Chapter – X

SUMMARY & CONCLUSION
LAND & PEOPLE

The Muneru river valley, the area chosen for the present study comprises of, a landmass roughly 200 km of area. It is drained by Muneru river a major northeran tributary of river Krishna along with its sub-streams such as Wira, Akeru, Katleru, which takes their genesis in Eastern hilly region of Warangal District and Khammam District and traverses before it enters Krishna District and as such be considered as one of the major tributary of Krishna river in the area past Nagarjuna Sagar. It is a life giving source to the people of the area under consideration from times immemorial. Muneru river is a rainfed stream, active mostly in rainy season but flows sluggishly during summer season. The land from gradually rises from the East to west i.e. the plain land surface to undulating broken chain of hills.

The region falls in the semi arid zone with a variation in temperature and rainfall. The temperatures varies between $20^0\text{C}$ in winter and $42^0\text{C}$ in summer. It witnesses most erratic rainfall with precipitation between 700 – 1000 mm. The western and northern border lands (upland zone) contain fertile lands such as Deltaic and Black regar soils and non-fertile soils such as red sandy, red loamy and red earths. Thus it is a rich reservoir of natural resources. Further the area to its southern side in Krishna District on the other hand, comprised of rich fertile soils viz. Black cotton and alluvial lands and constant rainfall (i.e. 700-900 mm) but however, contains limited natural resources.
The pre-neolithic adaptations in the area under consideration indicates that these cultures are more homely in that region collecting the forest produce such as fruits and tubers and hunting the wild animal for their subsistence. Hence, the pre-neolithic cultures made this zone as their abode and settled there. The Neolithic and megalithic and early historic settlements in the eastern and southern part of the area indicates that the early forming communities did not depend on the natural resources as their predecessors. But on the other hand they subsisted mainly on farming and pastoralism with an occasional hunting, fishing and collection of forest produce which has become a subserve factor.

SETTLEMENTS:

The early farming cultures of the lower Muneru river valley choose open air settlements close to the river banks and hill slopes akin to the settlements at Hallur, Hemmige and T.Narsipur and Nagarjuna Konda. The tops and flat lands of granetoid hillocks which are the grounds for settlements in Raichur and Bellari area is no more a feature in the selection of sites for habitation for the early farming communities of the area under present investigation.

Across the river banks the Neolithic folk choose such area which are free from floods and provide water supply throughout the year. Out of 72 sites, the river Krishna preserved the evidences for the early forming settlements only in 7 sites, while the Muneru river and its feeder streams contained the remaining 65 sites. The poor quality of the settlements on river Krishna might be due to
unpredictable foods, frequent shifts in the river course marshy lands etc. Even these 7 sites are located on the elevated land surfaces free from erosion and deposition. On the other hand, the Muneru river and its feeder streams were intensively occupied by the early farming communities because of various advantages. Theses streams have small catchment areas and flow in narrow incised channels and hence the water supply is predictable. Further, these rivers seldom overflow and cause floods and thus cause devostation of life and property but on the other hand make the water procurement easy. Besides, the diversion of water to lowland areas is easy in these rivers to grow small gardens since majority of the rivers have ‘U’ shaped meanders.

Besides the above factors, the settlement pattern of the early farming cultures is also guided by the fertility of the soil. The red sandy soils, the red loams and the red earths are not intensively occupied by the early farming communities. The clay content among the red sandy soils do not exceed more than 15% while the red loams and red earths are infertile and required frequent manuring and watering. Added to these factors these soils are situated in the arid dry climate region where the precipitation is always below 700 mm per annum. Probably due to the above ecological factors the early farming settlements are dispersed in these soils and the inter site distance is more than 10 K.M. Out of 12 neolithic sites, only 2 sites are located in these soils. Even these 2 sites are found adjacent to black cotton soils and thus shared the advantages of black
cotton soils as well. The infertile nature of these soils also showed its influence on the spread of the settlement.

