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“VILLAGE INFORMATION SYSTEM USING GIS TECHNIQUES” A CASE STUDY OF NIMONE VILLAGE, TALUKA- SHIRUR, DIST-PUNE (MAHARASHTRA)



Kale Nilesh Ashok¹ and Karlekar S. N.²

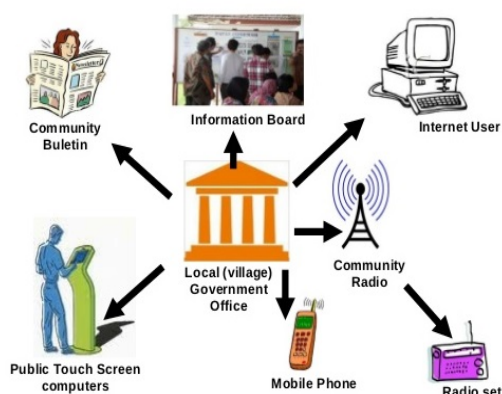
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ABSTRACT

Development is a process of improving the lives of people equitable, just and sustainable manner. It involves efficient planning, effective monitoring and knowledge based decision making, information is the key sustainable decision making but ability to interpret information is more critical. Data available in tabular forms are not easy to Annalise and interpret. The total area of village Nimone is 3772 hectare, out of the total 82.04%, area is under agriculture and 17.96% area is non-agriculture. If we analyze the non-agriculture land secretly then we find out that 12.86% area comes under barren, 2.68% area comes under water bodies, 0.59% area under gavthan and built up including residential, commercial, mixed, religious, public services, and vacant plant and 1.81% area comes under the category roads and streets. The village Nimone is well connected with other villages. In surrounding area with metaled road .The village is just 12 km from the pune-Ahmednagar highway and have good transportation facilities. The Pradhan Mantri Gram SadakYojna was implemented in the village. The Nimone village have 70 % Pakka houses and 30 % semi-pakka houses, it indicates that the economic condition of people is good.

KEYWORDS : “Village Information System”, Infrastructure.



INTRODUCTION :

In India, more than 70% population is residing in rural areas. The Rural areas also contribute to the economy of the country. But these areas have always been neglected by the planner's and decision makers from development point of view.

Village information system is the study of village at core level. It is based on the cadastral system, providing information about land use in the village. Data related to village required for the development of a

proper information system deals with both spatial and non-spatial data for each landholding and every household. This data is managed in a digital environment. As the data is in digital environment so it is easy to maintain, edit, update and rectify with least effort.

This study of Nimone village is small effort to acquire information at village level. It is limited to the aspects like, roof type, electricity, telephone facility, house cleaning, vehicles, water facility, water

accessibility and occupation. Data related to these aspects is very helpful in analyzing the existing status of infrastructure in village and making plans for the development in the village in future.

Aims And Objectives Of Study

The aim of this study is to prepare a database for Nimone village using GIS technology. This database will be helpful for rural planners and decision makers to implement different development plans the village.

The Objectives Of The Study Are As Follows:

