

**PRELIMINARY DUE DILLIGENCE REPORT**

**Date: April 2009**

## **Preliminary Due Diligence Report**

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## I. COMPANY INFORMATION

### A. Company analysis

#### Overview

Chevron is one of the largest integrated energy companies in the world. Headquartered in San Ramon, California, the company conducts business in approximately 180 countries, and is engaged in every aspect of the oil and natural gas industry, including exploration and production, refining, marketing and transportation, chemicals manufacturing and sales, geothermal and power generation.

et income of \$23.9 billion represented a 28.1 percent increase over the previous year. Capital and exploratory expenditures for 2008 were \$22.8 billion, and return on capital employed was 26.6 percent. Looking ahead, Chevron is investing for the future, focusing on increasing reserves, boosting crude oil and natural gas production, and improving reliability and efficiency (Source: Delivering Energy Now Developing Energy for the Future, Chevron's 2008 Annual Report).

Chevron is one of the largest foreign investors in Bangladesh, providing employment for about 2,200 workers and meeting 40 percent of the country's natural gas consumption. Chevron Bangladesh and its subsidiaries have been active in oil and gas exploration and production in Bangladesh for a number of years in the greater Sylhet region in north-eastern part of the country.

The two-year startup of Block 7 demonstrates Chevron's ability to handle complex projects involving many technical, environmental and workforce challenges. To bring the field into production, Chevron recruited about 2,300 Bangladeshi workers to work on the project. Chevron also produces natural gas from the Jalalabad, Bibiyana and Moulavi Bazar fields, both of which have been producing near full capacity and is continuing its exploration efforts in Block 7 in southern Bangladesh.

Companies and subsidiaries	Business
Chevron (worldwide)	Operation and business conducted in 100 countries worldwide
Chevron in Bangladesh	Operational in 4 blocks in Bangladesh: <b>Block 13:</b> Jalalabad Gas Field and <b>Block 14:</b> Moulavi Bazar Gas Field are producing near full capacity

## **Culture and values**

With a keen eye on the future, Chevron develops and commercializes advanced energy technologies, including core hydrocarbon technologies, a global digital infrastructure and information technology. Their business development portfolio includes biofuels, hydrogen infrastructure, advanced battery systems, nano-materials and renewable energy.

Chevron's community engagement activities focus on building capacity to promote local economic development and stable, long-term relationships. In 2007, Chevron invested \$119 million in community engagement initiatives globally. Approximately 68% was targeted to basic human needs, education and training. In 2007, Chevron adopted 7 policy principles under its Action Plan for Climate Change. The company has demonstrated its commitment through emitting 60.7 million metric tons of carbon dioxide equivalent in 2007, thereby improving energy efficiency by 27% since 1992. In early 2008, Chevron established two strategic alliances with government and academic institutions for R&D on new technologies like biofuel.

Chevron works with its partners within the Government of Bangladesh and with Petrobangla to develop the country's energy resources in a safe, environmentally responsible manner. To protect the environment, Chevron uses the latest technologies, and strict inspection procedures ensure safe operations.

### ***B. Competitor analysis***

Bangladesh is divided into 23 blocks ([www.petrobangla.org.bd](http://www.petrobangla.org.bd)) for the exploration and production of natural gas. They are allocated to different companies by the Government of Bangladesh through competitive bidding procedures. Hence, for each block, there is a designated company. For Block 7, there are no competitors in that particular block.

## II CSR INFORMATION

### A. General

Chevron defines corporate responsibility (CSR) as:

- Consistently applying core values, set out in ‘The Chevron Way’.
- Maximizing the positive impact of operations on current and future generations.
- Integrating social, environmental and economic considerations into core practices and decision making.
- Engaging with and balancing the needs of stakeholders.

Chevron reviews their corporate responsibility elements periodically to examine progress and to identify emerging issues. Based on this approach, Chevron made several changes to their list of priorities, namely:

- Continuous integration of corporate responsibility into business
- Global strategic workforce development
- Stakeholder engagement
- Health and safety, including HIV/AIDS
- Community engagement
- Human rights
- Climate change, renewable energy and energy efficiency
- Environmental management



**Figure 2: The Chevron Way and Corporate Responsibility** *Source: www.chevron.com*

The following table has been taken from the Chevron’s global website and captures the company’s performance along with their CSR indicators.

