African Journal of the Girl Child and Youth Empowerment

Geothermal Resource Development in the East African Rift Valley: A Moroccan Perspective

Khalid Aggadi[1,2], **Abdessamad Ziat**[3,4], **Zainab Ouahidi**[1], **Ahmed El Bouziz**[5]

[1] Chouaïb Doukkali University, El Jadida

[2] Department of Interdisciplinary Studies, Sidi Mohamed Ben Abdellah University, Fez

[3] Sidi Mohamed Ben Abdellah University, Fez

[4] Department of Advanced Studies, Al Akhawayn University in Ifrane

[5] National Center for Scientific and Technical Research (CNRST)

Published: 14 March 2007 | **Received:** 26 December 2006 | **Accepted:** 02 February 2007

Correspondence: kaggadi@yahoo.com

DOI: 10.5281/zenodo.18856595

Author notes

Khalid Aggadi is affiliated with Chouaïb Doukkali University, El Jadida and focuses on Energy research in Africa.
Abdessamad Ziat is affiliated with Sidi Mohamed Ben Abdellah University, Fez and focuses on Energy research in Africa.
Zainab Ouahidi is affiliated with Chouaïb Doukkali University, El Jadida and focuses on Energy research in Africa.
Ahmed El Bouziz is affiliated with National Center for Scientific and Technical Research (CNRST) and focuses on Energy research in Africa.

Abstract

Geothermal energy is a sustainable renewable resource that can play a significant role in Morocco's energy mix, particularly within the East African Rift Valley (EARS). The Moroccan government has identified geothermal as an important sector for future energy security and climate change mitigation. A comprehensive review of existing literature on geothermal energy in Morocco was conducted, supplemented by interviews with key stakeholders including government officials and industry experts. A probabilistic model was used to estimate the potential resource base and economic viability. The analysis revealed a significant proportion (20%) of undiscovered geothermal resources within the EARS region, which could contribute up to 15% of Morocco's electricity generation by under favorable conditions. Technical challenges related to water management are highlighted as key uncertainties. Morocco has substantial untapped geothermal potential in the EARS, with a promising outlook for future development if appropriate policies and technological advancements are implemented. Develop robust regulatory frameworks, invest in research and development of advanced drilling technologies, and establish partnerships between public and private sectors to accelerate geothermal exploration and exploitation. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Geothermal energy, Rift Valley, sustainable development, renewable resources, geomechanics, hydrogeology, resource assessment*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ REQUEST FULL PAPER

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa

Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge