

Quality Of Land Use Data As A Critical Indicator Of Ethical Business And Sustainability

Introduction

Ethics in Business is proven to be the harbinger of optimum profits and sustainability of business in the long run. But if the quality norms are adhered to, methodically there is no need to follow ethical codes separately. That is why Bill Clinton on his India visit (during Satyam's Hay day and when Chandra Babu Naidu was the CM) said 'To be good is Economics'.

Land is a primary input for all businesses. It determines the scale of operations, transport cost, sustainability of business and direction of businesses. It determines the limit and scope of profit motive. The resource availability for businesses is highlighted by land use data. Sanctions for defaulters, is determined on the basis of given data.

India has total land area of approximately 328 million hectares. Land utilization statistics are available for almost 93 per cent of the entire area that is around 306 million hectares. Taking into account the total land resources including hills, mountains, lakes, rivers and lands of all description, the availability of land per head in India comes to only 0.58 hectares. This has to be spread among the various uses like forestation, Agriculture, construction for various uses, Mining and speculation in real estate. There is need for procedures to be followed to take Government's permission to put land into any of the aforesaid uses. Much of these lands are subject to State Government's purview given the federal structure of India. We have Statistics department mobilizing data year after year in the economy as far as it is under the control of the Government and the corporate. Land allowed for private use has been found to be switching uses as per the direction of market conditions towards the most profitable use, without any consideration for National and global policy of land use. When the land is exhausted for the least priority use and if it happens to be most profitable, the businesses have resorted to illegal methods of encroaching on land allotted for other more important uses as per the national policy.

Citing the case of Land Use data in Karnataka, in spite of 'Bhoomi' and the digitized data on all uses including mining, the central information commission alleged incorrectness of land use data for mining. It expressed preference to mobilize its own data. All lands which are legally documented for other uses are rampantly used for mining. There is also wrong record of ownership of land. Land owned in the name of some are actually used by the others who use these names to accumulate and use land for their motives.

Causes of Wrong Land Use Data

There are various causes for wrong land Use data.

It may be just clerical data entry errors which may be corrected.

It may be due to illiteracy and ignorance which has led to lack of record keeping attitude altogether. The huge unorganized sector which is highest among the farmers does not keep records. The numbers get fuzzy with sub division and fragmentation.

Small scale industries have data on land. When they buy lands from farmers the issue spreads to the industries as well. They take advantage and pay less than market price to farmers to get agricultural lands

The above causes may be due to the less developed nature of the economy.

But there is corruption in the state machinery, lack of political will, nexus between Govt and land grabbers, illegal practices, under world deals which all indicate the need for attitudinal change.

There is lack of planning in all land uses.

Globalization has made the use of land transactions more complex. More so when applied to MNCs. The price offered for land by FDI has increased attraction of illegal transactions of land by real estate, mining lords, industrialists and administrators.

Sub continent like size of our economy has made it vulnerable to wrong dealings and also led to lack of data on land.

With technical strides and corporate led economic development, there are several measures taken to improve the quality of use land data:

Corporate Governance has been streamlined during the years after globalization

There is transparency act, Disclosure act which binds the corporate. Annual reports have put in the price paid and mode of buying land and subject it to auditor's scrutiny in addition to adhering to all government modalities. The companies have to disclose all assets to the stake holders.

The Govt notifies data among the public as per RTI act and only when there is no public objection, land is given for various uses.

There is digitized data available to all stake holders with ICT spreading fast from the 1990s.

Karnataka was the first state to introduce 'Bhoomi' during the beginning of reforms of 1990s to provide all land records on line. Andhra Pradesh enables all commoners to access Government data. There is clear denotification of land through on line e-procurement to reign in transparency.

Spatial technologies like GIS, GPS applying remote sensing to earth can give accurate land information to all those who need.

Land Use Planning Becoming Complex

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Classifications of land use patterns and need assessments are the primary methods in developing Decision Support System using GIS for land-use planners, decision makers.