**Table 1: Key Corporate Responsibility Performance Indicators** [Goals, shown in brackets, were established prior to Chevron's acquisition of Unocal] *Source: www.chevron.com*

	2004	2005	Change over the year	
<b>Socioeconomic</b>				
Fatalities (workforce)	17	6 [0]	-11	↗
Days Away From Work Rate (workforce)	0.18	0.12 [0.14]	-33%	↗
Total Recordable Incident Rate (workforce)	0.51	0.41 [0.40]	-20%	↗
Employee Motor Vehicle Incidents (per million miles driven)	3.01	3.65	21%	↘
Percent of female and non-Caucasian males at the senior-executive level worldwide	20.8	19.4	-7%	↘
Percent of females at midlevel positions and above worldwide	9.9	10.0	1%	→
Total corporate wide spending in community investment (US\$ million)	63.8	73.1	15%	↗
<b>Environmental</b>				
Number of petroleum spills	986	846	-14%	↗

	2004	2005	Change over the year	
Volume of petroleum spills (barrels)	15,514	47,934	209%	↓
Global SOx emissions (thousands of metric tons)	133	119	-11%	↗
Global NOx emissions (thousands of metric tons)	114	122	7%	↓
Global VOC emissions (thousands of metric tons)	427	469	10%	↓
Number of environmental, health and safety fines and settlements	469	577	23%	↓
Total GHG emissions (millions of metric tons of CO2 equivalent)	60.7	59.7 [61.5]	-2%	→
GHG emissions from flaring and venting (millions of metric tons of CO2 equivalent)	14.9	14.8	-1%	→
Total energy use (trillions of Btu)	873	853	-2%	→
Energy efficiency (Chevron Energy Index)	76	76	0%	→

- ↗ Area of improvement
- ↓ Area of decline
- → Unchanged or no significant improvement or decline
- NOx (nitrogen oxides)
- SOx (sulfur oxides)
- VOCs (volatile organic compounds)

## ***B. Local communities***

Chevron's community engagement initiatives target three areas: basic human needs, education and career training, and support for local small and medium-size businesses, which includes access to credit. These initiatives were executed in partnership with local and national governments, communities, nongovernmental organizations and multilateral institutions.

In Bangladesh, Chevron's community engagement activities were found to be quite extensive, as they engaged with local communities in social and development processes (as explained in later sections).

## ***C. Environmental performance***

The environmental performance of Chevron is summarized in this section and divided into the main priority areas of climate change, renewable energy and environmental management.

### **i) Climate Change**

The use of fossil fuels to meet the world's energy needs is a contributor to an increase in greenhouse gases (GHGs) - mainly CO<sub>2</sub> and methane - in the earth's atmosphere. There is a widespread view that this increase is leading to climate change, with adverse effects on the environment. Chevron has taken early action to create a comprehensive plan, known as the Fourfold Plan of Action on Climate Change, is now in its sixth year of implementation. This Plan reflects a balanced approach to addressing climate change through short and long-term measures. Chevron is:

- Reducing emissions of GHGs and increasing energy efficiency.
- Investing in research, development and improved technology.
- Pursuing business opportunities in promising, innovative energy technologies.
- Supporting flexible and economically sound policies and mechanisms that protect the environment.

In alignment with the Fourfold Plan of Action on Climate Change, they have also adopted the following principles that are essential to ensure flexible and economically sound policies in light of uncertainties that exist:

- **Global Engagement:** The reduction of greenhouse gas emissions must be shared equitably by the top emitting countries of the world
- **Energy Security:** Climate policy must recognize the role that critical energy sources play to ensure security of supply and economic growth.
- **Maximize Conservation:** Energy efficiency and conservation are the most immediate and cost-effective sources of new energy, with no GHG emissions. Government programs to promote energy efficiency and conservation must continue and should be enhanced.

- **Measured and Flexible Approach:** GHG reduction objectives must avoid a disruptive economic impact and allow for realistic turnover in capital and a phase in of new, low-carbon technologies.
- **Broad, Equitable Treatment:** Broad and equitable treatment of all sectors of the economy is necessary to ensure no sector or company is disproportionately burdened.
- **Enable Technology:** Government support and partnerships with the private sector for pre-competitive research and development in carbon mitigation and clean energy technologies must continue at an accelerated pace.
- **Transparency:** The costs, risks, trade-offs and uncertainties associated with such climate policies must be openly communicated.

Guided by the 7 Principles for Addressing Climate Change (as above, published in 2007), Chevron is working internationally and at the U.S. federal and state levels to build consensus on climate change policy.

