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The Kakatiyas of Warangal occupied a place of paramount importance and interest in the history of South India in general and that of Deccan and Andhra in particular. They were the next to establish their sway over the entire Telugu speaking area after the fall of the Satavahanas and before the rise of the Vijayanagara empire. They presided over the destinies of Telugu speaking people from the tenth century A.D. to the first quarter of the fourteenth century A.D. The period can very well be styled in the medieval history of Andhra country as "The Age of the Kakatiyas of Warangal." The Kakatiya rulers paid much attention to land management and development of agriculture. They had excavated a large number of canals and constructed tanks. Many of the tanks and lakes at present supplying water to some thousand acres in the Telangana region were originally the works of the Kakatiyas. They attempted to increase the extent of the cultivable land by clearing forests and bringing large tracts of fresh land under the plough. Land was surveyed and measured. Cultivable land was classified into two types namely wet and dry. The government took sufficient care for the proper upkeep of the tanks and canals. Annual repairs of the bunds, removal of silt deposits on the bed and repairs of the canals and sluices are the main items of maintenance they undertook. Thus, the Kakatiya age witnessed the development of agriculture and prosperity.

With Orugallu (Warangal) as capital, the Kakatiyas ruled over the Telugu country from about A.D. 1150 to 1323 A.D. They occupied a place of paramount importance and interest in the history of South India in general and that of Deccan and Andhra in particular. They were the next to establish their sway over the entire Telugu speaking area after the fall of the Satavahanas and before the rise of the Vijayanagara empire. The period of Kakatiyas can very well be styled in the medieval history of Andhra country as "The Age of the Kakatiyas of Warangal." The Kakatiyas devoted much of their energies in promoting agriculture and safeguarding the land.

It is an admitted fact that population in general was not so dense in ancient and medieval times as at present. The feature is more predominant in the Deccan. Most of the villages in those days were primarily the settlements of peasants who under the benefaction of the concerned chiefs brought as much land as possible under the plough. The topography of the region provided innumerable streams, small and big, which were harnessed to fill the tanks for irrigation purposes. Therefore, the kings and their dependents had necessarily a tough task before them, in clearing the jungle for cultivation with the co-operation of the people. Founding of new villages in the region at suitable places with water resources became more necessary during the Kakatiya period. Several villages in Andhra desa were named Ganapavaram, after Ganapatideva. Rudravaram after Rudradeva, and Muppavaram after Muppamamba have come into being by reclamation of the waste and forest lands by the respective kings and queens of the Kakatiya family. To construct a village in those days was a pious deed.

Similars was the sanctity attached to the digging of a tank.

**KEYWORDS**

Promotion of Irrigation
Ganapatideva's preceptor Visvesvara Swacharya according to one of the Tripurantakam inscriptions from Prakasam district, purchased some forest land for 850 gadyanas and after clearing the forest, constructed a village named Visvanathapuram with a tank for the worship and offering to the god. An inscription found in the village Parada in Nalgonda District, dated A.D. 1144 records the creation of an agrahara of the same name where shares of land were assigned to several brahmans, setti, boya and some to the temple with the specific condition that the donees should neither leave the place nor sell away their shares, but they themselves should remain there and see the village prosper. The lands in these villages were exempted from paying taxes such as Siddhaya, ari and koru. Such incentives were granted in those days for the promotion of new settlements, reclamation of land and agriculture.

It was in the Kakatiya rule that the Deccan received proper attention in creating irrigational facilities. Divine prosperity is always there in Hindu ethics attached to the construction of tanks which in several codes is mentioned as one of the saptasanshans or seven deeds of everlasting virtues. The Kakatiya administration there seems to have been no special department or an officer to look after the works of irrigation. Most of these works like construction of temples, tanks and buildings were generally looked after by the ministers and subordinate chiefs. The Kakatiya kings themselves constructed some tanks. Prola I, according to the Mulpalpam inscription excavated a tank named Kesan-tatata after his famous title, 'e.g.,-gaja-kesari, i.e., lion to the elephant like enemies' Ganapatideva according to the Telugu work Pratapa charitra built several tanks at places like Nellore, the Telugu Choda temple, and at Ganapuram in Krishna District. Reference to the tanks named Ganapa samudram are of frequent occurrence in the inscriptions of this period and such tanks are believed to have been constructed and they irrigate some thousands of acres even today.