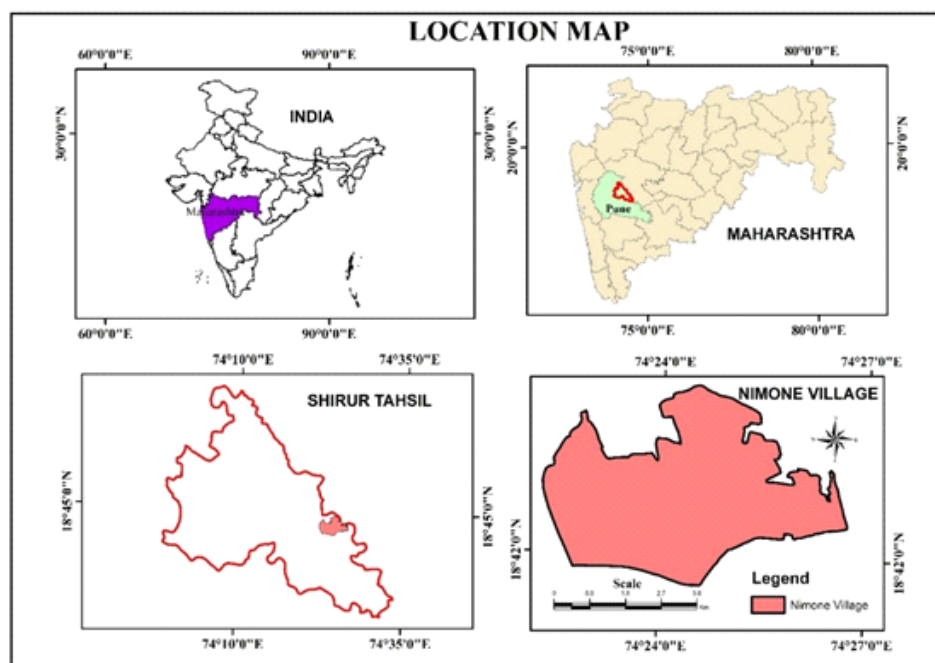
- 1) To prepare large scale base map of Nimone village at the scale of 1:10000 using Cadastral map.
- 2) To study the relationship between infrastructure distribution.
- 3) Assessment of status of infrastructure, which includes, water facility and accessibility and land use pattern in Nimone.

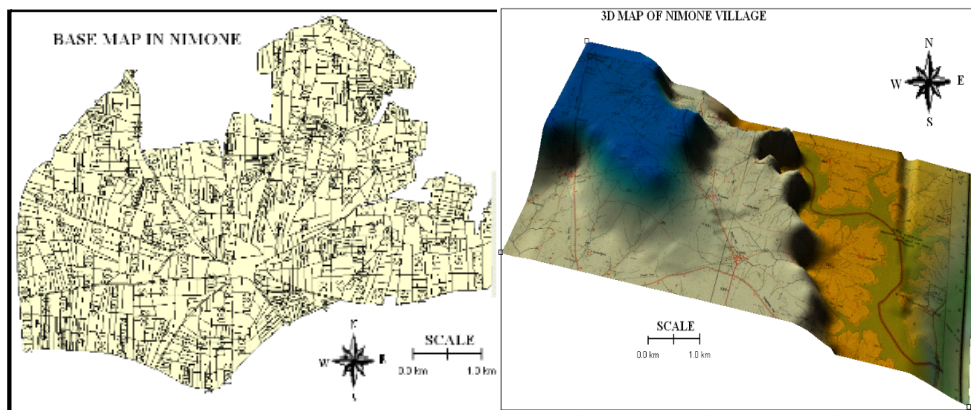
Scope of The Study:

The scope of the study is limited to the development of datasets related to land use pattern household population, caste, family type, telephone water facility and accessibility and occupation of households in GIS environment as well as Development of information system.

Location of village:

Village Nimone lies between $18^{\circ}42'28''$ N Latitude, and $74^{\circ}24'26''$ E Longitude. It is located southeast side of the Ranjangaon Ganpati and is 13 km away from the town. The village is 6 km away from Ghodganga sugar factory. Village Nimone is neighbored by 5 villages from all sides. These neighboring villages are Chavanwadi in the North, Ambale in the west, Navhare in the South, Gunat in the South East, Shindodi in the East and Ghod river East side.





METHODOLOGY

Software's used

The Software and Hardware are main tools to perform a particular task. I have used following types of software and hardware to complete my work and these are very beneficial for me to accomplish my task.

Pre –Field Work

- ✦ Finalization of the topic.
- ✦ Collection of Toposheet bearing No. 46 J/6 from the Survey of India's Sale counter
- ✦ Preparation of cadastral map.

Field Work

- ✦ Field visit
- ✦ Collection of Primary data
- ✦ Collection of Secondary data from local revenue officer.

