



Tropentag, October 9-11, 2007, Witzenhausen

“Utilisation of diversity in land use systems:  
Sustainable and organic approaches to meet human needs”

## Contribution of Gum Arabic Production to Household Food Security in North Kordofan, Sudan

TARIG ELSHEIKH MAHMOUD<sup>1</sup>, MANAL AWAD KHEIRY<sup>2</sup>

<sup>1</sup>University of Kordofan, Gum Arabic Research Centre, Sudan

<sup>2</sup>TU Dresden, Institute of Photogrammetry and Remote Sensing, Germany

### Abstract

Gum arabic is one of the main crops produced in the traditional rain-fed agricultural sub-sector in North Kordofan State, Sudan. It is a major non-timber forest product of the genus *Acacia*; namely *Acacia senegal* L., locally called “Hashab tree”. It contributes significantly to export crop portfolio in Sudan. Most of gum producers across the Gum-belt of North Kordofan experience a situation of food insecurity. The marketing system of gum arabic consists of three sub-systems; these are the rural traditional, the auction and the export market. The latter is dominated by the Gum Arabic Company (GAC) and other oligopoly-processing companies. The rural traditional market comprises small producers and village merchants. In this market, the producers are offered either low prices or given supplies much lower in value compared to their gum harvest. The traders and middlemen who act as a link between producers and the gum companies permit collusive arrangements, thereby allowing them to undercut producers’ prices.

Using some remote sensing and GIS techniques, the present paper displays some of the most risky gum production areas with regard to household food insecurity in North Kordofan. Such areas fall in the ‘transition’ Gum-belt between the war-affected south and the drought-affected north.

In order to investigate the prevailing conditions, the contribution of gum arabic as cash crop rotated or intercropped with other crops was highlighted. Using the Policy Analysis Matrix (PAM) as an empirical technique, the paper was able to elaborate the effect of policy interventions (e.g. producer floor price) and market distortions (monopsony, oligopoly) on income disparities between gum producers and other beneficiary groups. Having established these dimensions, the paper suggested some recommendations that can be used as a nucleus for improving household food security in gum arabic production areas of North Kordofan.

**Keywords:** Food insecurity, market distortions, Policy Analysis Matrix (PAM), policy intervention