Village Cadastral Map and Property Card
Dr. R. Nagarajan

welcome to agMOOCs courses on GIS in agriculture, essentials and applications. Now we'll be going – to the next aspects how GIS could be used in the village and land information system which is of rural importance and here there are lot many things which we may have to do before we get onto the different mode.

Now what is the land information system either in the rural or in the urban. We need effective sustainable land planning is missing, we need to have the progressive development and maintenance is the need of the hour. The unplanned activities need to be curtained, so that our environmental as well as resources can be managed and the services can be provided; also is the; to meet the growing land, real estate markets its development and the economic activity in general for the growth of the country. What is happening is the existing historical record keeping efforts are expensive and not safe what I wanted to say is what we have is many of them or most of them are in the form of papers maintaining these paper-based documents in the offices of a multiple-wake activities are going on. It's very difficult to do that and decaying of these paper products also that take place we are not able to locate these records in time; so that some of the activities are getting delayed one among the delays include by this type of location of data sets or records from the record office.

now we should know what are we doing it now this is what the need is, what are we doing now. see we are having village maps village maps. this is one among the village map this village map contains land parcels and also road sections and also then your river as well as other activities. the gown turn is the settlements this is how the Taluk plants which are available with the existing villages in a Taluk place. now what is the scale of this is the scale is almost one is to nearly 5000. now another one that is a Tahsil type now the another one is about the village maps the village maps, you have the land parcel here there as well as we have some amount of settlements.

this is the type of maps which are being used in the Maharashtra State another map record which are being used in the Orissa is; it is a digitized one. they have got the land parcels maybe a road network on either side of it or maybe a river and all other activities important activities you are done in a local language.

now these 7/12 records; they have got an attribute data that is what we call it as a record of right. this is what people call it as a property card. now the property guide is an important aspect what does it do about the property cash the property card tells you about what is your area which you own it and where it is located and adjoining activities if it is the first time your name will be there. if you have bought it from somebody else his name will be there as the thing now when you are going for a search whether it has been or the other one is the man who is selling is the correct person the searching is needed. the searching of this type of property cards takes lot of time and it delays our efforts. this is one another property cards of the 7/2 which are the agriculture land that is go over here it gives same thing about the name of the farmer how much is the a acre edges, what are all the different crops he grows during

the Kharif. Kharif is nothing but the rainy days that is from July to November and winter crops October to, you have it up to December or January then summer crops you start from January February up to April. so this is the crop areas 7/2 that is what we call it in Maharashtra state and which is nothing but agriculture plot identification number. Now this crop, crop area, this is the plot area wise then what type of crop he grows it whether he changes from one crop to another crop. so that information which is collected just for a tax purpose and other activities now what is happening is some of the our rural areas they are being converted into urban areas now what we need is some places you we all might have heard the very big thing in the news that this many acres of land has been grabbed from the rural people and this mixture of areas have been converted from agriculture land to the urban areas so these type of things whether it is urban whether it is useable not useable whether they are using it or not using it those type of information is needed one thing second thing is over a period of time how many times it has taken like that or how much area has been converted agriculture land area has been converted into urban sprawl.

suppose if you have lost so much of agriculture land what happens to your productivity what was the production at that point of time which we have lost forever. so these are all the questions which happens when we want to increase the crop production by seventy percentage of the existing crop production during 2050 for the future population growth. so this information accurate information at the one point information. so that we will be able to get it immediately and our decision-making process in all developmental activities could be secured.

Now the first application why we need an accurate data is urban sprawl analysis conversion of the previous land-use like agriculture, non-agriculture; used, non-used and how it has been converted into the things. then second thing is if what we need is we need some greeneries in the urban areas. So that there is a temperature, decrease is always possible. fresh air could be used for that what we need is we need some amount of land cover so that land cover takes care of the heat so land use land cover mapping how the land cover was there before and how the land cover that means how many trees have gone up how much area of greenery has been that is another analysis which we are doing it effectively to meet the climate change aspects is landform land reforms analysis then when it comes down to the land reform analysis in the fall in the form of a policy so that is the first thing which they would like to do that now; now what is happening is geodetic surveys are being done using the total stations to append the information which was not available in the earliest day.

so now what you do is take the basic maps which are available, do some represent analysis do some surveys here and they and then append it so that the data would be much more accurate now major thing which we are hearing is are the climate changes that is going to be a high intensity rainfall that is going to be high amount of flood, there is going to be other activities also that leads to natural disaster.

now in the high intensity rainfall in the recent areas there were a lot of flooding has happened even the floodwater have standing up to the six feet seven feet. so that means the area where that settlement has come up it was not suitable for the land use purpose so to avoid such

natural disasters it may not happen immediately it if it happens whatever the investment which you have made those things will go off. to support this that is a good land record management aspect which is missing which could be improved on due to so many reasons then if I have to do it the British Way is land and property assessment and tax collection for our finance almost people are talking about smart city planning; the smart city what people are planning is where everything is available and without any much of degradation to the existing environment. these are all the needs immediate needs for an accurate land information system for management.