AF29 - Cuvette Aquifer

**Geography**
- Total area TBA (km²): 790 000
- No. countries sharing: 3
- Countries sharing: Cameroon, Congo, Democratic Republic of Congo
- Population: 22 000 000
- Climate Zone: Tropical Wet
- Rainfall (mm/yr): 1800

**Hydrogeology**
- Aquifer type: Data not available
- Degree of confinement: Data not available
- Main Lithology: Sedimentary rocks - Sandstones

Map and cross-section are only provided for illustrative purposes. Dimensions are only approximate.
AF29 - Cuvette Aquifer

TWAP Groundwater Indicators from Global Inventory

No data available.

TWAP Groundwater Indicators from WaterGAP model

<table>
<thead>
<tr>
<th>Aquifer</th>
<th>Recharge, incl. irrigation (mm/yr)</th>
<th>Current state (m³/y/capita)</th>
<th>Projection 2030 (% change to current state)</th>
<th>Projection 2050 (% change to current state)</th>
<th>Renewable groundwater per capita</th>
<th>Human dependency on groundwater (%)</th>
<th>Human dependency on groundwater for domestic water supply (%)</th>
<th>Human dependency on groundwater for irrigation (%)</th>
<th>Human dependency on groundwater for industrial water use (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameroon</td>
<td>200</td>
<td>130 000</td>
<td>-41</td>
<td>-60</td>
<td>17</td>
<td>58</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Congo</td>
<td>300</td>
<td>9100</td>
<td>-39</td>
<td>-57</td>
<td>48</td>
<td>58</td>
<td>0</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>400</td>
<td>17 000</td>
<td>-39</td>
<td>-57</td>
<td>55</td>
<td>58</td>
<td>0</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>TBA level</td>
<td>380</td>
<td>15 000</td>
<td>-39</td>
<td>-57</td>
<td>54</td>
<td>58</td>
<td>0</td>
<td>27</td>
<td>27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aquifer</th>
<th>Groundwater depletion (mm/y)</th>
<th>Current state (Persons/km²)</th>
<th>Projection 2030 (% change to current state)</th>
<th>Projection 2050 (% change to current state)</th>
<th>Population density</th>
<th>Groundwater development stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameroon</td>
<td>3</td>
<td>2</td>
<td>50</td>
<td>110</td>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td>Congo</td>
<td>2</td>
<td>33</td>
<td>57</td>
<td>120</td>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>0</td>
<td>23</td>
<td>60</td>
<td>120</td>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td>TBA level</td>
<td>0</td>
<td>25</td>
<td>59</td>
<td>120</td>
<td>&lt;1</td>
<td>0</td>
</tr>
</tbody>
</table>

Key parameters table from Global Inventory

No data available.

Aquifer description

Aquifer geometry
No information was provided on the aquifer geometry.

Hydrogeological aspects
Within the Congo segment, geological formations are mainly sedimentary rocks -sandstones that indicate a good permeability of the aquifer. Data was not available on the aquifer parameters. There is probably no difference in recharge between the years.

Linkages with other water systems
Although recharge is through precipitation over the aquifer area, a major aquifer recharge zone seems to be localized at the Northern Province in Angola (at Lunda North). Major discharge areas are within the Kwango and Wamba Kasai rivers that flow towards the Congo River.
AF29 - Cuvette Aquifer

Environmental aspects
Data was not available on the extent of the aquifer where natural water quality is unfit for human consumption. Furthermore, data was not available on the extent of anthropogenic pollution, and shallow groundwater over the aquifer area.

Socio-economic aspects
Data was not available on the extent of the groundwater abstraction or the fresh water abstraction over the aquifer area. Within the vicinity the TBA that is close to the Northern Province of Angola (at Lunda North) and the area within the Kwango and Wamba Kasai rivers, data from different wells show that borehole productivities range on average between 4 to 7 m³/h.

Legal and Institutional aspects
Data not available on the status of a Transboundary Groundwater Agreement.

Emerging Issues

---

Contributors to Global Inventory

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Country</th>
<th>E-mail</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheikh Becaye Gaye</td>
<td>Université Cheikh Anta Diop</td>
<td>Senegal</td>
<td><a href="mailto:cheikhbecayegaye@gmail.com">cheikhbecayegaye@gmail.com</a></td>
<td>Regional coordinator</td>
</tr>
</tbody>
</table>

Considerations and recommendations

Request:
If you have data or information about this transboundary aquifer that can improve the quality of this information sheet and the underlying database, please contact us via email at info@un-igrac.org. If appropriate, the information will be uploaded to the database of transboundary aquifers and will also be used in new versions of this information sheet.

Colophon

This Transboundary Aquifers information sheet has been produced as part of the Groundwater Component of the GEF Transboundary Water Assessment Programme (GEF TWAP). GEF TWAP is the first truly global comparative assessment of transboundary groundwater, lakes, rivers, large marine ecosystems and the open ocean. More information on TWAP can be found on: www.geftwap.org. The Groundwater component of TWAP carried out a global comparison of 199 transboundary aquifers and the groundwater systems of 41 Small Island Developing States. The data used to compile this transboundary aquifer information sheet has been made available by national and regional experts from countries involved in the TWAP Groundwater project. For aquifers larger than 20 000 km² and which are not overlapping, additional data are available from modelling done by the Goethe University Frankfurt (Germany) as part of TWAP Groundwater. All data were compiled by UNESCO-IHP and the International Groundwater Resources Assessment Centre (IGRAC – UNESCO Category II Institute). Values given in the fact-sheet represent an approximate guide only and should not replace data obtained from recent local assessments. The editors of this information sheet are not responsible for the quality of the data.

For more information on TWAP Groundwater and for more data, please have a look at the TWAP Groundwater Information Management System which is accessible via www.twap.isarm.org or www.un-igrac.org.

References:
- Rainfall: Average rainfall per TBA has been calculated based on the aquifer map and grid data for precipitation. Source precipitation data: Hijmans, R.J., S.E. Cameron, J.L. Parra, P.G. Jones and A. Jarvis, 2005. Very high resolution interpolated...
AF29 - Cuvette Aquifer

- Climate: Climate indicates the major climate zone which occurs in the aquifer area. If more than 1 climate zone is present the zone with the largest surface area was selected. Source climate data: ArcGIS Online (2015), Simplified World Climate zones. Owner: Mapping Our World GIS Education. Original map: National Geographic World Atlas for Young Explorers (1998).
- All other data: TWAP Groundwater (2015).

Version: September 2015