ASSET MANAGEMENT USING REMOTE SENSING AND GIS

M adhumitha.A[1], Niyetha.B[2], Poojasri.S[3], Santhosika.P[4], Nithya.M[5],M.ELAKKIYAPRIYA[6]

[1234]UG scholar, [5]Assistant Professor, [6]Software Engineer

[12345]Department of Electronics and Communication Engineering,

Knowledge Institute of Technology, Salem-637504, Tamilnadu, India.

[6]Jasmin InfoTech, Chennai

madhu042ece@gmail.co m, nivethabaskar13@gmail.com,

santhosikaece@gmail.com,poojasriece@gmail.com,

mnece@kiot.ac.in

ABSTRACT:

Asset Management is a systematic process of maintaining, upgrading and operating physical asset. A transformation is taking place in business and governments, schools and hospitals. It can be explained in many ways for anecdote, organized infrastructure management system, methodology, financial, and public asset management. In this public asset system encompasses this subset of revenue and is various points of human interaction. For that, this system is very useful in assisting the person during any emergencies. Hence, this process mainly focuses to save human lives. In addition to that, Geographical Information system (GIS) is used to help students and faculty to integrate and evaluate data to develope new theories and knowledge. The future usage of all model location is based on this services. This tool used to organize and manage the data which is the aim of this system.

Keywords: **ArcGIS 10.3, Asset Management,Geographical Information system (GIS), Remote sensing,**

I.INTRODUCTION

The Asset management is a process for comprehending geography and making intelligent decisions in different locations on earth are usually associated with different environ mental profiles of buildings, campuses and districts. These places are a mix of real property, associated physical assets and supporting infrastructure in schools and hospitals. For instance this asset management help to manage infrastructure both outside and inside buildings, providing a co mprehensive way to optimize space, move staff and class room efficiently. In addition to determine the hospital side management personnel or familiar with the powerful visual representation or picture of a client service area emerges.

II.ASSET MANAGEMENT PROGRAM

A simple working definit ion of asset management would be: first, assess what you have; then, assess what condition it is in; and lastly, assess the financial burden to maintain it at a targeted condition.Essential processes and activitiesfor infrastructure asset management include the following of Maintaining a systematic record of individual assets (an inventory) e.g., acquisition cost, original service life, remaining useful life ,

physical condition, repair and maintenance consistency. Developing a defined program for sustaining the aggregate body of assets through planned maintenance, repair, and replacement.
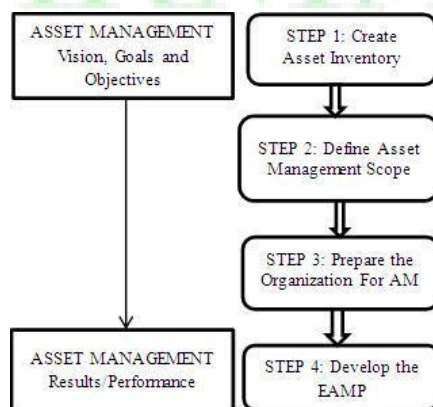
Fig 1: Flowchart for Asset management system

III.STUDY AREA

Geographical Information System (GIS) is an important tool constitute a powerful technology that can address many of the informat ion needs of decision maker in government and corporate. In addition to that, this tool is used for comprehending geography and making intelligent decisions through spatial visualizat ion and its analysis. This spatial data base is a database that is optimized to store and query data that represents objects defined in a geo metric space. These tools are cost effective than other tools to study and analyze such global parameters. Recent improvements in satellite image quality made it possible to perform image analysis much better than past.

The system of GIS, remote sensing and data management systems has helped in modeling quantifying monitoring and predicting the key feature of school and hospital resources Dharmapuri is located between latitudes N 11 47' and 12 33' and longitudes E 77 02' and 78 40'. The total geographical area of Dharmapuri District is 4497.77km2, i.e. 3.46% of Tamil Nadu. There we re a total of 26,943 workers, co mprising 606 cu ltivators, 427 main agricultural laborers, 1,052 in house hold

industries, 22,566 other workers, 2,292   marginal

workers, 54 marginal cu ltivators, 77   marginal

agriculturallaborers, 213 marginal workers in household industries and 1,948 other marginal workers.
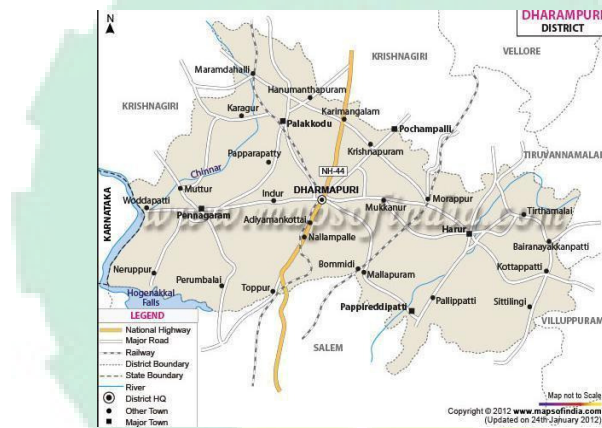

Fig 2.Location of dharmapuri district in tamilnadu

A.ARCGIS

GIS is a geographic info rmation system (GIS) for working with maps and geographic informat ion. It is used for: creating and using maps; compiling geographic data; analyzing mapped information; sharing and discovering geographic information; using maps and geographic information in a range of applications; and managing geographic in format ion in a database. The system provides an infrastructure for making maps and geographic information available throughout an organization, across a community, and openly on the Web.

