

# DE BEERS

GROUP OF COMPANIES

## UN GLOBAL COMPACT - CEO WATER MANDATE COMMUNICATION ON PROGRESS

### **About the De Beers Group of Companies**

De Beers is a member of the Anglo American plc group. Established in 1888, De Beers is the world's leading diamond company with unrivalled expertise in the exploration, mining and marketing of diamonds. Together with its joint venture partners, De Beers employs more than 23,000 people across the diamond pipeline, both directly and as contractors. It is the world's largest diamond producer, by value, with mining operations in Botswana, Canada, Namibia and South Africa. As part of the company's operating philosophy, the people of the De Beers Group of Companies are committed to Living up to Diamonds by making a lasting contribution to the communities in which they live and work, and transforming natural resources into shared national wealth. For further information, visit [www.debeersgroup.com](http://www.debeersgroup.com).

### **De Beers Support for the CEO Water Mandate**

De Beers signed up to the UNGC CEO Water Mandate in November 2009 and participated in the UNGC CEO Water Mandate Working Conferences in 2010 and 2011. This letter comprises our third Communication on Progress, to fulfill the requirements of the UN CEO Water Mandate Transparency Policy to feed back on our policy, standards and actions regarding water stewardship. We also report publically on our water management approach and performance into our annual, award-winning Report to Society, available on the company website, [www.debeersgroup.com](http://www.debeersgroup.com).

While our Canadian mines are located in water-abundant areas, most of our mines are located in semi-arid, water stressed environments in Botswana, Namibia and South Africa. Water, a limited natural resource, is essential for the operation of our mines. It is therefore a priority for us to investigate alternative sources of water and to operate using water resources as efficiently and sustainably as possible to minimise the impact of our water use. We recognise the value of water as a shared resource and the need for sound stewardship of water for the sustainability of our mines and neighbouring communities, downstream users and ecosystems and ecosystem services. We acknowledge the interrelatedness between stewardship of energy, water, biodiversity, waste and the influence that climate change has on these, and in particular on water availability. The challenge lies in

ensuring sustained equitable access to water of an appropriate quality for both our business and local communities. Through dialogue with governments, water users and other Water Mandate endorsers, we are growing our understanding of good water management policies and programmes on the journey toward better water stewardship, both within and beyond our operations.

Our De Beers Group of Companies Water Standard states the following desired outcomes and our performance is aimed at achieving these:

- No water used unless demonstrably required.
- 100% of Mining operations manage their water supply and demand to ensure demonstrable water efficiency and achieve water sustainability.
- 100% of operations follow the hierarchy to avoid, minimise and mitigate pollution on water resources.

Our activities and progress in the areas of commitment under the Water Mandate are provided below:

### **Direct Operations**

Work continued to improve our water management processes across our mining operations in Botswana, Namibia, South Africa and Canada in 2012, and at our supermaterials business, Element Six. A selection of key projects is discussed below.

#### *Botswana*

In 2012, the Debswana Water Management Strategy was updated and each operation began to implement their respective Water Strategies. At Jwaneng Mine, the Water and Energy Forum was restarted. A series of boreholes were also completed at the mine around the fine residue deposits dams and landfills, for the environmental network optimisation study for waste and waste water pollution management.

At Orapa Mine, the conceptual / Pre-Feasibility study for the Orapa Hypersaline Aquifer that was discovered in 2010 commenced. The project will analyse the technical and economic feasibility of desalinating ultra-saline water for use at the Orapa Plants, thus freeing up fresh water for other users. Potential new water projects planned for 2013, include a saline groundwater investigation for Jwaneng Mine and also a storm water collection dam for Jwaneng Township. Both of these projects are unconventional.

#### *Namibia*

Our marine operations aim to manage water consumption, and generate freshwater onboard the vessels, to reduce reliance on scarce water resources from the town of Port Nolloth. In 2012, the fleet improved the production of desalinated water on board the vessels, resulting in significant reductions in usage of fresh water imported from Port Nolloth. For periods when the vessels were in port for major

upgrades, flow meters were installed at water points. Tracking of usage has led to a greater understanding of water use and conservation.

At our land operations in Namibia, about 90% of all water used in the diamond extraction process is derived from the sea. The remainder is abstracted from the Orange River. At our Daberas Mine in 2012, 35% of the freshwater used was re-cycled, reclaimed primarily by recirculation from fine residue dams, thickeners and subterranean water from zones where mining has been completed. Hydrogeological studies were also conducted to describe baseline conditions, and evaluate the potential impacts on ground and surface water quantity and quality in the area. This information was used to inform placement of infrastructure (e.g. fine tailings disposal paddocks, exploration treatment plant location, water abstraction point etc.) for the new Sendelingsdrif Mine, which is near the trans-boundary Orange River system. With the commissioning of the Sendelingsdrif Mine, recycling options are being investigated to drastically reduce the raw water consumption from the Orange River. This investigation has indicated that one of the best options is to reduce withdrawal of water from the river from 283m<sup>3</sup>/hr to 48m<sup>3</sup>/hr.

#### *South Africa*

Developed and installed a number of years ago, a system of paste and thickened fine processed kimberlite at Kimberley Mines continues to play a key role in considerably reducing water consumption. In addition, the installation of a Vibratory Shear Enhanced Process (VSEP) has allowed the Kimberley Microdiamond Laboratory to meet some critical environmental objectives with regards to reducing water consumption in a water scarce region as well as reducing the volume of liquid effluent generated by re-using/recycling our process water before final disposal.

