucial for saving lives and avoiding rescue teams' exposure in the event an emergency evacuation process is required. The system has played a major role in enhancing the safety of the personnel at the Upper Zakum site.

Runner-up: ZADCO with entry 'High Precision Monitoring of Crude Oil Storage Tanks at Zirku Island'. An in-house software application was developed and implemented for the crude oil floating roof tanks (capacity of 1 million barrels) in Zirku Island, to provide high precision monitoring and allow for improvements across several safety features. The application achieves this by precisely detecting any minor or major leaks in the tanks and, in doing so, allowing for a timely intervention that avoids the escalation of hazards which may result in damage to assets and the environment.

HSE Performance

Winner: ADMA-OPCO

1st place: ADMA-OPCO with entry 'Communicating HSE through Automated E-messaging'. The automated e-messaging tool is an effective, high return, low cost method of raising HSE awareness and improving HSE culture among the workforce. By attaching a well-placed, subject-specific message as a footer on all outgoing emails, the company is maximizing the use of a communication tool which is widespread, well-read and, above all, free. A new message is sent every day which makes the recipient more aware and involved with the current focus of HSE, and encourages behavioral changes across the organization.

Runner-up: TOTAL ABK with entry 'Up in the Air: Helicopter Flare Tip Replacement'. "Up in the Air" describes the helicopter approach TOTAL ABK has used to replace its main flare tips, instead of the conventional heavy load crane barge methodology. The benefits of using the helicopter approach over the conventional one are manifold, and include a reduction in exposure hours (123 hours versus 2,880 hours), reduced down time (two field days versus three weeks), reduced change of weather delays, and up to seven times less CO_2 emissions. The improvement in HSE performance presented by the helicopter approach also resulted in a cost saving as it proved to be a third of that for the crane barge approach.

Sustainability

Winner: Borouge & ADNOC-Distribution

1st place: Borouge & ADNOC-Distribution with entry 'Working in Partnership-Sustainable Waste Recycling'. ADNOC-Distribution and Borouge worked collaboratively to initiate and implement a consumer waste collection and management program, in line with the general direction of the Abu Dhabi Government, at service stations across Abu Dhabi. In addition to pursuing environmental benefits, the aims of the program were to promote public awareness for waste recycling, maximise the lifetime of usable materials and promote ADNOC-Distribution and Borouge as environmentally conscious companies.

Runner-up: ADGAS with entry 'ADGAS-HSE Merits of OAG1 Project: Looking at the Future of Abu Dhabi's Offshore Oil and Gas Business'. A hot oil system was incorporated in the design of the offshore associated gas (OAG) plant at Das Island in consideration that heat integration leads to no fuel gas burning being required for process heating purposes. This approach provided the benefits of reducing thermal pollution, which was decreased by recovering 54 MMBTU/hr from the exhaust gases out of the gas turbine stacks, and reducing carbon footprint, which was reduced by 134 tonnes/day. The latter is equivalent to burning 2 million standard cubic feet per day of fuel gas, saving costs of AED 11 million/year.

2010 ADNOC HSE Awards Winners

Acronyms and Abbreviations

A&AD	Audit and Assurance Division
ADAA	Abu Dhabi Accountability Authority
ADIA	Abu Dhabi Investment Authority
ADIC	Abu Dhabi Investment Council
ADNOC	Abu Dhabi National Oil Company
ADSG	Abu Dhabi Sustainability Group
ADWEA	Abu Dhabi Water and Electricity Authority
AED	Arab Emirates Dirham
AGHSESC	ADNOC Group HSE Steering Committee
AICE	American Institute of Chemical Engineers
ALARP	As Low as Reasonably Practicable
AQI	Air Quality Index
AQMS	Air Quality Management System
BAP	Biodiversity Action Plan
BAT	Best Available Technology
BBL	Barrels
BPD	Barrels Per Day
CAMS	Competence Assurance Management System
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
CEO	Chief Executive Officer
CFC	Chlorofluorocarbon
CME	Continuing Medical Education
CNIA	Critical National Infrastructure Authority
CO_2	Carbon Dioxide
CoP	Codes of Practice
CPD	Civil Projects Division
CPD	Continuing Professional Development
CSR	Corporate Social Responsibility
E&P	Exploration and Production
EH&S	Environment, Health and Safety
EOR	Enhanced Oil Recovery
FAR	Fatal Accident Rate
GHG	Green House Gas
GNRD	Group Nationals Recruitment Department
GRI	Global Reporting Initiative
G3	3rd Generation of GRI indicators
HAAD	Health Authority of Abu Dhabi
HAZOP	A Hazard and Operability study
HCFC	Hydrochlorofluorocarbon
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
IPCC	Intergovernmental Panel for Climate Change
ISO	International Standards Organisation
IUCN	International Union for Conservation of Nature
KPI	Key Performance Indicator
kWh	Kilowatt hour
LDAR	Leak Detection and Repair
LNG	Liquefied Natural Gas
LTI	Lost Time Incident
LTIF	Lost Time Incident Frequency Rate
MARPOL	International Convention for the Prevention of Pollution from Ships
MASDAR	Abu Dhabi Future Energy Company
MMSCFD	Million Standard Cubic Feet per Day
MRC	Maximum Reservoir Contact
MSD	Medical Services Division
NA	Not Applicable
NGO	Non Governmental Organisation
NGV	Natural Gas for Vehicles
NO_x	Oxides of Nitrogen
NRC	National Recruitment Committee
OGP	Oil and Gas Producers (Association)
OHSAS	Occupational Health and Safety Accreditation System
QRA	Quantitative Risk Assessment
PCB	Poly Chlorinated Biphenyls
PPM	Parts Per Million
RAMS	Remote Area Medical Services
RHC	Ruwais Housing Complex
RWDC	Restricted Work Day Case
SAS	Sahil, Asab and Shah fields
SO_2	Sulphur Dioxide
SO_x	Oxides of Sulphur
SPC	Supreme Petroleum Council
TRIR	Total Recordable Incident Rate
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America
VMD	Vehicle Monitoring Devices
VOC	Volatile Organic Compound
WSUP	Water and Sanitation for the Urban Poor

أدنوك
ADNOC
شركة بترول ابوظبي الوطنية

Readers' Survey

As an ongoing endeavor to engage stakeholders and to improve performance, we welcome your feedback. Please fill out the questions below and return to:

Environment, Health and Safety Division
Supreme Petroleum Council
P.O. Box 898, Abu Dhabi, UAE
Fax: +971 (0)2 666 8089
Email: hse@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:

_____

_____

_____

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_____

Thank you for completing this survey.

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Report Contributors

The following provided the data on which this report is based.

Exploration and Production Directorate

ADCO	Abu Dhabi Company for Onshore Oil Operations
Al Hosn Gas	Abu Dhabi Gas Development Company Ltd
ADGAS	Abu Dhabi Gas Liquefaction Company Ltd
ADMA-OPCO	Abu Dhabi Marine Operating Company
GASCO	Abu Dhabi Gas Industries Ltd
ELIXIER	
NDC	National Drilling Company
ZADCO	Zakum Development Company

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 Borouge PTE Ltd
FERTIL	Ruwais Fertilizer Industry

Shared Services Directorate

ESNAAD	
IRSHAD	Abu Dhabi Petroleum Ports Operating Company

Independent Operators

ADOC	Abu Dhabi Oil Company Ltd
BUNDUQ	BUNDUQ Company Ltd
TOTAL ABK	Total Abu Al Bukhoosh Company

Academic Institutions

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

Other

CPD	Civil Projects Division