The most important piece of work in the construction of a tank was always the erection of an embankment strong enough to withstand the pressure of the water impounded in it. This was a comparatively easy task and naturally involved less trouble and expense in the hilly tracts than in level country. Unfortunately no details of the means adopted by the tank builders in the accomplishment of their task are described in any records of which we have knowledge. There is reason to believe that, in some cases at least they directly employed labourers and paid them wages in cash. In an inscription dated Saka 1215 at Tripurantakam in the Prakasam district, it is stated that the construction of a tank called Kumara samudram involved an expenditure of 241 madas whilst two
other tanks, both named Tripura samudram, cost 7 madas and 156 madas respectively. The government took sufficient care for the proper upkeep of the tanks and canals. Annual repairs of the bunds, removal of silt deposits on the bed and repairs of the canals and sluices are the main items of maintenance. We find numerous records which appoint certain persons for this purpose. Those persons are granted an income called dasavandha levied on the cultivators generally at the rate of one kuncha per each palnut of the gross yield. It is generally called pattu kuncha or cheruvu kuncha. There is another kind of remuneration called dasavandha manya. Some land irrigated under the tank is assigned to the tank keeper as manya.

Cultivable land was classified into two types, namely wet and dry. The lands which are irrigated by rivers, rivulets, tanks, canals and wells are called nadi-matrikas. Wet land is again sub-divided into paddy growing land or nir nela and garden land or toma nela. The lands which purely depend on rains are called nature fed or deva matrikas. Dry lands or deva matrikas are those where crops like millet, sesamum, indigo, mustard and castor were grown which depended on scanty rain fall. Forests and pastures (Budu) were rather more proportionate in extent than the two types of arable lands.

An inscription at Kakaratu dated 51225 records a monetary gift at the rate of one vastra or 1/16 of a ruka on every marrtu included in the acchukattu land as god's share. Here the levy is specified for each kaarLu either in Karitka or Vaisakhha season. Indirectly the specification furnishes the information that acchukattu lands are those which are brought under the plough and surveyed systematically for the purpose of taxation.

It is well known fact that methods of agriculture were almost the same as we find them till recent days before the introduction of mechanized farming. The indigenous tools and bullocks were used. According to the harvest seasons the lands are called Karttika and Vaisakha lands. Some lands are cultivated in the first season of the South-west monsoon which yield the crop in Karttika and the second type of lands in the winter season to yield the crop in Vaisakhha or summer. They are called tru garu or irupu lands. Auspicious occasions for sowing the seeds or commencing the new agricultural year or beginning the new harvest with regard to wet as well as dry lands, have been ceremoniously observed from early days. The two occasions generally fall on Erukka Punnama or the full moon day of the month of Jyeshta i.e. in the month of June, when the South-west monsoon sets in and the seasons becomes suitable for sowing the seeds. This is the main festival for the cultivators to begin the new year.

Reclamation of Land

The Kakatiya rulers not only took interest in providing irrigational facilities for the improvement of agriculture, attempted to increase the extent of cultivable land by clearing forests and bringing large tracts of fresh land under the plough. According to Kakatiyas in which local tradition preserved of several villages refer to the deforestation of much of area by command of Prataparudra and to the foundation of new villages on land they reclaimed from woodland and wild jungle. When Prataparudra marched against kayasta chief Ambadeva, he ordered Gugappa Ketu Nayaka and several other officers to cut down the forests near Kochcherilakota located in the Prakasam district and to build there the village of Duppipadu, modern Dupadu. An officer of the king's court called Srinatharaju of Anumakonda was placed in charge of this township. Likewise the country to the west of the Srisaila mountain corresponding to large part of the existing Nandikotkur of the Kurnool district of today was also at that time covered by dense forests which were cleared at the instance of the king, and several new villages were founded in the open spaces thus created. Officers in his service were appointed to look after the promotion of agriculture and provision of security. Similar accounts are related in the Kaifiyas regarding the foundation of a large number of villages in the Kadapa, Kurnool, Prakasam, and Nellore districts, these all bear the testimony to the real and intense interest taken by Kakatiya rulers particularly Prataparudra in increasing the area for cultivation which in turn paved the way for the strengthening the economic resources of his kingdom.

