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CHAPTER - 2

THE HARAPPAN CIVILIZATION

Salient Features

1. Urban Civilisation
2. Bronze Age Civilisation (Flourished during Circa 2500-2000 B.C.)
3. The largest Civilisation in geographical area of the ancient world.
4. Town-planning and well developed drainage system.
5. Gridiron layout and fortification.

Origin

1. Origin lies in various indigenous Pre-Harappan cultures.
2. Indus Civilisation was culmination of a long series of cultural evolution.
3. Emerged out of the farming communities of Sind and Baluchistan, Haryana Oujarat and Rajasthan.
4. Continuous cultural evolution from 6000 BC onwards in North West India which finally culminated in the rise of Indus Civilisation.

Phases of Development

1. Archaeological excavation & research have revealed phases of cultural development bursting up in the emergence of a full-fledged civilization at Kalibangan, Banavali and Rakhigarhi.
2. Began in Baluchistan & Sind are then extended into the plains.
3. These phases are Pre-Harappan, Early Harappan, Mature Harappan and Late Harappan
4. Extent of Harrappa:- From in North Manda (J & K) to 1600 k.m Daimabad (Maharastra.) in East Alamgirpur (U.P.) to 1100 K.m Sutkangedor (Bluchistan). Total Area was 12,99,600 Sq. k.m.
5. These phases of cultural evolution are represented by Mehargarh, Amri, Kalibangan and Lothal respectively.

Different Phases and Transformation

- Pre-Harappan - Mehargarh - nomadic herdsrnen to settled agriculture
- Early Harappan - Amri - growth of large villages and towns
- Mature Harappan - Kalibangan - rise of great cities
- Late Harappan - Lothal mature as well as decling phase.

Town planning

Facts on Town Planning

1. Features of Town Planning
   - A great uniformity in town planning, the fundamental lay-out of prominent urban settlements exhibits apparent similarities.
   - Based on 'Grid Pattern': streets and lanes cutting across one another at right angles dividing the city into a number of rectangular blocks. Main streets ran from north to south and were as wide as 30 feet. Streets and lanses were not paved.
2. Entire city complex was bifurcated into two distinct parts: the 'CITADEL' a fortified area which housed important civic and religious public buildings including granaries and residences of the ruling class and the 'LOWER TOWN', somewhat bigger in area and invariably located east to the former, meant. for commoners. Evidence of fortification of the lower towns as well from a few urban centres like Surkotada and Kalibangan and evidence of division of the city into three parts instead of two from Dhaulvira.
3. Use of standardized burnt bricks on massive scale in almost all types of constructions (an extraordinary feature of the contemporary civilizations), circular stones were used at Dholavira.
4. Elaborate and planned underground drainage system. Houses were connected to the main drain equipped with manholes. Mostly made up of bricks with mud mortar. Use of gypsum and lime to make it watertight. Cesspits were there inside the houses to deposit solid waste. Bricks culverts meant for carrying rain and

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storm water have also been found. Bricks were made in ratio of I 2 4. Size of Bricks - 7 C.m in Thick,

- 14 C.m Width

- 28 C.m Long.

5. Features of Houses
   - Houses were plain and did not exhibit, any refinement and beauty. So far as the decorative value of the houses was concerned, they lacked it. In general they gave plain and un-decorative look.
   - An average house comprised a courtyard and four to six rooms, a bedrooms, a kitchen, and a well presence of staircase gives indication of the second storey. Houses had side-entrances and windows were conspicuously absent. Except Lothal, where enterance were on main road and windows were found.
   - Houses varied from a single-roomed tenements to houses with a number of rooms and having even a second storey. Floors were generally of beaten earth coated with cowdung. Fire-places were common in rooms. Walls were thick and square holes in them suggest of use of wooden beams. Every house was separated by another by a narrow space of 'no-man's land'. Staircases were usually wooden but some made up of burnt bricks have been found too. Roofs were flat. Doors were set in wooden frames and the average width of a door was one metre. Square and rectangular pillars of burnt bricks were used in larger rooms, round pillars were absent. Kitchen was small in size. A round oven meant for baking chappatis has been found.

Art and Craft

Pottery

1. Mainly two types Plain pottery and Red and Black Pottery with decoration, the majority being the former.
2. Widespread use of potter's wheel made up of wood, use of firing technique, use of kiln.
3. Variety of Pleasing Design — Horizontal strips, Check, Chess-Board Pattern, Interesecting Circles (Pattern exclusively found), Leaves & Petals, Natural Motif — Birds, Fish, Animals, Plants, Human Figure — Rare (A Man & A Child found from Harappa), Triangles.
4. Pottery had plain bases. Few ring bases have been found.
5. Mainly famous colour of pot was pink. General design was on the red base horizontally black line on pots.

Seals

1. Seals are the greatest artistic creation of the Harappan people — cutting &polishing craftmanship is excellent.
2. No of seals discovered is approx. 2000
3. Made of steatite (Soft stone), Sometimes of Copper, Shell, Agate, Ivory, Faience, Terracotta.
4. Size— 4 inch to 2Y2 inch.
5. Shape — Square, Rectangular, Button, Cubical, Cylinder, Round
6. Two main types:-
   - Square — carved animal & inscription, small boss at the back.
   - Rectangular— inscription only, hold on the back to take a cord.
7. Colour — White appearance. Famous colour of seal was green.
8. Displays symbols - Circles, Crosses, Dots, Swastiks, Leaves of the Pipal tree.
9. Most frequently depicted animal - Unicorn
10. Other animals : Elephant, Tiger, Rhino, Antelope, Crocodile.
11. No bird were depicted on Harappan seal.
12. Purpose: Marked ownership of property. Used in applying to bales of merchandise. (Discovery of such seals beside the dockyard of Lothal).
13. Pashupati Seal has been found from Mohanjodaro. It depicts Siva seated on a stool flanked by an elephant, a tiger, a. rhinocerous, a buffalo and two antelopes / goats. Marshall identified it with Proto — Siva.
14. 'Persian Gulf Seals' have been discovered from Lothal.