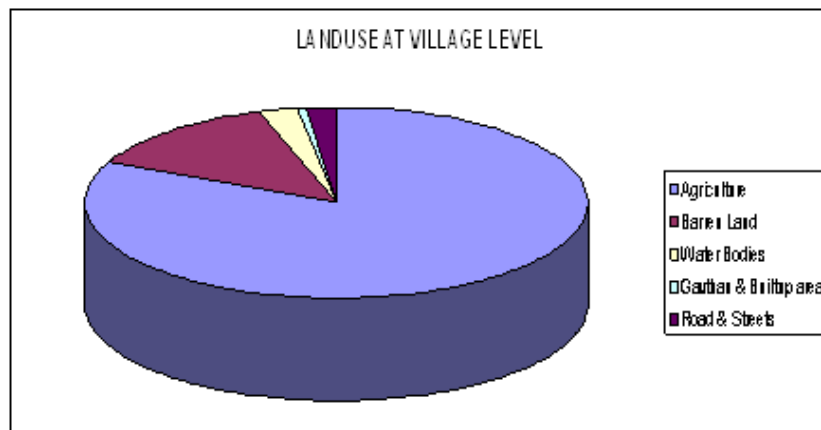
Post Filed Work

- ✦ Sub setting of the village boundary ,
- ✦ Digitizing the different thematic maps
- ✦ Attaching the attribute data
- ✦ Geographic Information System based computer analysis
- ✦ Preparation of final maps, tables and diagrams.

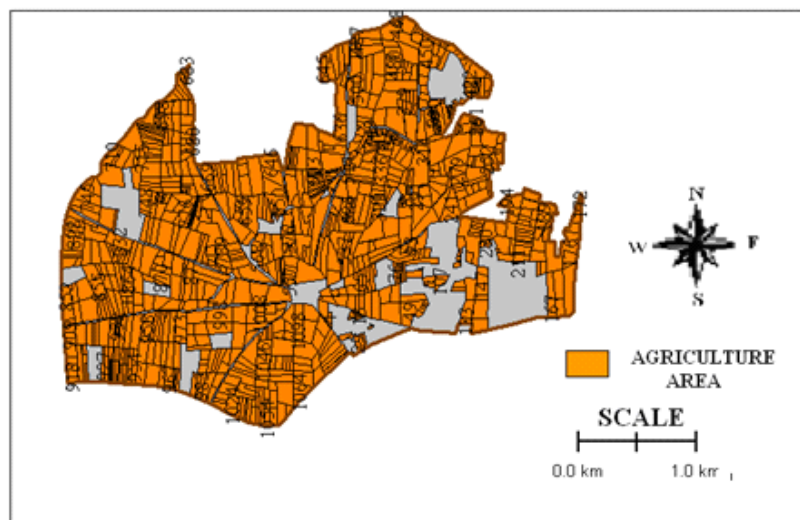
RESULT AND DISCUSSION

Sr.No	Land use Class	Area(in Hectors)	% Area
1	Agriculture	1642.51	82.04
2.	BarrenLand	257.62	12.86
3.	Water Bodies	53.73	2.68
4.	Gavthan& Built-up area	11.9	.59
5.	Road & Streets	36.24	1.81
Total		2002	100

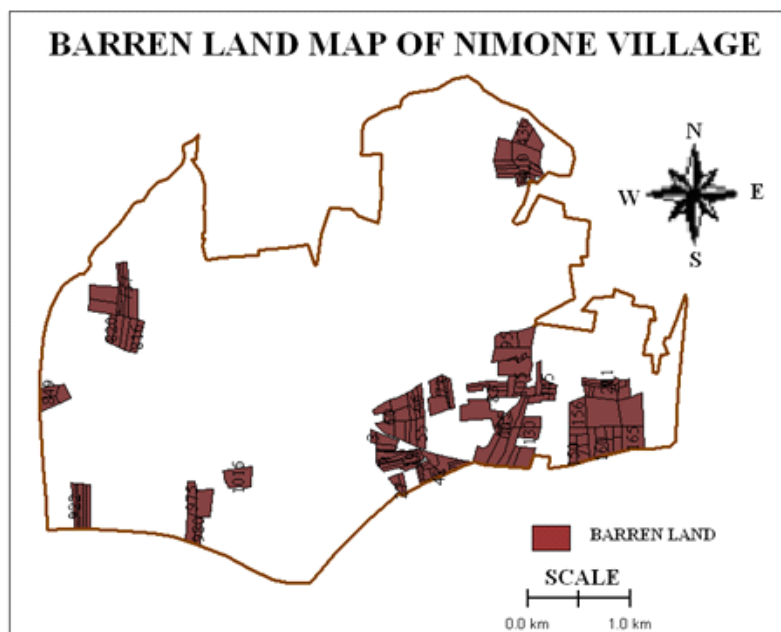
Source:-Revenue department.

