

# Community Land Registers for Internally Displaced Persons, South Darfur, Sudan: ICT Solution

Ahmed Hemoudi, Malumbo Chipofya and Dimo Todorovski (Netherlands)

**Key words:** Access to land; Digital cadastre; Land management; Low cost technology; Security of tenure; Keyword 1; Keyword 2; Keyword 3

## SUMMARY

In many countries, the land administration system is ineffective when it lacks innovative solutions to register all land tenure rights. Nevertheless, a well-functioning land administration system should capture even the customs and norms that govern land use management in the customary tenure system. In South Darfur, Sudan, it is claimed that the customary tenure system is most affected by the poor land administration system because there is no recognition of its different land rights among all Sudanese Land Acts. Additionally, land professionals believe that the Native Administration System as a social institution is considered a parallel land administration system that manages the community land. It acknowledges people's relation to their tribal land (Dar) and the returning Internally Displaced Persons (IDPs) with their Housh connection (extended family house). However, only 1% of the customary land in the Darfur region is believed to be registered. Furthermore, Darfur's region has experienced armed conflict since 2003; therefore, communities in Nyala and Eid El-Firsan, South Darfur, have received many IDPs from other states, such as western Darfur and returning IDPs.

The Native Administration System lacks innovative land registration technologies because it manages the customary land through a paper-based system and Aaraf. Therefore, It has been necessary to develop technical solutions that improve the Native Administration System's main work. This research distinguished an ICT solution for the community land register for IDPs in South Darfur. The information system requirements were identified after assessing the Native Administration system's main functions, practices, and processes in addressing the land claim of returning IDPs and the Juddiya's primary work as a local land resolution mechanism. Fieldwork, interviews, and a literature review were used to conduct this research.

The identification of the ICT solution was guided by the spatial and legal frameworks of the

---

Community Land Registers for Internally Displaced Persons, South Darfur, Sudan: ICT Solution (12615)  
Ahmed Hemoudi, Malumbo Chipofya and Dimo Todorovski (Netherlands)

FIG Working Week 2024

Your World, Our World: Resilient Environment and Sustainable Resource Management for all  
Accra, Ghana, 19–24 May 2024

fit-for-purpose land administration approach. A selection of LA tools was analysed for alignment with the identified requirements. Furthermore, the capacity of the community to use the LA tools effectively was evaluated. The combination of functionalities provided by SmartSkeMa, the Field Survey App, and UAVs was found to be the best suite of ICT functionality for the Native Administration System in administrating the community land. The three tools provide complementary functionality that can be integrated into a solution that facilitates capturing different customary land use rights and their social restrictions through participatory mapping using affordable high-resolution UAV imagery and also allows for collecting information about land conflicts.

---

Community Land Registers for Internally Displaced Persons, South Darfur, Sudan: ICT Solution (12615)  
Ahmed Hemoudi, Malumbo Chipofya and Dimo Todorovski (Netherlands)

FIG Working Week 2024

Your World, Our World: Resilient Environment and Sustainable Resource Management for all  
Accra, Ghana, 19–24 May 2024