## **ii) Renewable Energy**

Global energy demand is expected to increase by 50 percent by 2030. While conventional fossil fuels are expected to continue to be a primary source of energy for decades, changing market dynamics and higher energy prices are accelerating the pace and scale at which renewable energy is becoming a part of mainstream energy supplies. Chevron's mandates include continuous development of this emerging energy source as a clean and sustainable option for the future.

Chevron has made a long-term commitment to improved energy efficiency in their day-to-day operations, which will diminish its own carbon emissions. They also are delivering energy efficiency and renewable energy solutions to external clients through their subsidiary Chevron Energy Solutions.

## **iii) Environmental Management**

Chevron is committed to protecting the environment by minimizing and mitigating environmental impact throughout the life cycle of their operations. Doing so is one of their business objectives and reflects the vision, values and business priorities.

Chevron is also accounting for 'carbon costs' in new project evaluations i.e. all new capital projects and development initiatives must go through a rigorous decision making process to identify potential risks and benefits and Chevron will incorporate the cost of carbon emissions into this analysis. During 2007, Chevron introduced additional tools to forecast carbon costs in the evaluation process.

Chevron is also investing in Research, Development and Technology, by supporting academic and government research programs to explore climate change policies and technologies, including carbon sequestration.

The Operational Excellence Management System (OEMS) is the framework for achieving world-class environmental performance. Lloyd's Register Quality Assurance has attested that the requirements of OEMS are in alignment with, and in some respects exceed, the requirements of ISO 14001 and OHSAS 18001, the leading global standards for excellence in environmental management and health and safety management, respectively.

#### ***D. Communication on CSR policy and achievements***

The following section highlights some of Chevron's CSR achievements:

- Chevron is a leading producer of renewable energy in the oil and gas industry and one of the largest producers of geothermal energy in the world. Chevron has currently installed capacity to produce 1,156 megawatts of geothermal energy. As markets and regulatory requirements continue to evolve, Chevron plans to build its existing portfolio of renewable energy with a focus on transportation and power generation. Chevron has invested more than \$2 billion in renewable and alternative energy and in energy efficiency services since 2002 and expects to invest more than \$2.5 billion from 2007 through 2009 in these same areas.
- In 2006, Chevron formed strategic alliances with government, academic and other institutions to focus on emerging technologies, demonstration projects and application of proven technologies. They also announced several new joint initiatives to develop environmentally responsible and commercially viable technologies and processes to recover crude oil and natural gas from western U.S. oil shale sources, an alternative source of energy.
- In 2006, Chevron continued to support the rebuilding efforts of communities affected by natural disasters in South Asia, Pakistan and the U.S. Gulf Coast. They also continued efforts to promote economic development in Nigeria's Niger Delta region and their relocation assistance to families from Sarykamys, Kazakhstan.
- Since 1992, Chevron has increased their energy efficiency in global operations by 27% and lowered energy costs by approximately \$2 billion.
- Chevron committed \$10 million over three years to help rebuild the devastated regions of South Asia after the 2004 tsunami. In consultation with the local business units, government and potential partners, a comprehensive needs assessment was conducted in Indonesia to focus efforts on building institutional and human capacity. Some examples of the recovery contributions included short-term vocational training for young people, partnering with the government and USAID to build a new polytechnic school and establishing five local financial institutions and providing 500 loans in targeted areas.
- Chevron is taking steps to learn more about how to design and operate hydrogen fuel systems. Through public-private collaborations, hydrogen demonstration stations and

real-world applications, they are trying to provide valuable insight into the opportunities and challenges of hydrogen as a viable fuel source.

- Chevron is the world's largest producer of geothermal energy, a renewable resource that generates reliable power while producing virtually no greenhouse gas emissions. Since 2007, they are producing 110 megawatts of energy in West Java and supplying 7% of the national demand in Luzon, Philippines' largest island.
- Chevron also operates Chevron Energy Solutions (CES), a subsidiary dedicated to achieving energy cost-savings on behalf of its customers. Since 2000, the subsidiary has developed more than 800 projects involving energy efficiency or renewable power for education, government and business customers. CES works with public institutions and businesses to develop projects that increase energy efficiency, reduce operating costs and benefit the environment. A growing number of these projects generate electricity from solar, biomass and other emerging technologies.

### **III. ASSESSMENT OF COMMITMENT TO CSR**

Social responsibility is the foundation of Chevron's business practice, and one of their most cherished values. In all its operations, Chevron strives to improve the lives of people wherever they work. Chevron's community engagement initiatives strive to contribute to economic growth and the well-being of the communities and over the past several years, Chevron focused on building human and institutional capacity. In 2007, they invested approximately \$119 million in community engagement initiatives in the United States and around the world, an increase of nearly \$30 million over 2006.

Partnerships are at the heart of Chevron's community engagement initiatives, as they are essential to creating sustainable programs that build local capabilities. Chevron collaborates with strategic partners to plan, implement, monitor and evaluate their community engagement projects, including local and national governments, communities, nongovernmental organizations (NGOs), development and donor agencies, and multilateral institutions. Through their partnerships, Chevron leverages its own and partners' expertise, skills, technical knowledge and financial resources.

In 2007, more than 100 Chevron employees from more than 15 countries took part in social impact assessment and stakeholder engagement training sessions; these training sessions were part of the three-year rollout of their Environmental, Social and Health Impact Assessment process for new capital projects. In addition, Chevron introduced a new community engagement tool kit, which provides their community engagement staff with guidance in designing, implementing and assessing community engagement programs for all stages of a project's life cycle.

In Bangladesh, Chevron has been active in community development for several years through a wide variety of activities and programs that focus primarily on education, health care and social welfare. Being 'the best partner to people wherever we work' is one of Chevron's core visions. This involves supporting local communities by sponsoring educational, health care and social welfare projects. Chevron is also working to equip the neighbours with the necessary skills to enhance their standard of living and preserve their culture and traditions for future generations.

To support this spirit of giving, Chevron started an employee giving and volunteer program in 2008 that will provide up to \$20 million annually for U.S. non-profit organizations. Chevron has invested more than US \$1 million in the community development projects in

Bangladesh. Chevron directly carries out most of these projects and some are carried out in cooperation with leading NGOs in Bangladesh. Employees also take key roles in establishing the company's values in community development by regularly participating in projects such as Habitat for Humanity House Building Program, Tree Plantation and Blood Donation.

Chevron's vision is to work in partnership with the Government of Bangladesh and Petrobangla, the state-owned oil and Gas Company, to develop the country's energy resources in a safe, environmentally responsible and efficient manner for the benefit of the people of Bangladesh.

As the concept of caring for the environment is well integrated into Chevron's business ethics, the Tree Plantation program has been a major focus on its CSR portfolio. And among the annual plantation programs, the rejuvenation drive in a number of denuded hillocks of the Lawachhara Reserve Forest, which is next to the Moulavi Bazar gas field, has been a major challenge. Here Chevron's aim has been and remains to offset the adverse affect of the unbridled felling over the last few decades.

Under this program which started from 2006, a total of 18,000 thousand saplings were planted in 22 acres of the Lawachhara forest area in the first phase. Regular care has ensured high survival rates. A survey, carried out to evaluate the condition five months after the saplings were planted, revealed that nearly 90 percent of the planted saplings survived. Thanks to the constant monitoring by Chevron employed planters, the saplings all show a very satisfactory growth rate.

At the end of the second phase, following the 2007 plantation campaign, which saw the planting of some 25,000 saplings, the number of trees planted in the forest stand at over 45,000.

Since the aim of this ongoing plantation campaign is rejuvenation of the depleted forest areas, only indigenous variety of trees were planted keeping in mind the existing bio-diversity of the area. Ensuring sustenance to animals that inhabit the forest was one of the major considerations of the drive.

Under the same program, more than 100,000 trees have been planted in and around the gas field areas of Chevron Bangladesh in the greater Sylhet region, of which some 40,000 were planted in 2007.