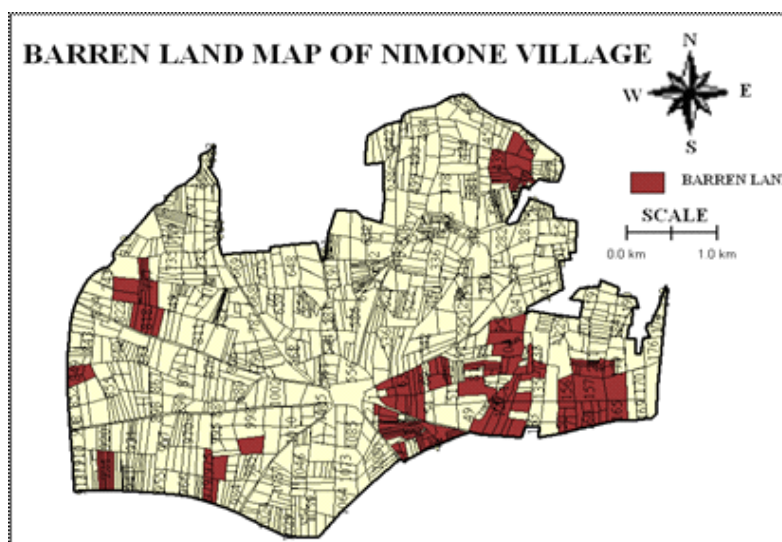
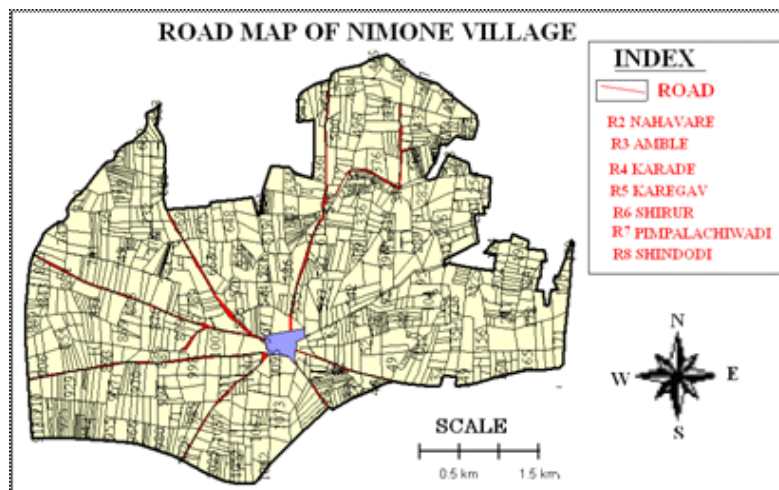
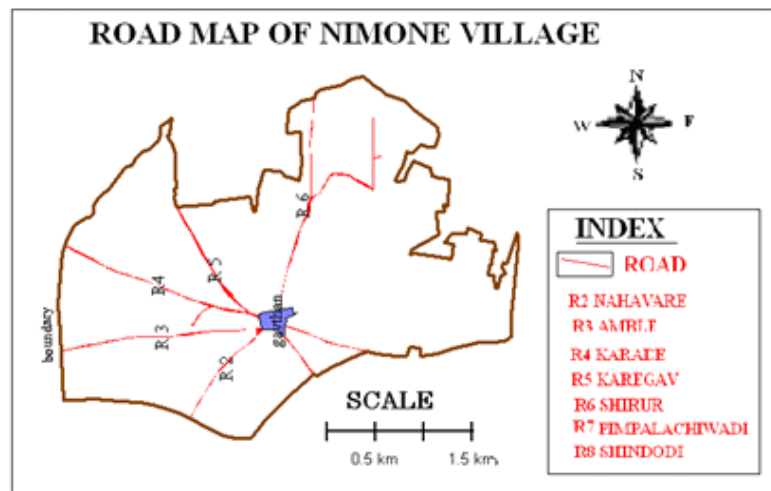


