



# ROYAL DUTCH SHELL

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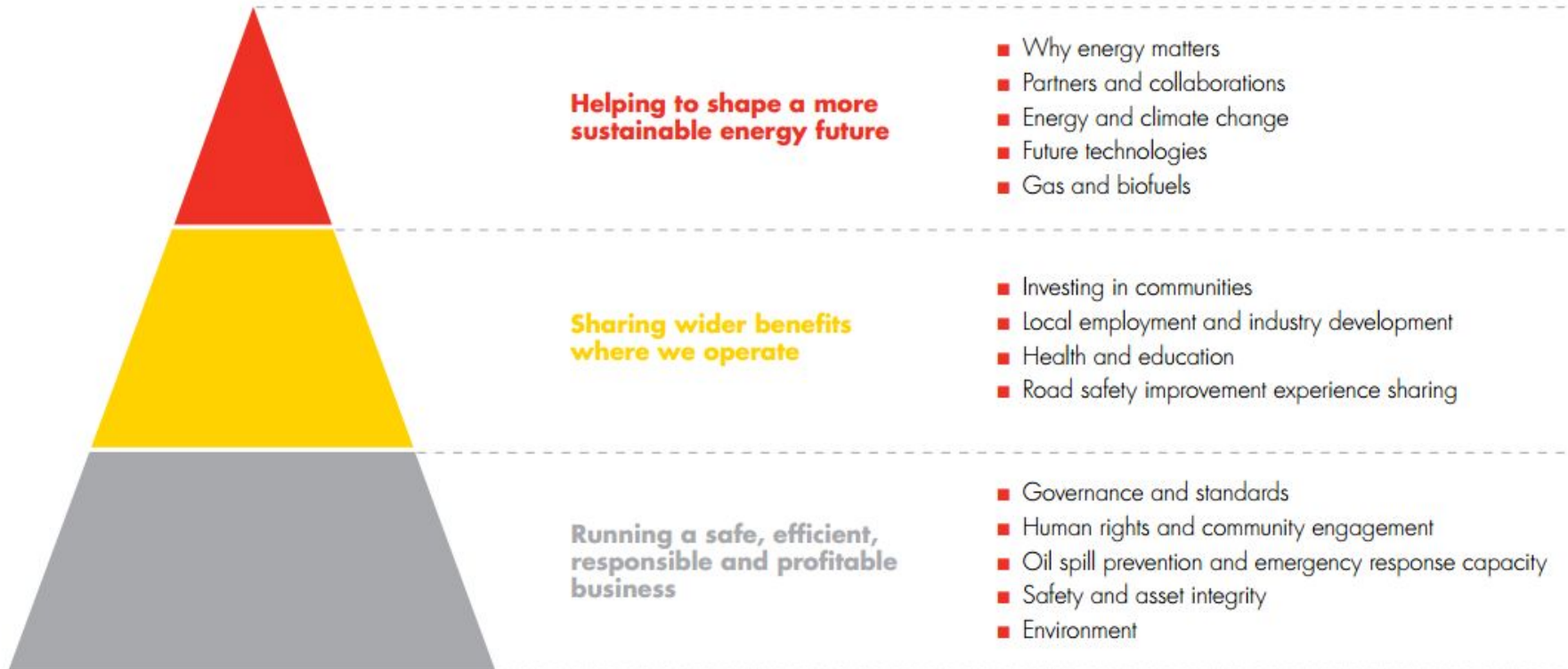
# BUSINESS STRATEGY

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## INTEGRATING SUSTAINABILITY

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### REPORT AREAS AND EXAMPLES



- ❖ They carefully consider the potential environmental impact of our activities and how local communities might be affected, both before projects begin and during operations.
- ❖ Their environmental standards focus on key areas such as managing emissions, reducing our energy use, flaring less gas produced with oil, preventing spills and leaks, minimizing our use of fresh water and conserving biodiversity.



