



The Destruction of the National Science System by Conflict in Sudan

The ongoing conflict in the Republic of the Sudan is destroying the science, health and educational sectors of the country, with impact on the future of Sudan and that of Africa.

The Network of African Science Academies (NASAC) represents 30 African member academies, providing science advice within their countries and for Africa. The Sudan National Academy of Science represents the highest calibre of internationally respected scientists. NASAC's mandate lies within science and among scientists, and the focus in this statement is on the extreme case of Sudan because of the scale of attack on the science, education and health systems, the effects on students and scientists, and the waste of vital national resources.

In the midst of the unfolding humanitarian catastrophe¹, the conflict continues to impact on the scientific freedoms: freedom of movement, of association, of expression and communication, and of access to data and information. There is rising evidence of impact on scientific infrastructure, including universities and research centres^{2,3}, medical schools⁴, scientific collections⁵, laboratories, libraries, and communications⁶. Sudan's unique cultural heritage is in danger⁷. There is long-term impact due to interruption of medical studies⁴. Moreover, there were heavy seasonal floods and rains in many areas^{8,9}, some of which have not occurred in the areas before. The gross effects of the conflict on the environment are extraordinary, especially in Northern Sudan where gold mining is practiced with extensive chemical pollution. The floods washed the artisanal mining areas, carrying the polluted waters to ground water table and the Nile.

The number of internally displaced persons and displaced persons in neighbouring counties includes researchers and university staff, indispensable in the structure of a functioning state. An extensive brain drain is occurring⁴.

The Sudanese National Academy of Sciences has appealed to academic institutions worldwide to help university staff and students displaced in the country's violent conflict^{2,10}, and has identified actions to aid the scientists of Sudan and potential rebuilding of the science and health systems. University partnerships have been shown to help continued education⁴. In rebuilding, scientific expertise is required in understanding the societal consequences of the conflict, especially those in food security, water security, human security and migration.

This statement follows letters from the NASAC President to the Chairperson of the African Union and the Secretary General of the United Nations on behalf of the NASAC member Academies. NASAC calls for an end to the wreckage of Sudan's science expertise, infrastructure and future, and a global initiative to support re-establishment and renewal of these resources¹¹ that are vital not only to Sudan but to Africa and the world.



¹ Conflict and refugee crisis WHO, Sudan conflict and refugee crisis, Multi-country External Situation Report n. 21, published 17 July 2024 <https://www.who.int/publications/m/item/sudan-conflict-and-refugee-crisis--multi-country-external-situation-report-2-17-july-2024>

² <https://www.researchprofessionalnews.com/rr-news-africa-pan-african-2023-9-sudan-s-scientists-plead-for-help-as-war-ravages-research/>

³ <https://www.interacademies.org/news/snas-appeals-solidarity-sudanese-people>

⁴ Mahgoub, E.A. A. et al., War and education: the attacks on medical schools amidst ongoing armed conflict, Sudan, Conflict and Health (2024) 18:23 <https://doi.org/10.1186/s13031-024-00584-7>

⁵ <https://council.science/blog/science-at-risk-a-race-against-time-to-protect-seeds-in-sudan/>

⁶ <https://council.science/blog/statement-sudan/>

⁷ <https://council.science/blog/looting-of-the-sudan-national-museum-more-is-at-stake-than-priceless-ancient-treasures/>

⁸ <https://www.unocha.org/publications/report/sudan/sudan-humanitarian-impact-heavy-rains-and-flooding-flash-update-no-03-25-august-2024-enar>

⁹ <https://mecouncil.org/publication/sudans-puzzle-confronting-climate-change-in-a-war-torn-state/>

¹⁰ M.H.A. Hassan, Sudan's disastrous war – and the science it is imperilling, Nature 623, 10 (2023) doi: <https://doi.org/10.1038/d41586-023-03341-7>

¹¹ Nature Editorial, Restore Internet access in war-torn Sudan, Nature, 634, 514 (2024), <https://www.nature.com/articles/d41586-024-03332-2>

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