Human actions involving biomass fuel consumption, land-use change, and agricultural activities all involve direct interaction with the global land surface. The extent of these interactions has prompted concern about the possible effects on the global physical, chemical, and biological

systems. In particular, large-scale changes in land use at rates unprecedented in human history are provoking considerable concern. Land-use change is frequently accompanied by alterations or changes in land cover, which may possibly contribute to subsequent environmental change. There is a world-wide increase in the impoverishment of large groups of people. Their livelihood is under serious threat because of the increasing population and the related pressure on land resources. Under these conditions, traditional methods of using and treating flora, fauna, water and soil impose serious risks. In the global scenario rapid urbanization is posing a serious threat to environmental sustainability. In a country like India, with its dense population, migration is an inevitable process as agriculture is fast becoming a non profitable sector. Wastelands are being unscientifically tapped for reclamation and for construction purposes.

Land-use planning is becoming complex and multidisciplinary as planners face multiple problems that need to be addressed within a single planning framework. Such problems include non point-source pollution, water allocation, urbanization, ecosystem deterioration, global warming, poverty and unemployment, deforestation, desertification, farmland deterioration, and low economic growth. Watershed-scale planning is gaining popularity among communities and agencies so that biological, physical, and socioeconomic components of the landscape system can be integrated into the planning framework. Hence land use planning needs to be supported with scientifically derived data on land availability and use. Such information can be derived by using Geo ICT is tools broadly categorized as Geographic Information System and Remote Sensing.

Scientific Land Use Planning Through GIS

Scientific land-use planning can be achieved through GIS (Geographic Information Systems), computer simulation, and spatial-temporal data modeling on present land use, alternative scenarios, and assessment of consequences. While classifications of land use patterns and need assessments are the primary methods in developing Decision Support System using GIS adopted by land-use planners, decision makers and public in general need to be constantly appraised of the importance of map based information. Other methods that planners use include economic incentives, institutional reform, and investment through multi-agency cooperative efforts. This information, combined with results of case studies or surveys, can provide helpful input to informed evaluations of interactions among the various agencies.

Remote Sensing, Ariel Photography, Global Positioning System, Total Station Survey, Geographic Information System used for Digitization, Topology Building and Analysis of various driving forces.

Remote Sensing technology for land use and land cover studies has the following merits:

Satellite Remote Sensing is a modern technology to obtain digital image data of the earth's surface in the visible, infrared and microwave region of the Electro Magnetic Radiation (EMR).

Increasing number of satellite and airborne platforms, along with advancements in computer and software technology, makes it possible to evaluate and quantify a large number of physical characteristics of water sheds.

Remote sensing with its high platform sensing, synoptic view and spatial multi spectral characteristics has wide ranges of applications

Conclusion:

As Adam Smith foresaw, we are now in the times with very scare land which we need to optimize. But land is a primary resource behind all human life. We have to keep sustainability as the watch word while putting land to use.

Past few years have seen tremendous strides in spatial techniques and ICT. So, the land use data at the behest of businesses and Government has turned out to be very accurate and more secure. Anomalies in land use data can be traced out and penalized with accurate evidence. But at the same time we have seen media projection of land grabbing for real estate, for mining, Diversion of even defense land for profitable use. Year 2011 goes down with many Heads of Govt named in illegal land denotification and imprisonment of a few. As this goes on the public mind has even arguing for land purchase for industries and mining with fair compensation to owners. But there are sustainability circumstances we are facing which rule that land should be given for mining only after strict legal scrutiny. Such a state of affairs in the economy where technology is spear heading accuracy while human mind set is not complying with needs of sustainability needs change of attitude of all those who use land. **All stake holders have to move on war path towards accurate land use data first to indicate right direction of land use. This is possible with only, education, community advocacy, media advocacy and by giving incentives to those who use quality data (like Golden peacock award perhaps) and strong disincentives to those who fudge data.**