The Neolithic and other farming settlements in black cotton soils are numerous. Of the 12 Neolithic sites, 10 sites are situated in these soils. The reasons for this intensive occupation of the black cotton soil is the self ploughing, self fertility and moisture retention nature of the soil. Besides these, the black cotton soil has spread like a table land interspersed here and there by the dolerite and basalt dykes which have provided the required raw materials for the fabrication of edge ground tools. Further, the black cotton soil area is drained by the Muneru river and its tributaries which have provided perennial water supply either through runnels or by water pools. Added to these factors the area is provided with a constant rainfall between 700-900 mm per annum. Because of the above factors the settlements in Black cotton soils are numerous during Neolithic and post Neolithic period.

In this context it may be mentioned that during the megalithic and early historic periods, the settlements not only continued in Black Cotton soil as it was before, but also extended to other areas such as red loamy, red earths as well. There occur as many as 13 sites found in Megalithic and early historic period in red soils. This might be due to the improvement of technological know how in the period. As already evidenced, the use of Iron is an important feature in the period and hence the digging, wells for water for drinking and to the fields with the help of Iron corw bar and other metallic tools might have prompted to the
people to occupy the lands which were hither to non entity. The improvement in the technology especially iron has no doubt had its impact on the settlement pattern of early farming cultures of Muneru river.

TECHNOLOGY:

There is not of much variation during Neolithic period in the stone tool technology and the choice of raw materials with the other parts of South India. However, in the range of tools and types there occur minor variations.

The shape and the position of the blade of the ground stone axes indicate that the Neolithic folk has preferred convex cutting edges over straight and oblique edges probably to reduce edge damage. Indications are however available on some edge damaged tools that some are reused by reflaking and regrinding at the edges. Further, some of the edge damaged tools are used as wedges. The rubbing stones three grinding methods were employed. They are – to and fro movement, circular rotation and forward and backward movement. The differences in shape and cross section among the rubbing stones is due to grinding methods employed.

Steatite disc beads are found in a limited sites but in a limited manner. These are considered to be exotic objects for a simple reason that these beads are found in a fully prepared condition and at no where these beads are found in different stages of preparation. In this context it is a fact that steatite disc beads are numerous at Ramapuram, Singanapalle (Sarma, I.K. 1972) etc., and found in
various stages of preparation. Further, steatite is not locally available at Muneru river valley. Probably, certain nomadic bands similar to those of present ‘Pusalavaru’ (Raghavaiah: 1969) were trading these beads in the Neolithic sites of Muneru river valley from the adjacent areas.

The presence of mat impressions on the pot bases belonging to date palm, read and thatch indicate that mat weaving was an important part-time vocation for the Neolithic folk of Muneru river valley.

**POTTERY:**

The pottery is handmade and prepared on gritty and fine clays. In the technique of preparation of the pottery, there existed close similarity between the Neolithic of Muneru river valley with those of the South Indian Neolithic. In typology also there is not of much a variation from the forms present in the site under present consideration with those that occur at Brahmagiri Ib, Piklihal Ib, hallur Ia & b, Tekkellakota Ia and b, Sangankallu II, T. Narsipur, Paiyampalle etc.

**THE ECONOMY & SOCIETY:**

The economic life of the people presents a close similarity to that of other sites in the South India. It ranges from hunting activities to primitive agriculture. Though there is no direct evidence on the practice of agriculture in Muneru river valley, on the basis of the presence of a large quantities of querns rubbers and mullers it may be inferred that some sort of cultivation was in
practice. Besides, the presence of the sites near meanders of the shallow banked streams where agricultural gardens easy to grow also provides similar impression. The discovery of the charred grains of horsegram (Dolichos biflorus) from Tekkellakota (Nagarjuna Rao and Malhotra 1965-91) and Ragi (Eleusine coracana) from hallur (Vistnu-Mitre 1971, 125-133) indicate similar agricultural practices in the present area under consideration. Farming was possibly carried out by jungle clearance with the help of edge ground axes and fire. The seeds were probably soan in the holes made with the digging sticks. This system which is known as digging and slash and burn method still survives among the tribal communities. The bladelets inserted to the wooden sickle might have been used for harvesting crops during Neolithic period.

Stock raising was another aspect of the economy of the people as revealed from the faunal remain from various sites. Bos indicus was the major representative among the bones recovered from the surface collections of Muneru river valley. Other species include Bos bubalis, sheep and goat etc. The evidences from palavoy and Hallur indicate that the cattle were used in draught work. Wild animals such as antelope, deer etc., were probably hunted. Probably the same practice was in vogue at Muneru river valley also.

