## Issues and guidelines for the emerging use of GPS and PDAs in agricultural statistics in developing countries

Naman Keita, Senior Statistician, Food and Agriculture Organisation of the United Nations

E-mail: Naman.Keita@fao.org;

George MuAmmar, P Programme Officer, World Food Programme, Italy

E-mail: George.MuAmmar@wfp.org

Elisabetta Carfagna, Professor, University of Bologna, Italy

E-mail: elisabetta.carfagna@unibo.it

**Abstract 97:** The Food and Agriculture Organization of the United Nations, the World Food Programme, and the European Union Joint Research Center with inputs from the "Centre de coopération internationale en recherche agronomique pour le développement-CIRAD" are developing a technical Handbook on the use of GPS and PDAs for measuring crop area in the context of subsistence farming in developing countries, particularly in Africa. The Handbook also covers the use of these devices for geo-referencing data collection units and linking them to spatial data through a geographical information system (GIS) as well as GPS and GIS data exchange formats and methods. An emerging use of the PDAs is also its use as survey tool for electronic data capture and transmission and for field supervision. The Handbook is based on empirical studies and field experiences of the Institutions as well as the experiences from other countries

This paper presents an overview of these experiences and discusses the issues involved with the use of the emerging tools for measuring crop area, survey data capture and linking geo-referenced ground data with spatial information in a GIS system. It discusses the technical guidelines proposed on these issues.

**Key words and phrases:** GIS, Personal Data Assistant, Crop Area Estimation, Global Positioning System, Developing countries,