- ❖ They work to manage and minimize environmental impact from our operations.
- ❖ They use energy-efficiency technologies and processes to reduce our carbon dioxide (CO<sub>2</sub>) emissions and are also working to advance carbon capture and storage (CCS) technologies which could reduce cumulative global CO<sub>2</sub> emissions by around 15% by 2050.

# OUR STANDARDS



- ❖ Our approach is to comply with environmental regulation, to continually improve our performance in line with best practice, and to prepare for future risks and opportunities.
- ❖ We draw on external standards and guidelines such as those developed by the World Bank and International Finance Corporation to inform our approach.
- ❖ Our own strict environmental standards are designed to meet or exceed regulatory requirements – they are detailed in our HSSE & SP Control Framework. Shell standards are applied to joint ventures that we control.
- ❖ We also encourage our joint-venture partners to apply materially equivalent standards for those we do not control.



- ❖ Detailed assessments of the potential environmental, social and health impacts are carried out when we plan new projects.
- ❖ These assessments help us to manage and reduce impacts on the environment or on communities during construction, operation and, when relevant, at the decommissioning stage of projects.
- ❖ The results are made publicly available where we are legally permitted to do so.
- ❖ Our Control Framework requires all of our major installations including refineries, chemical plants, gas plants and permanently staffed oil and gas production facilities to be certified to ISO 14001.



# Our environmental performance is managed in the following ways:

- ❖ Air quality
- ❖ Sensitive environments
- ❖ Waste management



# AIR QUALITY



- ❖ Emissions of nitrogen oxides, sulphur dioxide and volatile organic compounds from the production and processing of fossil fuels can affect air quality.
- ❖ We work to reduce air pollution from our operations.
- ❖ We also help customers, including shipping and industrial customers, to reduce their impact on air quality by using our products.



# SENSITIVE ENVIRONMENTS

- ❖ Our projects can affect local biodiversity and dependent communities.

- ❖ When we operate in critical habitats – that is, those that are rich in biodiversity and important to the conservation of endangered species – we apply stringent mitigation standards. This includes reviewing how local people may depend on biodiversity and ecosystems for essentials such as fresh water and food for their subsistence.

- ❖ We partner with major conservation organisations – Earthwatch, the International Union for Conservation of Nature (IUCN), The Nature Conservancy and Wetlands International – to help us improve our performance.

- ❖ We also develop biodiversity action plans for major operations in sensitive environments.





# SENSITIVE ENVIRONMENTS

- ❖ Our approach is to identify and minimize any impacts during planning, operations and at decommissioning.
- ❖ We implement measures to restore habitats or ecosystems that are close to our operations. For example, we are working on marshland restoration in Iraq, near our Majnoon operations, with Wetlands International.



# SENSITIVE ENVIRONMENTS



- ❖ The biodiversity of the world's oceans is at risk from overfishing, climate change, pollution from plastics, and other challenges.
- ❖ Protecting this biodiversity will be an increasingly important priority for the world.
- ❖ Shell collaborates with governments, nongovernmental organizations and other experts to identify measures to conserve the marine environment.

# WASTE MANAGEMENT

- ❖ We aim to reduce the amount of waste we generate and reuse or recycle where possible.
- ❖ Our main sources of non-hazardous waste include soil from excavations and drill cuttings (materials removed from the ground during drilling such as rock and soil).
- ❖ Where possible, hazardous waste – such as process water from our chemical plants and refineries – is treated on-site or removed for treatment or safe disposal.
- ❖ The decommissioning of retired platforms and infrastructure is also potentially a major source of waste. Where possible, we recycle part of the platforms once they are brought to shore.



# GREEN INFRASTRUCTURE

- ❖ We are looking into ways to integrate natural systems into the design of our projects.
- ❖ This approach, known as green infrastructure, benefits the environment by creating or improving habitats, while increasing the resilience of our facilities and reducing costs.