However it was not always easy to find people to migrate to the newly founded villages and settle there. To make people and entrepreneurial farmers to migrate to newly founded villages the Government encouraged by granting special privileges to the emigrants. The one of the effect to cultivate the land at first for a term of three years free from the payment of any rent or fiscal charges, from the fourth year onwards taxes were levied at low rates which were gradually raised year by year until they came up to the level of those obtaining in the older established villages. With the construction of a tank and providing other infrastructure like temple, road connectivity the formation of a full-fledged village is completed.

Crops

Paddy was the staple crop in all parts of the kingdom as it is today. The best known facilities provided by the numerous tanks, canals of small magnitude along the streams were by no means insignificant in those days. Every village in fact was self sufficient with regard to food grains, rice as well as other grains like millet, ragi, saja ponna etc. An incomplete kavya of an unknown author found on the hillock near Hanmakonda describes the lands of Antha as golden in colour with the riped paddy fields looking like the Meru mount of gold. All kinds of millets were grown in the wet or dry lands. Wheat, green gram, black gram, horse gram and some of the other husked grains were also cultivated and grown in the fields.

Thus the Kakatiya age witnessed the reclamation of land, foundation of new villages, promotion of irrigational infrastructure and adoption of systematic land survey paved the way for the development of agriculture. It helped in turn to strengthen the state economy.
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LAND MANAGEMENT AND AGRARIAN ECONOMY UNDER SATAVAHANAS AND IKSHVAKUS

ABSTRACT

The agrarian history and land management of Andhra region during ancient times has been a complex field of study. It suffers from lack of sufficient source materials and also the vagueness in the denotation of several terms occurring in the inscriptions.

Of the many aspects of economic history of the Coastal Andhra the one dealing with land management and development of agriculture is an important factor of economic history of Andhra.dess. Hence the land management is an essential element of the polity of the state. Better and rational land utilization paves the way for the development of agriculture and allied industries which in turn paves the way for economic stabilisation of the area and people.

Land defines the economics of utilisation of natural resources and thus is much more than the mere terra-firma. It includes "all the materials and forces, which nature gives freely for man's use in land and water, in air and light and heat." The socio-economic life of the people in any epoch is determined largely by their natural environments such as the mountains, the soils, the rivers, the flora and fauna and the weather phenomena.

Land management is defined as the process of managing the use, preserve, and development (in both urban and rural settings) of land resources. Land resources are used for a variety of purposes, which may include organic agriculture, reforestation and water resource management.

During the Nanda and Mauryan period that preceded the Satavahana rule in Andhra.

applied a single unified administrative system and provided congenial atmosphere for a systematic social structure in the region. Of course, the Satavahanas who succeeded the Mauryas in the Deccan, though followed the same policy what was followed by Mauryas, but deviated from the main system as and when the social, economic and religious needs warranted. Ikshvaku was who were the successors of Satavahanas followed the system that was prevalent in the region and they did not disturb it. Agriculture was the main occupation of the people under the Satavahanas and their successors i.e. Ikshvaku in the region under survey, in India at all times.

The term "agriculture" is used in its wider sense that is relating to land, especially cultivated land, its management. It is not used, never, in the more restrictive sense of "relating to tenancy" which it has come to acquire in popular usage in a later period. Land defines the economics of utilization of natural resources.

Land and its classification:

According to Arthasastra of Kautlya that the country (desa) between the Himalayas and the ocean had a variety of landscapes such as forests, villages, mountains, level plain, and uneven grounds, where works conducive to power and prosperity of the state could be undertaken. Thus the following types of land are met with in our sources. They are a) site for houses, b) fertile c) swampy or wet, d) plains, e) marginal farrows, f) low grounds, g) marshy, h) land beaten by force of river water, i) land frequently overflown by water, j) land in the vicinity of wells, k) land watered by regular rains, l) saline, fallow, barren and uncultivated tracts, m) forest, n) miry, o) rocky, p) uneven, q) desert, r) depressions in the ground and land full of pebbles, s) deep ditches, t) elevated or high-table land, u) grazing grounds, gardens and groves, and v) mines and quarries.

