Municipal Solid Waste Open Dump Site Juba, South Sudan

Preliminary Environmental Assessment

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This report was prepared by Mr. Michael Schauderna, Env. Eng. with the assistance of Tim Cassidy, GEOCARE GmbH, Austria, for United Nations Environment Programme, South Sudan.

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SUMMARY

Project	Site Investigation and Preliminary Evaluation of Environmental Impacts of the Municipal Solid Waste Open Dump Site
Location	Open Solid Waste Dump Site near Jebel Kujur, southwest of Juba, South Sudan
Field study and sampling	11.10.-19.10.2012
Purpose of study	To assess the environmental impact of the practice of dumping municipal solid waste at the site near Jebel Kujur, so as to better inform decisions regarding remedial action.
Preliminary evaluation of **socio-cultural-economic** impacts of dump site operation	Despite significant operational improvement at the dump site, the health impact on the waste-pickers remains severe. There are a variety of direct threats to the waste-pickers: the heavy vehicles that move around the site while people are picking over the waste; the hospital waste dumped at the site; and toxic fumes from burning waste. There are also indirect threats posed by the preparation and consumption of food – some of which is discarded and rotten - at the site. There are only a few small scale farmers in the vicinity of the dump site. The nearest structure is 300 m away and the nearest community is 1.5 km from the site. So the general health and economic impact is low. The dump site is situated on a moderately-sloping hill, so leachate flows downhill when it rains and pools of contaminated water form as a result. This situation poses a significant risk to the waste-pickers or grazing animals that come into contact with that water. A small ephemeral water body on the north side of the hill is used as a source of drinking water by some waste-pickers: the hygienic conditions there are appalling. The dump site certainly has a negative impact on water quality. The impact of on-site dust, odour and noise on the waste-pickers is severe, but few other people are impacted by those hazards because the population around the site is so sparse.

Preliminary evaluation of **environmental impacts** of dump site operation	Impact is low as there is no groundwater body of any importance, due to the geologic and hydrogeological conditions of the site area (shallow gneiss bed rock/ generally non water bearing).
Suitability of the site	If operated as a controlled dump site, the general location of the site is regarded as suitable.
Recommendations	The on-going **conversion of open waste dumping to controlled waste dumping** activities has already shown some major improvements and should be continued and supported by all stakeholders. Health and safety measures for the **waste-pickers** are of great concern and need to be addressed immediately. A plan for the handling of **hazardous wastes** needs to be established as there is currently no alternative to the uncontrolled dumping at the site. **Future land use planning** in the vicinity of the dump site (on-going or closed) should be given high priority to minimise impacts to an acceptable level. Waste management plans should be integrated into a spatial plan for the city and its region. Plans for further **expansion of the current dump site** and scoping for new sites are seen as critical issues given the short operational timeframe of the current dump site.
Organisation	UNEP United Nations Environment Programme SIEP (Sudan Integrated Environment Project) in South Sudan

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ABBREVIATIONS

JICA	Japan International Cooperation Agency
km	Kilometre
m	Meter
SIEP	Sudan Integrated Environment Project
UNEP	United Nations Environment Programme
UNMISS	United Nations Mission in the Republic of South Sudan
JCC	Juba City Council

APPENDIX

1 INTRODUCTION

The United Nations Environment Programme (UNEP) is the United Nations focal point for addressing environmental issues at the global and regional level. Its mandate is to coordinate the development of environmental policy consensus by keeping the global environment under review and bringing emerging issues to the attention of governments and the international community for action.

UNEP's Division of Environmental Policy Implementation (DEPI) works with international and national partners, providing technical assistance and advisory services for the implementation of environmental law and policy, and strengthening the environmental management capacity of developing countries and countries with economies in transition.

The Post-Conflict and Disaster Management Branch (PCDMB) within DEPI provides cutting edge environmental science and expertise to countries affected by or vulnerable to conflicts and disasters. The objective of the branch is to minimize threats to human well-being from the environmental causes and consequences of conflicts and disasters.

The UNEP programme in South Sudan is rooted in addressing the environmental drivers of poverty and conflict, recognising that natural resources (trees, groundwater, soil etc.) provide for the most basic needs for energy, shelter, water and food. The programme has the following over-arching goal: “To assist the people of South Sudan to achieve peace, recovery and development on an environmentally sustainable basis”. The purpose of the programme is: “To improve sustainable and equitable governance, management and use of environmental resources”.

Waste management is one of the three main pillars of Sudan Integrated Environment Project (SIEP) in South Sudan. To date the programme has focused on solid waste management in Juba city.

Situated on the White Nile, Juba is the capital and largest city of the Republic of South Sudan. Since the Peace Agreement between the South and North Sudan, the city has developed very rapidly and is now considered one of the fastest-growing cities in the region. The already remarkable rate of growth increased after the country became independent on 9 July, 2011. The 2008 Census held the population of Juba to be 375,000, however, several organisations estimate the current population of Juba to be in