WAMSI Online System
- A GIS Tool For Detecting Encroachment

WAMSI, developed by National Informatics Centre has been implemented at the State/UTs Waqf Boards of India is based on GIS technologies which uses historical satellite imageries of Waqf properties. WAMSI is used to identify land encroachments and tackle the challenges thus caused. About 5 lakh immovable properties have been added so far to this system. The GPS coordinates collection from field work has been initiated with the introduction of GIS feature of WAMSI.

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Encroachment of land resources is a common problem created by vested interests or by neighbours having adjacent farming lands. For e.g. it has been observed that during crop sowing and monsoon season, soil boundaries are naturally altered, vanished or even deliberately broken down. The farmers remake such boundaries of farming lands and over a period of time, even such small chunk of altered portions lead to accumulation of a larger area of farming lands. This illegal accumulation or encroachment creates major challenges for managing the land resources by authorities.

Waqf Management System of India or WAMSI is a web-based and work-flow enabled management system for Waqf properties to identify land encroachments and tackle the challenges thus caused. This system has been developed by National Informatics Centre and implemented at State/UT Waqf Boards of India. WAMSI is based on GIS technologies and uses historical satellite imageries of Waqf properties. About 5 lakh immovable properties have been added so far to this system. The GPS coordinates collection from field work has been initiated with the introduction of GIS feature of WAMSI. This article focuses on the technologies used and related important aspects of WAMSI.

The web URL, http://wamsi.nic.in/ is the public interface of WAMSI to view its features. This online platform provides all the current and relevant information on Waqf properties including GIS capabilities for encroachment detection and decision support system, which helps initiation of necessary administrative action against encroachers to keep them at bay.

PROCESS RE-ENGINEERING
WAMSI system has been designed, developed and maintained on basis of the best practices followed by various State/UT Waqf Boards in India. The work-flow processes has been re-engineered for better system efficiency.

ADVANTAGE OF THE SYSTEM
- Efficiency in various processes of information delivery. Transparency and sharing of up-to-date information to the public through web
- Helps in generating revenue for the welfare of weaker sections of the society and in line with the concept of Waqf
- Geographic Information System (GIS) driven by historical satellite imageries based on GPS coordinate system is seamlessly integrated with WAMSI, which helps in identifying the encroachments.

Technologies used for this secure and role defined system having access through web are all open sourced and are listed below:
- Linux operating system

In the Year 2003, an encroachment near boundary detected (Satellite Imagery 30-OCT-2003)

In the Year 2005, the encroachment near boundary cleared (Satellite Imagery 03-SEP-2005)

Snapshots of WAMSI's in-built GIS Report, available to the public in which encroachment identification and clearance displayed

• Apache & Tomcat Web Servers
• Java programming language (J2EE)
• PostgreSQL open source database
• Google and ISRO Bhuvan satellite imageries using APIs
• Open source DSpace technologies for DMS system

Important aspects and benefits of WAMSI

• Registration of Waqf Estates and Waqf properties
• GPS coordinates for the layouts
• Physical changes using photographs
• Management/ Mutawalli changes
• Annual Waqf property returns
• Annual welfare measures undertaken
• Annual administrative contribution to the Waqf Boards

Mr. Tony Connor, Director, Public Interest Registry ".org" Domain giving away the Manthan Award 2015- Certificate of Recognition for WAMSI project to Sh. Rakesh Mohan, Joint Secretary (MoMA) Sh. Dinesh Chandra, TD (NIC) and Sh. Naeem Ahmed, TD (NIC)

• Transparent leasing of Waqf properties
• Rent collections and reminders
• Litigation cases tracking and date of hearing reminders
• Digital preservation of ownership rights documents

USEFULNESS TO OTHER SECTORS

WAMSI system can also be used for other sectors where immovable and movable properties are treated as public assets, in which their protection, tracking of their revenue as well as legal cases poses challenges. For such applications and based on specific requirements, WAMSI can be customized by the NIC-PMU(WAMSI) team stationed at New Delhi.

USEFULNESS FOR OTHER COUNTRIES

WAMSI System can be potentially useful to other countries where Islamic concept of Waqf is prevalent, particularly for the countries in West Asian, South Asian and South-Eastern Countries.

AWARDS AND RECOGNITIONS

WAMSI has received several awards and accolades since its inception. Media houses have covered the project through their various channels.

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