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### HUMAN RIGHTS SITUATIONS THAT REQUIRE THE COUNCIL'S ATTENTION

Written statement\* submitted by Sign of Hope e.V. - Hoffnungszeichen, a nongovernmental organization in special consultative status

The Secretary-General has received the following written statement which is circulated in accordance with Economic and Social Council resolution 1996/31.

[20 August 2009]

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<sup>\*</sup> This written statement is issued, unedited, in the language(s) received from the submitting non-governmental organization(s).

#### Human Rights Situation in Sudan Oil and Human Rights

Sign of Hope wishes to draw the attention of the United Nations Human Rights Council to human rights abuses in Sudan related to the oil exploration and exploitation in Unity State.

A Sign of Hope team visited several small villages in the oil fields of Thar Jath, southern Sudan, in February and November 2008 and in April 2009 to learn more about the contamination of drinking water there.

#### **Main findings**

The drinking water in several villages in the vicinity of the Central Processing Facility (CPF) of Thar Jath is contaminated with chemicals which originate from the oil extraction. Produced water originating from the CPF is proved to be one source of contamination. Another source of contamination are chemicals that are used to enable the drilling process. These chemicals were found in a drilling pit close to an abandoned oil well near the village of Koch.

Sign of Hope has ordered the services a German based company specialized on the rehabilitation of drinking water resources - to scientifically assess the quality of drinking water in the area around the CPF – and to trace possible sources of contamination. By doing so Sign of Hope wanted to follow up initial suspicions that arised after Sign of Hope had collected a first set of water samples in February 2008 that indicated that the drinking water in some village was not potable.

A team composed of Sign of Hope human rights researchers and drinking water specialists stayed in the area of Thar Jath between April 21 and April 26, 2009.

#### Produced water as a source of contamination

Firstly the team took water samples at ponds containing produced water close to the Thar Jath CPF. The CPF located in Block 5A is run by the WNPOC consortium. The team found scientific evidence for a direct link between the produced water found close to the CPF and the contamination of drinking water. Water samples from the surface of the swamplands, from small man made lakes used by locals for personal hygiene and from water wells underwent hydrochemical analysis. Based on this the team was able to characterise the water chemism (i.e the characteristical chemical composition).

In November 2008 results of the analysis of another set of water samples showed a difference between surface water and the wells with predominantly harmless drinking water quality in contrast to the contaminated wells for example in Rier village.

Surface water samples and the good drinking water from wells near Koch and Leer show the naturally occurring hydro-chemism. Both these types of water show a hydrocarbon dominance and an electrical conductivity (as indicator for salt contents) fulfilling the requirements of the Sudanese Drinking Water Guideline as well as the WHO guideline. By contrast the ionic distribution found in contaminated wells shows a very high salinity with a significant dominance of sodium chloride, with nearly exactly the same chemism of the samples of produced water collected adjacent to the CPF. In these samples sodium-chloride constitutes more than 80% of

the total mineral concentration. The chloride concentrations result from the potassium chloride being a flushing additive in the drilling process or in CPF-processes. The potassium ions are being replaced by sodium and calcium ions: the main contaminants, we found in contaminated drinking water.

The water from nearby wells like the one in the village of Pakur showed literally the same ionic distribution as the water sample from one of the pits at the CPF. That means that there is a direct correlation between the CPF's produced water and the contamination of drinking water resources in the vicinity of the CPF. Based on the results of the chemical analysis specifically the wells tested in Duar, Rier, Bow and Pakur are posing a threat to the health of human beings and livestock. Waters from these wells contain high concentrations of lead and/or chromium. People or livestock that drink this water are at risk of permanent dehydration because of diarrhoea and enrichment of NaCl-salts in the organism. Therefore it is indispensable to depollute the areas and to find sustainable solutions for the disposal of produced water.

#### Drilling fluids as another source of contamination

Secondly oil well drilling pits are likely to be an additional source of pollution. The group took a water sample from a pit at an abandoned borehole close to the village of Koch. The GPS coordinates of the abandoned drilling pit are N08°38'8''; E029°58'49.9''. The water contained several toxic chemicals in considerable concentrations. In the Thar Jath and the adjacent Mala oilfield there are at least another 30 drilling sites containing the same or similar chemicals like the group took a sample of.

There is reason to fear that even these contaminants will find their way into the drinking water. Water samples collected at the pit of the abandoned exploration drilling site showed extremely high concentration of salts and heavy metals like chromium, lead, nickel, cadmium, boron and arsenic. Such highly contaminated sites are an extreme danger for the ecology of the swamplands.

The Commissioner of Koch, Peter Bol Ruot, confirmed in February 2008 that in the year 2006 a total number of 27 adults and three children died as a result of the consumption of contaminated water. Ruot told Sign of Hope in February 2008 that at this time up to 1,000 people have fallen sick for the same reason.

#### Recommendations

The Council should ask the Khartoum government to make sure that the WNPOC consortium treats the produced water properly so that there is not even a risk of seepage into drinking water resources.

The Council should call upon the Khartoum government to press the WNPOC consortium to immediately rehabilitate the highly contaminated water in the oil well drilling pit north of Koch. These dangerous chemicals must not find their way to drinking water layers. The oil companies have the responsibility to act immediately to stop a looming ecological catastrophe.

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The Council should call upon the Khartoum government to ensure that the oil companies operating in Sudan fully and unconditionally protect the environment – notably surface and ground water from contamination by toxic chemicals. The oil companies must conduct petroleum operations in accordance with international good oil field practice in terms of health, safety and environmental standards. Drilling water must not be discharged into rivers, swamps and on the ground.

The Council should emphasize that the Sudanese Government in Khartoum has brought the oil companies into the country. To secure public health the Government must now improve the quality of drinking water dramatically and at the same time prevent an ecological catastrophe.

In addition the Council should urge the Government of Sudan to compensate those who have been displaced from their village to clear the way for oil exploitation.

Moreover the Council should ask the Sudanese Government to involve the oil companies of Thar Jath into water rehabilitation projects.

Finally the Council should ask the Sudanese Government to fully implement the provisions of the Sudanese Drinking-water Standard issued by the Sudanese Standards and Metrology Organization in 2002.

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