### ***Chevron's CSR Activities in Bangladesh in Brief***

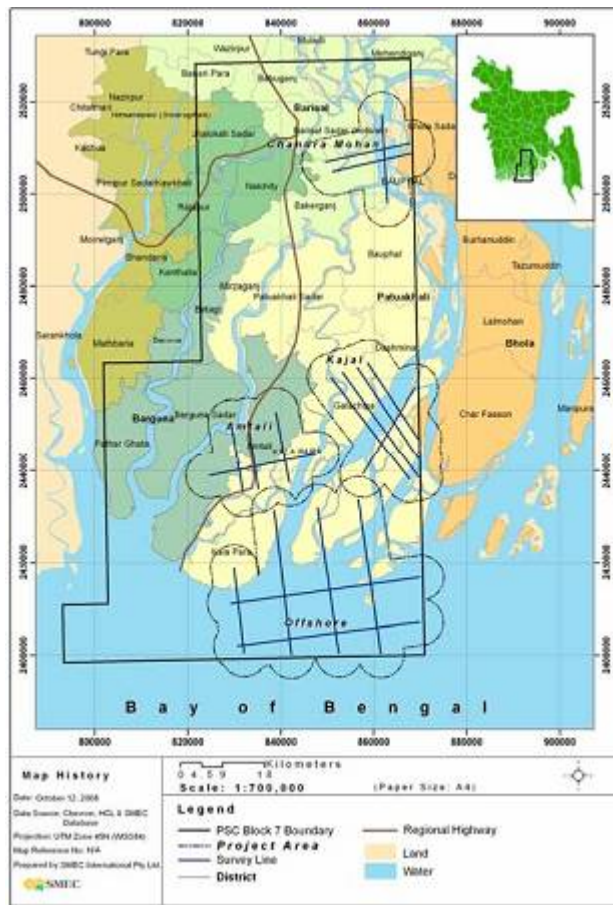
- Responding overwhelmingly to the serious flooding in Bangladesh, Chevron Bangladesh employees raised over \$43, 000, which the company matched with a one to three ratio. Employees also volunteered to distribute supplies of dry food and medicine packages in affected areas.

- Chevron immediately responded to cyclone SIDR and a US\$ 100, 000 donation was made by Chevron Corporation. Employees of Chevron Bangladesh raised over US\$ 38, 000 and this was matched three-fold by the company and distributed as relief amongst the victims.
- Chevron partnered with Habitat for Humanity and provided affordable homes for people throughout the country. Since 1999, over 1000 houses have been built across Bangladesh.
- Chevron established two Smiling Sun clinics for the communities living near Bibiyana and Moulavi Bazar gas fields. The clinics will provide services to the people living in the two unions near the Bibiyana gas field, Inatganj and Dighalbag union of Nabiganj upazila under Habiganj district. The Chevron funded Smiling Sun Clinics are part of the wide network of 318 permanent and 8, 212 satellite clinics run all over Bangladesh under a USAID supported program.
- Implementing a Livelihood Program for the vulnerable families living near the Bibiyana gas field serving some 1,200 beneficiaries is another area of Chevron's CSR activities. Chevron Bangladesh has been implementing several social development projects in partnership with communities living near areas of its operations with a view to providing assistance in healthcare, education and livelihood. The Alternative Livelihood Program (ALP) aims to provide support to underprivileged families of the locality to enhance their job skills and raise their household incomes. Since September 2006, training on job skills, input to set up agro and non-agro based farms and creating market linkages have benefited 307 men and 224 women.
- Chevron supported schools in areas near the gas fields through scholarship and other programs to improve teaching standard as well as amenities around the sites.
- Chevron has partnered with BRAC, one of the largest NGOs of the world, and established three community libraries to provide support to BRAC's Rural IT Program in 11 libraries.
- Implementing a Road Safety Awareness programme was another notable initiative of Chevron Bangladesh. Chevron's road safety program for the community living around six-kilometre road that leads to the Bibiyana field from Dhaka-Sylhet highway aims to spread the safety culture beyond its workplaces. This was launched in partnership with Jalalabad Rotary Club; the program has held workshops, seminars, awareness programs.
- Chevron planted more than one lakh trees in Greater Sylhet and Dhaka. To contribute to environmental sustainability, Chevron has been carrying their tree plantation programs for a number of years now. Under these programs, over 100, 000 trees have been planted in the greater Sylhet and Dhaka regions of both timber and fruit bearing species.
- In order to support Sylhet Red Crescent Society in their Safe Blood drive throughout Greater Sylhet, Chevron Bangladesh also organizes eye camps in Bibiyana area to increase opportunity of treatment of for underprivileged people. Chevron also helped Sandhani establish a microbiological laboratory in the Dhaka Medical College

Hospital, helped build five new rooms in Sylhet Red Crescent Maternity Hospital, establish a modern Tuberculosis (TB) lab for ICDDR,B, supported polio eradication drive in Bangladesh and disabled rehabilitation centre in Moulavi Bazar.