- ❖ For example, coastal erosion can be a threat to the stability of pipelines as well as to people's homes and livelihoods. In Louisiana, USA, we are exploring the use of nature-based solutions to stabilize the embankments near our pipeline and to prevent erosion.
- ❖ Over time, these pipeline corridors can create new habitats for water organisms which will also benefit fishing communities.



# WATER

Water scarcity is a growing challenge in many regions and the availability of fresh water is a key global issue.

It is important that Shell and others in the oil and gas industry manage water in a responsible and sustainable manner to protect and preserve this valuable resource.



# Our approach



Our water management approach is based on complying with local and international regulations, on improving our performance and preparing for the future. Across the world, water constraints tend to affect people at the local or regional level. Therefore, the way in which Shell manages our use of fresh water is often tailored to the local situation.

# WATER-ENERGY-FOOD



## POTENTIAL FUTURE WATER FOOTPRINT

High:



Resources  
Plays

Medium:



Future  
Opportunities



Up stream  
Engine

Low:



Deep Water



Downstream  
Engine



Integrated  
Gas

## GLOBAL SHELL INITIATIVES

- CEO Water Mandate
- World Business Council for Sustainable Development

## OPERATIONAL LEVEL ACTIONS



Groundbirch reclaimed water facility, Canada

# Water use in our operations

- ❖ In water scarce areas near our operations or projects we develop water management plans. These assess the risks of water availability and help us to monitor and reduce our water use.
- ❖ We also work with parties in water scarce areas, such as communities, municipalities and local government, to understand broader issues around water availability and to create appropriate solutions.
- ❖ Over the past two years we have established a global centre of excellence for water at the Shell Technology Centre in Bangalore, India. This enables us to share ideas, innovations and technologies on water issues across Shell.





# COLLABORATION

We work with industry bodies, such as IPIECA, the World Business Council for Sustainable Development and the World Resources Institute and our environmental partners on a number of programs for water recycling, natural infrastructure and water accounting practices. These relationships enable us to improve our current performance and help us prepare for the future.