ArcGIS includes the following windows desktop software: Arc Reader, which allows one to view and query maps created with the other ArcGIS products; ArcGIS for Desktop, which is licensed under three functionality levels .
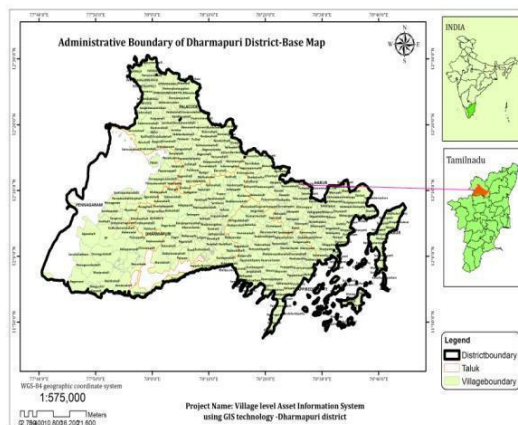
BASE MAP

Fig 3: Base map for Dharmapuri

B. ADD DATA THROUGH ARC CATALOG

There are t wo main ways to add data. We will begin with adding two data files – mid_cities.shp and md_interst.shpfro m Arc Catalog. Navigate to the data you want to add. For us, that is under Folder Connections .Mapping will add two layers. Geographical Information System Thecolors of your layers and their order may differ fro m the example on the instructor's screen, but you should have all three datasets. Each of these layers contains geometric objects that represent some real world entity. Points are used in the mid cities layer to represent Maryland cities. (At a larger scale cities could be represented by polygons.) Lines are used in the mid-city layer to represent the interstate highways in Maryland, and polygons are used in the md counties layer to represent Maryland counties On the left-hand side of the view the three selected layers are displayed in the view's table of contents Each layer has a litt le check mark in the box to its left. This means they are "turned on" and being displayed. If you uncheck them, that layer is no longer visible.
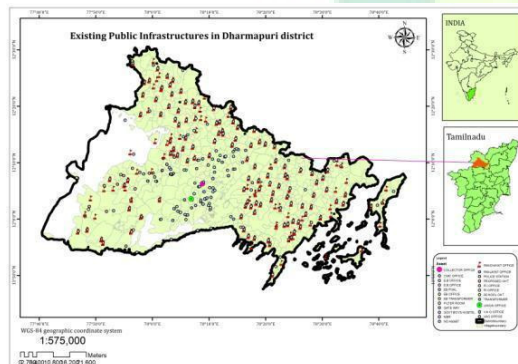
C.PUBLIC INFRASTRUCTURE

Fig4: Public Infrastructure for dharmapuri

IV.RES ULTS AND DISCUSSION

The study was carried out in Dharmapuri District using the techniques of GIS and Remote Sensing for the detection of asset resources . The schools and hospital cover is seen as one of the major threats to sustainable development. Here the results give us the effective mapping and monitoring of asset schools and hospital areas in Dharmapuri.
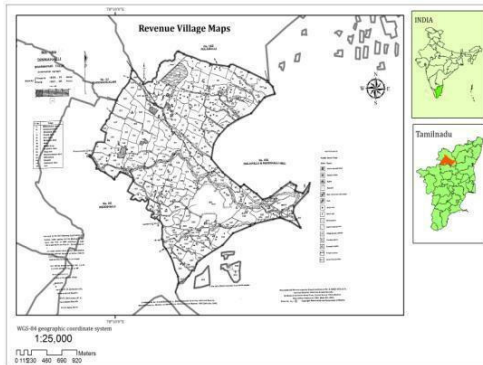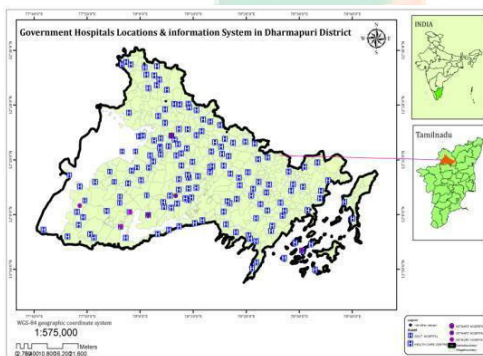

Fig:5 Village map Revenue
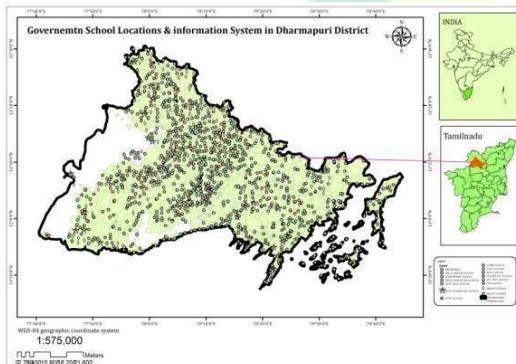

Fig 5: Hospitals map for dharmapuri

Fig 6: School information map for dharmapuri

IV.CONCLUS ION

Environmental asset management is widely understood and accepted among schools and hospital agencies. In early days new legislative and reporting requirements gave impetus in adoptation of asset management practices, today the widely demonstrated benefits of asset management in environmental

decision making encourages its adoption. This environmental asset management is the key to finding the most effective and preserving, upgrading and replacing highway.

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