## Monrovia: from 1995 Block Mapping Survey to 2023 Digital Cadastre.

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## SUMMARY

Lantmäteriet, the Swedish Mapping, Cadastral and Land Registration Authority, is implementing a Sweden funded bilateral project with the Liberian Land Authority in Liberia-'Capacity Building for Inclusive Land Administration and Management in Liberia' (ILAMP).

In late 2022, an atlas was discovered, produced by the World Food Programme and UNFPA between 1994-1995, during a lull in the Liberian civil war.

The atlas was found in a Liberia Land Authority office and is a hand-sketched block mapping survey of Monrovia and its environs.

The block mapping of the atlas is 3D, given that apartments have also been captured along with all individual properties.

Also discovered, in conjunction with the atlas are two directories of principal occupants, commercial and private and public institutions that either own/owned or inhabited the properties at the time of mapping.

The block mapping code implemented in the atlas links to the directories, associating the individual properties and apartments to the respective occupants (not necessarily owners) or institutions.

Given that Liberia is a country that lacks, or has lost due to the civil war, spatial information, and hardcopy maps, cadastral and otherwise, this discovery is significant.

Monrovia: from 1995 Block Mapping Survey to 2023 Digital Cadastre. (12174) Mahmoud Solomon (Liberia), Frank Pichel (USA) and Christopher Byren (Liberia) Lantmäteriet has scanned the atlas and accompanying directories and the objective is to subsequently digitize the atlas.

The digitized properties can then be linked, utilizing OCR, to the records from the two directories as attribute data associated to the individual properties.

This will result in the creation of a digital cadastral map of Monrovia, anno 1995.

Scanning the atlas and directories in Liberia presented a challenge due to the unusual format of the material and was therefore done by experts at the National Archives (Riksarkivet) in Sweden.

The scanning of the atlas and directories has historical significance since we are only aware of a handful of hardcopy versions in existence.

The atlas and directories are now digitally preserved for the future.

More importantly, these will provide a digital cadastral map of Greater Monrovia.

This will create a basis for further work related to resurrecting the now obsolete Open Title digital title deed solution and possibly leveraging AI to geo-reference title deeds that lack coordinates.

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