Frequent references to khetra, khetta or khettiyam occur in the inscriptions and the literary sources of the period under consideration. The term ordinarily means an arable field or tilled land. Epigraphic records * both royal and private explicitly mention the donations of fields (khettta) for the maintenance of the Buddhist monks and ascetics residing in the nearby monasteries and caves. Thus khetra or khetta was a fertile land. It included vast plains*, wetary or wet land (kedara), land on the bank or river, enjoying sufficient moisture, land frequently over-flown by water, land in the vicinity of wells, land watered by regular rains, marginal farrows between two rows of crops, low lands, and marshy places. Cultivation was done according to the fitness of land for all units of land were not of the same fertility.

Arable land (kshetra) was preferred to all other types of land, for the very existence of people depended on it. Kautlya holds that a limited tract with water is better than mere plain; the former being more conducive to the crops and fruits throughout the year. While describing the attributes of a good country, the same authority gives importance to fertile lands. Thus kshetra was a fertile land producing all kinds of agricultural products. Akriti, ushara, anuvrata, bhumas and khila were the terms used for uncultivated, barren, fallow, dry and salty types of land. It is curious to note that Megasthenes does not specifically refer to any such tracts, which however were quite common, in our period. They were reclaimed for cultivation, laying out irrigation measures, gardens and buildings for shelter. According to Milinda Panha the bad character of the fallow land could be known, if there was no sprouting up of the seed. In Bhasa's drama Panchaaratram, Sakuni warns Duryodhana that 'yet corn will grow in the salty soil, if Yudhisthira be king' A later authority Narada smruti explains that tract of land not under cultivation for one year is called ardabhakti (half waste), and that which has not been tilled for the last three years is termed as kha-
Thus it was a type of land not under plough at certain period and may better be taken as cultivate waste. The interpretation of the Vedic term kliya which is probably the same as khila, as “strip of land between the cultivated plots probably used by the owners of plots in common” is a hasty inference.

Another type of land is called the forest or jungle land i.e. vana, vansapara, and aranya. The Arthasastra mentions such uncultivable tracts under the title of bhumichardavahana. They were used as grazing grounds, hermitages or the brahmans, royal forests for the king’s sports, game forests for the people in the extremity of the country, reserved timber and elephant forest (dravyahastivana). Our sources give numerous references to the reclamation of forest or jungle lands and thus making them fit for cultivation and habitation. It may therefore show that bhumi chandra though apparently conveying the sense of a land having holes was not entirely uncultivable. Other types of land such as rocky, mily, uneven, desert, having depressions and full of pebbles were not fit for cultivation. However, the Arthasastra states that a good country should be free from all such types of lands which is not possible, hence the element of land management forms the policy in agronomy.

The terms sthala and parvata occur in the Arthasastra for uplands or high grounds. Building of bricks and mud were generally made on elevated spots to safeguard against floods. The Ramayana too refers to the high grounds and land with deep ditches. The Satyugama Jataka mentions a high table land in the heart of a forest, where silk cotton trees were grown. Thus sthala consisted of both the cultivable and habitable lands. In the outskirts of the village, there was a meadow or grazing ground i.e. gocara, or gavya for grazing of cattle. Besides, uncultivable lands and forests served as pasture lands. The Arthasastra indicates that great importance was attached to pasture land, where the cowherds tended the cattle of the village folk. The term vrraja-bhumika or vrraja-bhumi referred to in the Rock Edict of Asoka has been taken by Bulhier as “an outpost for city or village and a cowpen developed into a ranch and hence into a village”. Thus, right from the early period in the history of mankind the importance of the land and its qualities and utilities were identified for its better utilisation, consequently mankind developed techniques of land management.

Land Survey:
With a view to safeguard the interests of the landowners against frequent anomalies and to maintain the royal treasury by accurate land assessment and collection, the land survey was considered an essential unit of the state policy. Careful measurement of arable land (kaibhata) was known even in the earlier period. But the minute and detailed survey and measurement of all types of land such as cultivated, uncultivated, wet, fruit gardens, forests and pasture lands which Arthasastra introduces to us for the first time, was probably not made prior to our period. Thus, such detailed system of survey and measurement must have also furnished the state an adequate data of productive capacity of the people.

The Arthasastra tells that the total area of the village was ascertained by means of inspection of the village accounts and records, which were maintained by the gopas and sthanikas with separate entries of produce of different types of land after complete verification of the boundaries of the lands. Besides, survey was undertaken by the state officials like the Rajakaminikas and Rajyaka or Rajjuja-