unlocking opportunities: the ceo water mandate approach
(16 august 2009 – public session)

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sasol
south africa
**What is Sasol?**

- Sasol is a global integrated energy and chemicals company with a large South African footprint.

- Sasol converts synthesis gas to liquid hydrocarbons:
  \[
  \text{CO} + 2\text{H}_2 \rightarrow \text{-CH}_2\text{-} + \text{H}_2\text{O}
  \]

- Spans mining, oil and gas, synthetic fuels, oil refining, and six chemical industries.
sasol’s need for water

- used primarily to regulate temperatures and generate steam
  - required at a high assurance of supply

- our demand from the vaal river water supply system is relatively small (4% of yield)
- assuring reliability of supply remains an ongoing challenge
- good rains, dams full but growing concern with imbalances
international rivers shared by south africa

Vaal River Water Management Area

Sasol operations

South Africa

Orange
Inkomati
Maputo
Limpopo
Selected Transfers
## United Nations Global Compact CEO Water Mandate

### Key Focus Areas

<table>
<thead>
<tr>
<th>Direct Operations</th>
<th>Process Efficiency Improvements</th>
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<tbody>
<tr>
<td>Supply Chain &amp; Watershed Management</td>
<td>Beyond Fence Line Engagement, Security, and Footprint Reduction</td>
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<td>Collective Action</td>
<td>Influencing Positive Behaviour</td>
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<td>Public Policy</td>
<td>Water for Growth and Development, Changing Legislation</td>
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<td>Community Engagement</td>
<td>Continuous Efforts</td>
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<td>Transparency</td>
<td>Publish Annual Sustainable Development Report (sasol.com)</td>
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The CEO water mandate is seen as particularly useful when engaging in ‘beyond the fence line’ activities.
water savings: direct operations vs. catchment management

Case 1 - Cooling Tower Blowdown Recovery Plant

Case 2 - Pressure Management on Main Water Header to Township

<table>
<thead>
<tr>
<th>Case 1</th>
<th>Case 2</th>
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<tbody>
<tr>
<td>$ 50 mill</td>
<td>capital</td>
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<tr>
<td>18 Mℓ/day</td>
<td>saving</td>
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<tr>
<td>$ 2.00/m³</td>
<td>o &amp; m</td>
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</tbody>
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Savings:
- Case 1: 18 Mℓ/day saving
- Case 2: 28 Mℓ/day

Costs:
- Case 1: $ 0.5 mill capital
- Case 2: $ 0.02/m³
towards collective risk reduction

- moving “outside the factory fence”
- opportunities for positive impacts in water stressed catchments
- potential for public-private partnerships (business, government, donor institutions)
- CEO water mandate approach "outside the factory fence" could reveal greater improvements in water management within the same catchment