#### *Canada*

In Canada, Snap Lake Mine continues to encounter higher than expected volumes of water entering the underground workings and this has led to development of an adaptive management response plan. Water entering the mine originates primarily from the lake, water trapped in the host rock and groundwater. Water is collected and pumped from underground to the surface, and treated and tested for compliance with the mine's Water Licence requirements before being released into Snap Lake. Elements of the mine's adaptive management response include on-going biological and water chemistry monitoring, annual updates to the models used to forecast the quantity and quality of water entering the lake, site-specific aquatics effects studies, and engineering feasibility studies to evaluate options for improving water control and treatment infrastructure. The effects from the mine on the surrounding aquatic ecosystem are closely regulated by a Land and Water Board and monitored by an independent monitoring agency with representation from local Aboriginal communities.

## **Element Six**

Over the last two years, at Element Six we have developed a new generation of advanced electrochemical reactors called DIAMOX. These reactors incorporate a remarkable electrode material called Boron-Doped Diamond (BDD) that can break down almost all dissolved organic pollutants in industrial wastewaters and completely mineralise organic carbon to carbon dioxide. Even toxic and hazardous substances can be destroyed. The company has substantial knowledge in the field of Advanced Electrochemical Oxidation Processes (AEOP) and, in particular, diamond electrode technologies. This technology has widespread application in the water sector, from disinfection of micro-organisms to the treatment of hazardous substances found in many industrial effluents and leachates.

Looking ahead, in 2013-2014, requirements from our major shareholder, Anglo American will be implemented in the next couple of years to further strengthen our approach. This includes defining targets for reductions in water use by implementing and tracking specific projects at sites, revisiting our Water Management Plans and undergoing audits.

## **Supply chain and watershed management**

At our Venetia Mine in South Africa we are entering the latter part of a three-year catchment management project in the Limpopo river basin in collaboration with the Worldwide Fund for Nature (WWF-South Africa). Straddling four southern African countries, the Limpopo basin provides water for more than 14 million people. Water management challenges, therefore, pose a major risk for all stakeholders in the area, including businesses. In 2012, as part of this collaboration, WWF appointed a Water Facilitator who liaised with all stakeholders in the region on catchment and watershed management. We are planning a collaborative and co-funded project with the CEO Water Mandate, which will gather accurate basin-scale data for the region in 2013

In Namibia, all water infrastructure for the town of Oranjemund is maintained by Namdeb and therefore water is supplied to residents free of any cost. This situation is expected to change with the recent proclamation of Oranjemund town. Namdeb supported the newly elected Oranjemund town councillors to attend a sustainability leadership course through Cambridge University's Programme for Sustainability Leadership. The main objective was to advocate for sustainability thinking and to assist the town councillors with developing a town based on sustainability principles. The training included water resources management considerations. Namdeb is in the process of assisting the town council with the installation of water and electricity meters as a first stage in the implementation of a billing system. Water saving measures are implemented through awareness campaigns, and the recycle and reuse of process in-circuit water.

### **Collective Action**

In Namibia, Namdeb continues to take part in the regional, national and international initiatives related to the overall management of the Orange River-Senqu watershed. Through these initiatives, Namdeb aims to secure adequate water supply and ensure the health of the Orange River is maintained.. Namdeb remains an active member of the Orange River Mouth Interim Management Committee (ORMIMC). Stakeholder participation is seen as one of the mandates of Orange-Senqu River Commission (ORASECOM) and regarded as critical for equitable sharing of water resources.

Namdeb has actively been involved in the drafting of the Orange River Mouth Management Plan, a project of the Benguela Current Commission. This project is facilitated by the UNDP and funded through the Global Environmental Facility. The Orange River Mouth Management Plan aims to establish a Transboundary Ramsar site between Namibia and South Africa. It addresses institutional, ecological and socio-economic management issues and challenges that exist within the Orange River Mouth Ramsar site – a wetland of international importance.

### **Public Policy**

We participate in development of national water policies in our countries of operations. In Namibia in 2012, Namdeb was involved in the finalization of the water regulations and guidelines for the Water Resources Management Act and had input into the National Climate Change Policy and Action Plan. In Botswana in 2012, Debswana provided input to the new Botswana National Water Policy and is represented on the technical steering committee for the development of the new Botswana Integrated Water Resources Plan which is to be launched in 2013. Debswana has held presentations to the stakeholders of the Botswana Integrated Water Resources Plan as part of integrated water resources training sponsored by the Swedish Water Institute. Debswana continues to work with Botswana Bureau of Standards on the development of new water standards for Botswana.

### **Community Engagement**

Annually, various mines drive and support employees, local communities and schools to participate in the World Wetlands and World Water day activities. In Botswana, at t Jwaneng Mine the initial phase of a review of compensation procedure for private borehole owners was undertaken. This involved briefings with communities, the Land Board, the Department of Water Affairs and other government stakeholders.

### **Statement of continued support**

Water is vital to our business. Driving activities and outcomes related to the six key areas of commitment under the Water Mandate, and the overlaps between these, assists us in our efforts to improve our own performance, and to work with others on stewardship of this essential resource. We reaffirm De Beers continued support for the CEO Water Mandate and renew the company's commitment to the initiative and its six elements and hence to advancing practices in sustainable water management. Further information on our water management practices can be found in our Report to Society and on our website, [www.debeersgroup.com](http://www.debeersgroup.com).

A handwritten signature in black ink, appearing to read 'P. Mellier', is written above a long, thin horizontal line that extends to the right.

**Philippe Mellier**  
**Chief Executive Officer**

31 May 2013