## IV. UNDERSTANDING CHEVRON'S PROPOSED ACTIVITY

### Project Location



In 2008, Chevron expanded its stake in the production-sharing contract covering Block 7 to 88 percent, including areas lying in the southwest region of Bangladesh. The area under Block - 7 encompasses Barisal, Patuakhali, Jhalakathi and Pirojpur districts. The area is huge spanning more than 460 kilometres. This 2-D seismic survey would cover both onshore and offshore areas up to 20 kilometres of the Bay of Bengal. Transect lines accordingly cover agricultural cropland; some mud flats where some mangrove species and some water logged plant species are available and migratory birds are important indicator; and portions is the coastal area where marine species like dolphins, turtles and hilsha fish are of importance.

### Need for the Project

In order to assess subsurface conditions in the lease area, Chevron Bangladesh Block Seven, Ltd. (“Chevron”), plans to conduct a two dimensional (2D) seismic acquisition survey (the Project) in 4 selected areas within Production Sharing Contract Block 7 (PSC Block 7) in southern Bangladesh. The Project will be conducted under a Production Sharing Contract (PSC) with the Government of the People's Republic of Bangladesh (GoB), represented by Petrobangla. As the Project is primarily a data acquisition exercise, the Project involves little in the way of physical infrastructure and/or physical alteration to the local area. The program is proposed to be a typical man portable seismic survey, employing about 1,000 staff.

The 4 Project areas in eastern and southern PSC Block 7 were identified as potential locations for gas fields from a mid-2005 2D seismic acquisition survey Chevron conducted of the land and river areas, but not of the off-shore marine areas in the Bay of Bengal, within PSC Block 7. The proposed Project will more clearly delineate the geological intricacies of the site. The

Project areas are located within the Greater Barisal Division in the districts of Barisal, Bhola, Barguna and Patuakhali. The northernmost area is approximately 116 km south of Dhaka, and the southernmost area is approximately 320 km south of Dhaka. They contain one or more environments - land, river, estuarine, and marine. The prospective seismic survey lines range from being on only one to two or more of these environments. Project Area descriptions are presented as follows.

Prospect	Coverage (2D lines)	Zone	District	Upazillas
Chandra Mohan	55.49 km	Land and River	Barisal, Bhola, Patuakhali, Jhalokati	Barisal Sadar, Bakerganj, Mehendiganj, Bhola Sadar, Bauphal, Natchity
Amtali	70.63 km	Land, River, and Estuarine	Borguna, Patuakhali	Amtali, Barguna Sadar, Galachipa, Kalapara
Kajal	142.49 km	Land, River and Estuarine	Patuakhali, Bhola	Dashmina, Galachipa, Char Fasson
Offshore	197.35 km	Land, Shallow Marine and Estuarine	Patuakhali	Kalapara , Galachipa
<b>TOTAL</b>	<b>465.96 km</b>			

*Source: EIA Report of Chevron Bangladesh*

There are five Districts within the 4 Project areas: Barisal, Barguna, Bhola, Jhalokati and Patuakhali. However, the current environment and potential impacts within Jhalokati are not discussed in this report, nor were any field trips or contacts made in Jhalokati. This is because the area of Jhalokati within any Project area is negligible, and there will be no impacts to the people or features in the small portions of the two Jhalokati Unions intersecting the Chandra Mohan Project area (Dapdapia Union and Siddhakati Union in Nalchity Upazila, Jhalokati District). The area of Jhalokati in the Chandra Mohan Project area is about 43 km<sup>2</sup>, and, more importantly, it is slightly less than 5 km away from the closest survey line. This makes it at the very edge of the 5km DoE mandated buffer zone.

### **Project Description**

The project is planned to carry out 2D Seismic Survey of four discrete areas within PSC Block 7. The proposal is based on Chevron's extensive experience with this type of survey and also builds upon lessons learnt during the previous 2D survey of PSC Block 7, which was undertaken in 2005. A 2D survey involves using a controlled noise source to generate acoustic waves, which propagate through the underlying geological strata. These waves are

reflected by the various rock strata and recorded by surface receivers (geophones). Based on the recorded time differences an indication of the geology and gas potential can then be inferred.

The 2D survey will generally be comprised of survey lines extending for up to approximately 40 kilometers. A noise source will be generated at approximately every 50 meters, with receiver geophones located at approximately 25 meter intervals. The geophones are connected to a central recording facility. A grid pattern of survey lines will be established through the four Project areas at spacing of between approximately 2 and 10 kilometers, depending on geological formations determined from the previous 2D survey. The 2D survey will be undertaken over land and water areas. The land survey will require drilling holes to approximately 26 meters below the surface and an explosive charge (shot) used to generate the acoustic wave. Water areas will be surveyed using boat mounted air-guns, which will generate a similar acoustic wave.

