

## A GENUINE COMPUTERIZED LAND RECORD



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Land Record System in our country has been evolved over centuries. It was there in rudimentary form managed / run by village officer who maintained and prepared different registers for village fields, transfer of land and collection of taxes. Sher Shah Soori attempted to reform and improved the system; i.e. created categories of land, measured and prepared schedule of land tax. The system was further improved upon during the Mughal era to establish detailed method of land tax assessment and collection. British were quick to put it on scientific lines to ensure better tax collection system.

Land Record System or *Patwari Nazam* that we inherited at time of independence was a good system well thought out and carried well documented procedures of its operation. Bad governance intrusion caused its operations to suffer many pitfalls and it will not be out of place to say that it landed in the wrong hands and corruption derailed it. Unfortunately neither the bureaucracy nor the country's leadership had time to take corrective measures. The *Patwari Nazam* was misused for political purposes thus destroying it to the extent that is the most hated department of the country.

Ordinary citizen suffered and land related crime flourished. It will not be wrong to say that large majority of the court cases in our courts are; one way or another connected to land related disputes and even murders.

The present government is making an effort to computerize the land records and put a handle to the *Patwari Nazam* but the fact is that the leadership has been ill advised by novice bureaucrats. Simply transferring hand written *Patwari* Ledgers into Excel format is not sufficient and it will not truly resolve the problem – we need a genuine Land Information System (LIS).

LIS will have fixed boundaries on the coordinate system of the country and complete data of the owner. For LIS the following are the basic ingredients:

1. The digitization of *Patwari's Latha or Deh Map*.
2. Fixing coordinate values to the land parcel boundary. It will be a steep uphill task since they are not to any fixed mapping scale.
3. High Resolution (0.5 m) Satellite Imagery.
4. Aerial photographs or LIDAR data.
5. Field verification of the ownership.
6. Soil classification leading to categorization of land for tax assessment.

The procedure will involve the following activities:

- Digitize the *Patwari's Latha or Deh Map*
- Super impose it on geo-referenced orthophoto map developed using high resolution imagery or aerial photographs or LIDAR data image. This task will require lot of efforts in the form of rubber banding, the term used to fit two maps of different or distorted scales.
- Land parcel is positively identified in the field in presence of the owner and owners of the adjoining parcels. Any claims or counter claims are resolved at the Village or Deh level group of elders / notables.
- Coordinates of all the corners of parcel are read from the image and they form integral part of the land data.

Complete data of each and every parcel of land shall be prepared on standard format it shall carry the following info / data:

- Full name of the owner including alias if any and surname / title.
- Father name and in the case of a woman her husband's name.
- Left Hand Thumb impression of the owner.
- CNIC No.
- Present residential address.
- Property number as per the Revenue records.
- Land category.
- In the case of tax payer – NTN
- Details of the property shall include area and coordinates of the property boundary (geographical-Latitude & Longitude and in Survey of Pakistan coordinates system.
- Copy of the orthophoto image.

The development of GPS technology is progressing at a very rapid pace and in a few more years one should be able to read coordinates from the Wrist watch and be able to locate exact boundaries of his/her landed property.

Since whole of this system involves computer and related software – the old *Patwari* will be replaced by a qualified GIS degree holder or qualified surveyor with relevant computer training / qualification.

It cannot be done / implemented in a hurry as our leadership is trying to score political gains. It requires well laid out procedures and trained manpower to put in place gradually one District at a time.

LIS is successfully practiced in very many countries of the Europe and Africa including Australia and New Zealand and there is no reason why it cannot be implemented in Pakistan.