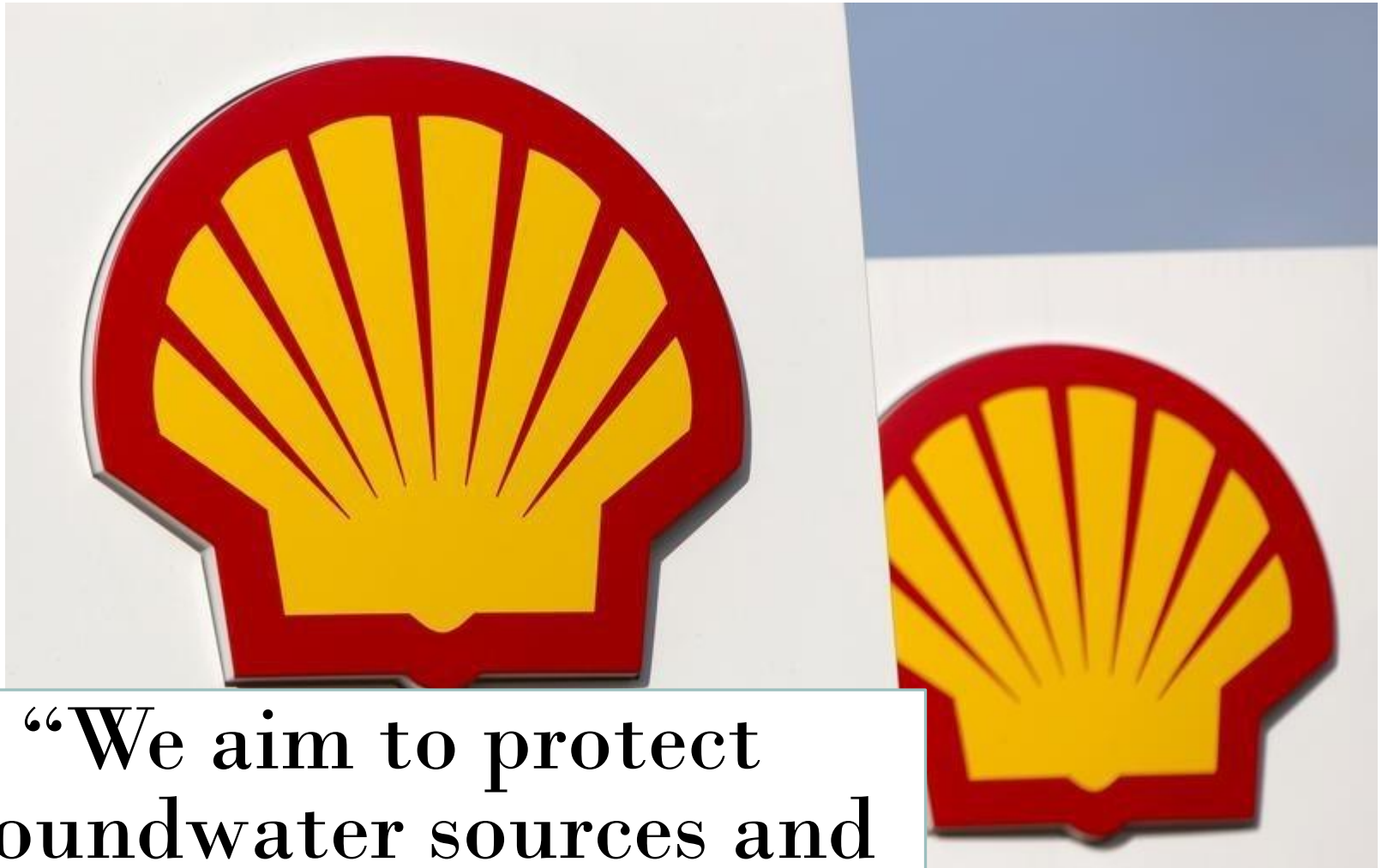
## COLLABORATIONS OVERVIEW

	Environmental sustainability and climate change	Human rights and social responsibility	Safety and technical standards	Technology and innovation	Transparency and governance
American Petroleum Institute (API)	■		■	■	■
Bonsucro	■	■			
Canada's Oil Sands Innovation Alliance (COSIA)	■			■	
Center for Sustainable Shale Development (CSSD)	■				
Danish Institute for Human Rights (DIHR)		■			
Energy Institute (EI)			■	■	
Extractive Industries Transparency Initiative (EITI)					■
Global Alliance for Clean Cookstoves		■			
Global Business Initiative on Human Rights (GBI)		■			
Global Gas Flaring Reduction Partnership (GGFR)	■				
Global Road Safety Partnership (GRSP)			■		
International Association of Oil and Gas Producers (IOGP)	■		■		■
International Emissions Trading Association (IETA)	■				
IPIECA	■	■	■		■
Roundtable for Responsible Soy (RTRS)	■	■			
Roundtable on Sustainable Palm Oil (RSPO)	■	■			
UN Global Compact	■	■			■
UN Sustainable Energy for All (SE4All)	■	■			
World Business Council for Sustainable Development (WBCSD)	■	■	■		■

“For the past 14 years I have been Chief of the West Moberly First Nations in north-eastern British Columbia. In this role, I have been actively involved in speaking about issues of importance to First Nations. This includes the legal duty to consult with First Nations as well as the impacts of the oil and gas industries’ activities on First Nations.

Shell is a valued partner in our region but it is also a part of an industry with which we have a challenging relationship. We are encouraged by Shell’s new approaches to land use planning that it brings to the region.

However, we urge Shell and others in its industry to consider the cumulative impacts of industrial development before they make decisions. Shell must balance economic opportunity against our treaty rights and its impact on the environment; it must consider what is ultimately best for the area and all who



**“We aim to protect groundwater sources and reduce water consumption in our drilling and production activities.”**