As the Project is primarily a data acquisition exercise, the Project involves little in the way of physical infrastructure and/or physical alteration to the local area. There will be no new permanent construction, with the Project only requiring repair and/or temporary use of some existing infrastructure in the region. Physical components of this Project will include: Temporary camps for Project staff; Installation of temporary source point markers; Installation of explosive charges underground (shot holes); Installation of semi-permanent geodetic benchmarks; and Installation of temporary receiver lines. This Project does not contain any provision for the installation, commissioning, repair, or upgrade of any gas extraction infrastructure. No new gas extraction drilling will be initiated as part of this Project. The 2D survey will be undertaken during the dry season, between December 2008 and June 2009.

## **V. MEDIA AND STAKEHOLDER ANALYSIS**

Regarding the Block 7, Chevron had commissioned Snowy Mountain Environmental Consultants (SMEC) to conduct an extensive Environmental Impact Assessment (EIA), to assess the feasibility of undertaking a 2D seismic survey in that block.

During the EIA preparation, stakeholders and local people, civil society representatives, Forest Department, Department of Environment, policy makers and planners were all extensively involved in reaching a consensus. A series of consultations and meetings were held, including the media and journalists. Speed Trust, a stakeholder consultation expert group, has been engaged by Chevron to facilitate consultation with different stakeholders through out the project period. Speed Trust will ensure all public sentiments are captured, communicated to Chevron and necessary steps are taken to solve the issues.

### ***A. General Internet Queries***

These concerns were centred on the fact that seismic lines would fall across the ecologically sensitive areas of Barisal, Patuakhali, Jhalakathi and Pirojpur districts.

Chevron Bangladesh will be using latest survey techniques that leave no significant impact on the environment. The vibrations will move downwards and not result in loud noises and disturbances to the surface. Environmental specialists and Environmental Management Plan (EMP) results depict that Chevron will comply with legal and environmental standards and the company has also prepared a detailed mitigation plan to offset the impacts on air quality, water, soil, noise and vibration, biodiversity, as well as management of waste, hazardous waste and potential disasters.

The Environmental Clearance Certificate issued by the Department of Environment (DoE) on 24th February 2008 reaffirms the fact that Chevron's activities will comply with the Environment Conservation Rules (ECR) 1997 and The Noise Pollution (Control) Act, 2006. Further to that the World Bank Environment, Health and safety Guidelines will be adhered to for additional safety and security.

### ***B. Queries to watchdog, sustainable development, and NGO websites***

No significant posting has been found yet.

## **VI. POTENTIAL ENHANCEMENT OF IUCN MISSION OR PROGRAMME**

IUCN Bangladesh forged a partnership with Chevron in 2008, in the interest of its state member the Government of Bangladesh, to monitor and advise them on biodiversity sensitivity in their operational areas (Block 13 in Lawachara Forest). The successful completion of this project has now led to further engagements between the two parties; Chevron has now approached IUCN B to provide biodiversity related knowledge and technical know-how in their new intervention area, namely Block 7 (encompassing Barisal, Patuakhali, Jhalokathi and Pirojpur Districts). This area hosts a number of important indicator species such as migratory birds, dolphins, turtles, hilsa fish as well as mangrove plants.

IUCN B's role in this assignment will be manifold: they will be on-board the seismic survey vessels to spot and record observations of sensitive wildlife; develop fact sheets on turtle, dolphin and bird sightings; train and sensitize Chevron staff on the significance of marine biodiversity and last but not the least facilitate dialogues using its convening power and position as the catalyst between Government, NGOs, national stakeholders. The activities of IUCN B include monitoring, creation of database, capacity building, etc. but are not limited to those only. In essence, this is a fruitful partnership aimed at attaining IUCN Business and Biodiversity Programme (BBP) Strategy's (February 2009) goal of 'A more accountable private sector which contributes to sustainable development including conservation and social equity'.

IUCN will continue to be a 'neutral facilitator' and demonstrate its conveying power to bring scientists, government and private sector under a common platform. Engagement with Chevron in Bangladesh is expected to strengthen IUCN Bangladesh's existing capacity in being a 'technical advisor' with respect to 'sharing knowledge' of and critically shape opinion about how biodiversity can be conserved. This engagement with Chevron is based on the principles of relevancy to IUCN's vision and mission along with promotion of IUCN's mandates in the private sector. It is a strategic partnership, where there are potential future opportunities to be harnessed.

