

MANAGING STRAY LIVESTOCK USING WASTELAND THROUGH INFORMATION MASHUPS

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ABSTRACT

Livestock provides so many things which we require in our day to day life, so it is very valuable resource for a common man. Although livestock plays important role in our daily life it is not given enough importance or maintained properly especially in urban areas. This results in very poor quality and quantity of outcome from them. This paper presents a scenario to avail its management and better fodder arrangement for stray livestock especially of cities or urban region.

Keywords: livestock, wasteland, forage, mashup, google earth, kml, information technology

INTRODUCTION

Livestock will double as well as its products such as meat, milk, and eggs etc. demand will be double fold by 2050. Necessary increases to future production must be reconciled with negative environmental impacts that livestock cause.

Diverse tropical forage grasses and legumes, by providing a valuable source of livestock feed, can help farmers improve meat and milk production and raise incomes. Tropical forages are also a climate-smart option as they have the potential to reduce the environmental footprint of agriculture through carbon sequestration, reduction of greenhouse gas emissions, and restoration of degraded land (Forage and Livestock CIAT, 2018).

In India, the livestock sector alone contributes nearly 25.6% of Value of Output at current prices of total value of output in Agriculture, Fishing & Forestry sector. The overall contribution of Livestock Sector in total GDP is nearly 4.11% at current prices during 2012-13. As per Office of Registrar General of India (ORGI), the total population in the country as on 1st March 2011 is 1210.2 million. The total livestock population consisting of Cattle, Buffalo, Sheep, Goat, Pig, Horses & Ponies, Mules, Donkeys, Camels, Mithun and Yak in the country is 512.05 million numbers in 2012. The total livestock population has decreased by about 3.33% over the previous census but it has increased substantially in Gujarat (15.36%), Uttar Pradesh (14.01%), Assam (10.77%), Punjab (9.57%) Bihar (8.56%); Sikkim (7.96%), Meghalaya (7.41%), and Chhattisgarh (4.34%) (Ministry Of Agriculture - Department Of Animal Husbandry, 2014). There is an increase in livestock population over 2007 to 2012 from 23.51

million to 27.12 million (excluding 0.29 million stray cattle) registering a growth of 15.36% in the total number of animals of various species (Livestock Census, 2012). The stray cattle in urban consumes road side waste or grabage instead of fodder and as a result quality of milk also gets deteriorated. They also create a incumbrance especially for the vechicles on roads. Many accidents have been reported because of stray cattle in cities. At present form total geographical area of gujarat, 3.40 % of used and unused fallow land is available. Also, 10.47 % of cultivable wasteland is available (Agriculture, 2008-09). This unused land can generate enough fodder for livestock.

Increase in livestock directly indicates that more forage is required for them and so more land is needed to cultivate good quality and quantity of forage. Variety of wasteland is available in almost all cities/urban areas and its size varies. To unriddle this issue wasteland can be utilized for forage production and forcing owners of stray livestock to use nearby developed wasteland as per capacity of wasteland.

OBJECTIVE

To know the managing stray livestock using wasteland through information mashups

METHODOLOGY

Accurate geo-reference data will assist in accomplishing above scenario. Stray cattle can be geo tagged with collars and their roaming location as well as owner can be identified. Based on statistics of stray livestock a map of clusters should be prepared. With the help of remote sensing and GIS nearby fallow/cultivable waste can be identified

or information for the same can be obtained from authentic source. In each piece of fallow or wasteland certain amount of stray cattle can be accommodated. This amount should be based on capacity of fodder production capacity of fallow or wasteland. So before deciding accommodation capacity of any fallow or wasteland its fodder generation capacity should be estimated or it should be developed and based on fodder produced, stray livestock should be accommodated. Google Earth, a technological icon in recent IT development,

provides a high degree of data integration with client data. The technology brings an exciting global integrated platform that can allows sharing of geographical information and facilitate management of stray livestock and converting wasteland for grass for stray livestock which are hinderance in most of the urban or rural areas. Clustering of stray cattle in nearby waste or fallow land provides data which can also help in providing preventive measures in times of calamities. Below fig-1 show flow acquiring location details and launching Google earth.