SOCIAL STRUCTURE:

The society is stratified as could be seen by the presence of specialist crafts such as pottery, mat weaving, steatite disc beads, cultivation, stock raising,
preparation of stone tools during Neolithic period and the iron implements during Megalithic and early historic periods. Two classes among the people-affluent and poor could be recognized on the basis of the presence of luxury items like sophisticated thin vessels, spouted and painted vessels, ornaments like steatite disc beads etc. It is not known how the society functioned – either by community panchayat with a head agreeable to all – a system still prevalent among present tribals of the region under consideration.

**CHRONOLOGY:**

Unfortunately none of the sites in Muneru river valley is exposed for systematic excavation and hence no reliable Radiocarbon dates are available for the Neolithic, megalithic and early historic cultures of Muneru river. The stratigraphical scrapings at Kesarapalli did not yield reliable datable samples while the Nagarjuna Konda gave wrong dates because of the contaminated samples. In this circumstances one cannot help except to rely on the relative dating of the culture.

The radiocarbon dates for the early phase of the South Indian Neolithic is revealed in the excavated sites of Kodekal (2335 ± 105 B.C.) and Utnur (2170 ± 150 B.C.) which gave the earliest dates so far. The C. 14 dates for mature phase are Palavoy Iia 1965 ± 105 B.C., Tardel 1805 ± 95 and 1665 ± 120 B.C., Hallur Ia 1610 ± 105; Tekkellakota 1657 ± 100, 1515 ± 105 B.C. and T. Narsipur 1695 ± 105 B.C. The radiocarbon dates for the late phase is revealed at Sanganakallu
1490 ± 100, 1450 ± 100 B.C., Tekkellakota Ib 150 ± 135 and 1445 ± 135 B.C. T. Narsipur Ii 1445 ± 105, Hallur 1330 ± 105, 945 ± 100. The last mentioned date from Hallur is the terminal date for Neolithic culture which in course of time amalgamated into the succeeding megalithic culture. Except the solitary date from Palavoy the remaining dates of mature phase fall between 1800-1500 B.C. The above discussion tentatively provides an impression that the early phase lasted roughly between 2300-1800 B.C. mature phase 1800-1500 B.C. and the last phase III 1400-1050 B.C.

The cultural aspects of Muneru river valley such as the open air settlements on the river banks, prolific occurrence of a variety of ground stone tools and pottery, steatite disc beads, etc., provides a close comparison of Neolithic culture of Muneru river valley of Andhra with the mature phase and late phases of South Indian Neolithic which is present at Hallur, Tekkellakota, T. Narsipur etc., and datable respectively to 1800 – 1500 B.C. and 1500-1050 B.C. Probably the dispersal of Neolithic settlements in the nuclear area of Raichur and Bellari took place around 200 B.C. and hence a band of Neolithic folk migrated towards the east searching for arable areas along the Krishna river and settled finally in Andhra area and later at Muneru river valley around 1800 BC and continued upto 1000 B.C. until such time the megalithic culture over took the area.

All the Neolithic sites have yielded megalithic cultural evidences. This give an indication that the megalithic culture spread gradually in Muneru
river valley replacing all the primitive stone using technology of Neolithic period by metal using (Iron) technology. Since metal using technology has more advantages, the people gradually adopted to the new ways of life. Around 1000 A.D., all the area under present investigation at Muneru river valley become a part and parcel of megalithic way of life. The adoption of technological development especially use of iron during the megalithic period has helped the inhabitants to occupy new areas which are hither to non entity such as red soils, red earths; red loamy soils. The growth of big village settlements in these new areas during megalithic and early historic periods might be due to the exploitation of neo and eco facts to the best satisfaction of the then population.

The process of early farming settlements seems to have started at Muneru river valley during Neolithic times roughly in 1800 B.C. and amalgamated into megalithic culture around 1000 AD and continued upto the starting of early historic cultures in 500 B.C. at Muneru river valley. The dates of the cultural settlements at Muneru river valley given above are hypothetical and requires scientific digging.