The 3-month engagement of IUCN Bangladesh with Chevron will involve continuous monitoring by biodiversity experts from IUCN – pre, during and post stages of the seismic surveys to be conducted by Chevron in Block 7 in southern Bangladesh. For the purpose of

environmental monitoring and reporting, a team has been formed comprising ecologist, facilitator for stakeholder engagement, marine biodiversity expert, dolphin expert, turtle expert, ornithologist, field supervisor, etc. IUCN Bangladesh team will maintain its independence and report to Chevron on daily basis and the report can be made public. This monitoring team will work for the entire project period, along with monitoring personnel from Chevron Bangladesh Block – 7.

## **VII. METHODOLOGY**

Based on the scope of work, the methodology for activities can be grouped into following blocks:

- A. Knowledge/information development
- B. Active monitoring and support to Chevron team
- C. Dialogue facilitation

Details of the methodology and approaches are as given below:

### **A. Knowledge/information development**

This block of activities will generate knowledge/information that will support the monitoring activities and appraise both Chevron and IUCN team on the important biodiversity issues.

A1. Develop guidebook/fact sheet on turtle, dolphin and endangered migratory and resident birds and train Chevron crew

A2. Develop a baseline on normal frequency on deliberate turtle deaths/killing based on secondary information and Focus Group Discussion (FGD) with fishermen

A3. Conduct survey on migratory and endangered birds

- Engage a bird expert to train the field team to actively monitor birds in block-7 area.
- Train the field team to conduct the survey
- Develop a data recording format and record data on daily basis

### **B. Active monitoring and support to Chevron team**

This set of activities envisaged to provide active monitoring to Chevron team so that they can take mitigation measures by avoiding, delaying or shutting down the use of air guns if the protected species (turtle, dolphin and birds) are sighted nearby. Primary data on dolphin, turtle and migratory birds will also be developed as daily observation log.

B1. Engage a team of Marine Wildlife Observers (MWO) (3 in numbers) to be on board of Chevron's survey vessel. The WMO will monitor and keep record of mostly

- Dolphin
- Turtle

- Migratory birds and endangered birds

B2. Train the MWO (3-6 in numbers) to conduct the monitoring in acceptable quality and on agreed format

- Develop a format for data recording
- Train the MWO in data format and record keeping

B3. Conduct daily monitoring on board on Chevron's survey vessel

B4. Input data in database and produce daily report for Chevron team

### **C. Dialogue facilitation**

IUCN Bangladesh will assist Chevron to engage with environmental NGO and other national stakeholders. Role of IUCN Bangladesh will be limited to provide its convening capacity and facilitation these dialogues.

## VIII. RISK ANALYSIS MATRIX

IUCN will be at liberty, equipped with adequate resources to carry out monitoring activities in Block 7. The role of IUCN will not be ‘policing’ Chevron’s operations; rather to provide sound scientific support, capacity building and advice.

Further to this, the following table gives an overview of the risks and management mechanisms that IUCN is adopting for this process:

Transparency	IUCN is maintaining its transparency in dealing with this case. It has been discussed with its members regarding the operational modalities. A further detail discussion will be held soon.
Inclusiveness	An interdisciplinary team of experts has been formed, in order to capture all the possible aspects.
Communication	IUCN will follow ‘public disclosure’ principles and ensure free flow of information in this case. Information will be hosted in the website to ensure public access to information.
Independent Opinion	IUCN has the freedom to express their opinion in this project and will validate information through its panel of experts, including marine experts, turtle and dolphin experts, ornithologists etc.

Potential impacts and mitigation measures have been identified with Chevron and stakeholders. Safe practice depends on knowledge, risk assessment and adherence to regulations. Because the three are closely linked, the requirement for scientific knowledge cannot be divorced from the needs for both risk assessment and regulations. The expert panel’s recommendations are premised on the following assumptions:

- the proponent complies with the requirement of Bangladesh’s country regulatory regime put in place for the 2D seismic operations in the proposed area
- the proponent as stated in the EMP is fully committed to protect the natural biodiversity of the operation area and would use current best practices in line with the rest of the world.
- a third party, multidisciplinary monitoring team will oversee the project activities to monitor the impacts of project activity on wildlife and nature.