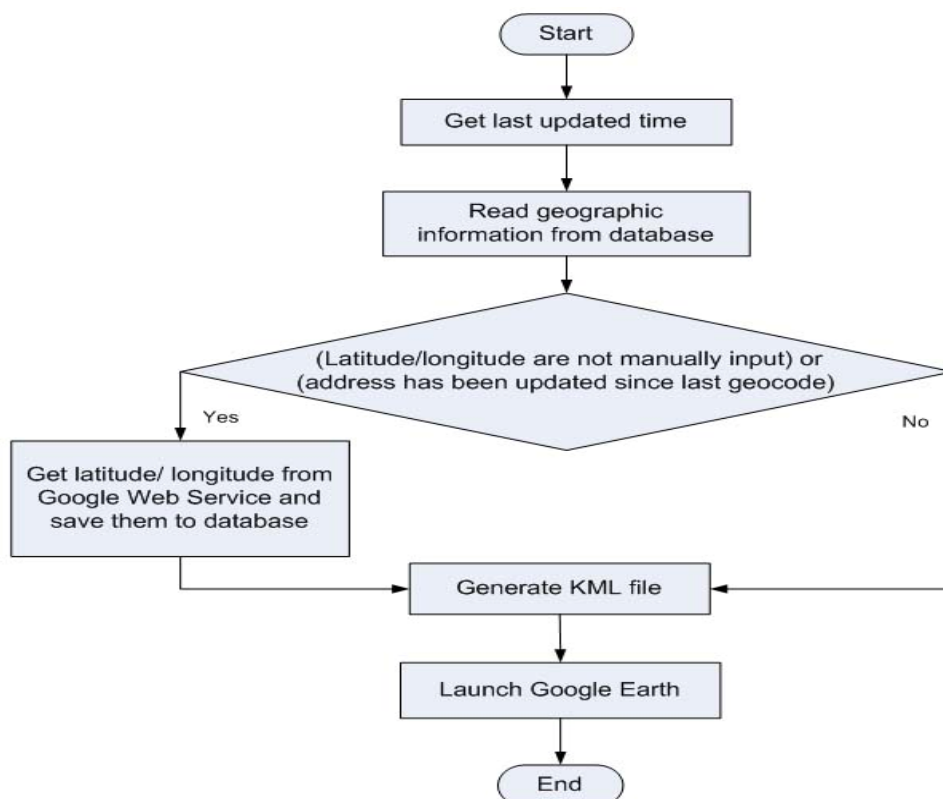


Fig.1: Flowchart for acquiring location details.

The process flow of mobile or web application is depicted below in Fig.2 : for this solution

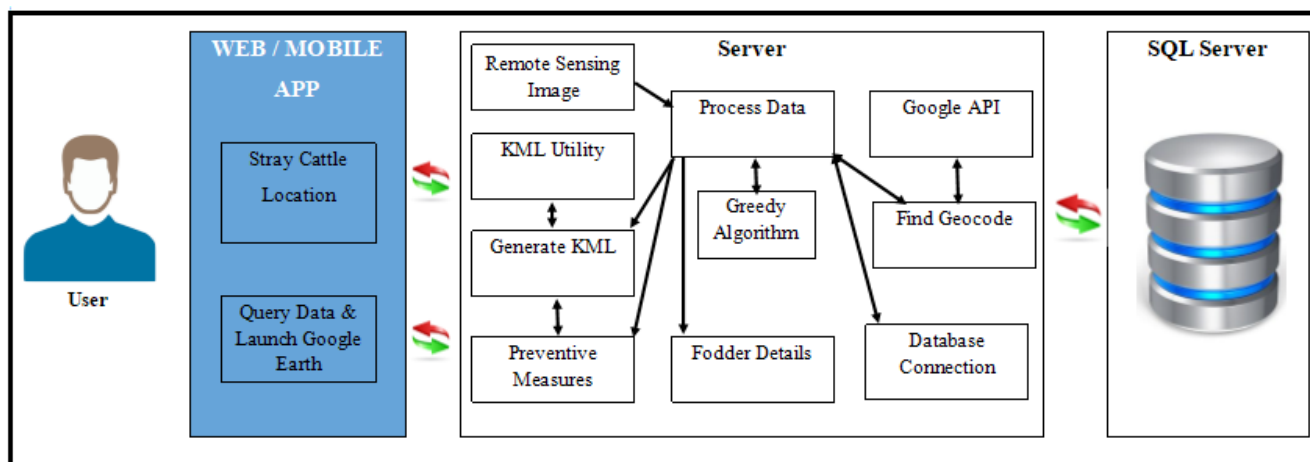


Fig. 1: Process flow of a system for managing stray livestock and wasteland in urban regions.

CONCLUSION

A mashup is becoming a new phase of application evolution that uses data from multiple sources and web/mobile as a platform for creating new kind of content rich and user experience applications. By providing fodder and designated space for stray cattle one can serve better life to them. As well as it will also result in reduction of road accidents. Existing waste and unused fallow land can be properly utilized for serving stray cattle.

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