AGRICULTURE MAP OF NIMONE VILLAGE



BARREN LAND MAP OF NIMONE VILLAGE





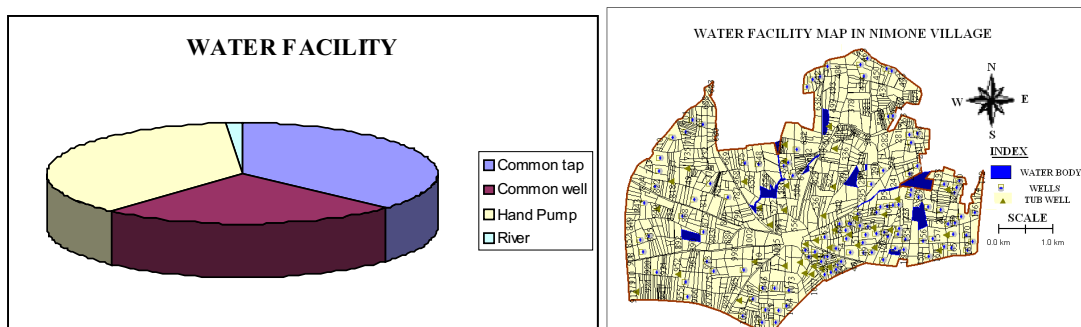
Water Facility and Accessibility

In the village Nimone most of the houses do not have water facility inside the houses. Water facility located outside the houses each common tap and water facility found inside the house

government supply and pumps in Nimone. The following table shows water facility in the Nimone village.

Sr.No	Water Facility	No. of Houses	%
1.	Common tap	150	36.94
2.	Common well	100	24.63
3.	Hand Pump	150	36.94
4.	River	6	1.47%

Source: GrampanchayatNimone.



CONCLUSION

It is clear that the total area of the village Nimone is 2002 hectares and most of land is agricultural i.e 82.04 % land is under cultivation. There is availability of irrigation facilities in the area . If we focus on land use map it can be pointed that the eastern part of the village have most barren land and numbers of wells are present in large number. It can be concluded that the eastern part of the village have high relief .as compare to the other part .therefore water supply to this land is difficult.

The village Nimone is well connected with other villages. In surrounding area with metaled road .The village is just 12 km from the pune-Ahmednagar highway and have good transportation facilities. The Pradhan Mantri Gram SadakYojna was implemented in the village. The Nimone village have 70 % Pakka houses and 30 % semi-pakka houses, it indicates that the economic condition of people is good.Water facilities in the Nimone village is located outside the houses each common tap. The Common well and hand pump is also there in the village .so water facilities are satisfactory in the village and there is no shortage of water because of the presence of the Ghoad dam.

RECOMMENDATION

The cadastral Map of the village is very helpful for study of the village. Village information system is the study of village at micro level and technique of GIS make this work more easy. These techniques can be used in other studies at village level and it will be very fruitful techniques like this study.

More parameter should be taken to develop a good Information system for village so that it will be helpful for the rural planners and decision makers to analyze every aspect of information system.

Information system for other village should also be developed so that rural planners can be at ease to developed rural area. This type of studies at village level will help the decision makers and

developer to minimize balance between rural and urban development.

REFERENCES

- 1.Salil Das (2010) “Village Level Information system - A web GIS Based Application for Development Planning at district Level Planning.
- 2.Vishal Moon (2012) “Village Level Information system” GIS Based Application for DangargarhTahasil.
3. Land Cover Classification of Remotely Sensed Satellite Data using Bayesian and Hybrid classifier
1Ratika Pradhan, 2M. K. Ghose, 3A. Jeyaram
- 4.Saksena H.S (1981) safeguard for Schedule casts, Uppal Publication Houses New Delhi.
- 5.Ravindr.A&Jaishankars, GIS based information system for village level planning
- 6.Latan Kumar (2003), GIS based application for rural development,
- 7.www.gisdevelopment.net/application/rural?usr0007.htm.
- 8.Web.maha.nic.in.



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