TECHNICAL ACHIEVEMENTS

- Lost-Wax technique, used for making bronze images.
- English Bond method-Bonding system for bricks.
- Flemish Bond method-used for making staircases.
- Kiln Bricks — Evidence of Kiln has been found at Rakhigarhi

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- Water Harvesting System—Dholaveera
- For small measurement binary system and for big measurement decimal system were used in Harappa.

FINDINGS AND EVIDENCES

1. Cemeteries 'H' & 'R 37'	Harappa
2. Furrow mark	Kalibangan
3. City divided into three parts	Dholvira
4. Fragment of Woven cloth	Mohanjodaro
5. City without a citadal	Chanhudaro
6. Small pot (Probably an ink-pot)	Chanhudaro
7. Cities where lower towns were fortified	Kalibangan & Surkotada
8. Cities having both proto—Harappan and mature Harappan evidences and Harappan Cultural Phases	Kalibangan & Banwali
9. Dockyard	Lothal
10. Evidence of Rice	Rangpur & Lothal
11. Evidence of Coffin Burial	Lothal
12. Remains of Bones of Horse	Surkotada
13. Fire altars	Kalibangan, Banarvali, Lothal and Rakhigarhi
14. Terracotta Models of ships/boats	Lothal
15. Temple— like structure	Mohanjodaro
16. Human skeletons huddled together indicating violent death/massacre	Mohanjodaro
17. Houses having front entrances	Lothal
18. Bronze rod/stick with measure marks	Lothal
19. Single — roomed barracks	Harappa
20. Bronze models of'ikkas' and 'bullock-carts'	Harappa, Chandudaro
21. Pasupati Mahadev seal (As said by John Marshall)	Mohanjodaro
22. Medical Beliefs, surgery of skull	Lothal & Kalibangan
23. Seal depicting Mother Goddess with a plant growing from her womb	Mohanjodaro
24. Painting on a jar resembling the story of the cunning fox of panchtantra	Lothal
25. Harappan game similar to chess	Lothal
26. Copper rhinocerous	Daimabad
27. Copper chariot	Daimabad
28. Copper Elephant	Daimabad
29. Devastation by flood	Dhanhudaro, Mohanjodaro & Lothal
30. Collegiate building	Mohanjodaro
31. Assembly Hall	Mohanjodaro
32. Granaries	Mohanjodaro & Harappa
33. Steatite figure of a bearded man	Mohanjodaro
34. Bronze dancing girl (11.5 cm)	Mohanjodaro
35. Cylindrical seals of Gigamesh and Ekindu Mesopotamian type, three in number	Mohanjodaro
36. Warehouse	Lothal
37. Granary outside citadel	Harappa
38. Working platcform	Harappa
39. Sandstone male dancer	Harappa
40. Terracotta figurine of a horse	Mohanjodaro
41. Absence of mother goddess figurines	Rangpur
42. Bead-making factory	Chanhudaro & Lothal
43. Absence of seals	Alamgirpur
44. Shell-ornament makers factory	Chanhudaro, Balakot and Lothal
45. Metal workers factory	Chanhudaro & Lothal
46. Persian Gulf seals	Lothal
47. City having a middle town apart from the citadel and the lower town	Dholvira
48. A merchant house	Lothal
49. Impressions of cloth on sealing	Lothal

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50. Six types of pottery	Kalibangan
51. Evidence of double burial	Lothal
52. Evidence of pot-burial	Surkotada
53. Furnace	Rakhigarhi
54. Kiln	Rakhigarhi
55. Boustro phedon	Kalibangan
56. Camel bones	Kalibangan
57. Horse skeleton	Surkotada
58. Horse teeth	Rana Ghundai
59. Regalia	Kunal
60. Stone cut water reservoir	Dholavira

Indus Civilisatlon-General Aspects

CUSTOMS AND AMUSEMENTS

- A good number of toys — Clay Cart, Rattles, Bulls with mobile heads, Monkey with movable arms, Dices, Chessboard.
- Hunting, Fishing, Cock-Fighting.

COSMETICS

Tweezers, Ear-scoop, Piercer, Antimony rods, Ivory comb, Mirrors, Hair pins, Round buttons, Minor razors, Kohl pots and sticks

DRESS AND ORNAMENTS

1. Females were scantily dressed, they wore a short skirt especially figurines of mother Goddess.
2. The male wore a robe, sometimes embroidered.
3. Cotton was used, no evidence of Linen and Silk.
4. No evidence of footwear.
5. Special care of hair, reference of pony-tail, bun and braided hair.
6. Curley hair (clay figure from Mohanjodaro).
7. Beards (not very long), shaven upper lips in the figure of Yogi.
8. Necklaces, Beads, Girdle, Bracelet, Fillets, Finger rings, Bangles, Nose Ornaments, Anklets.

RELIGION

1. Predominance of Mother Goddess, denotes people's faith in fertility cult.
2. Male deity — Pasupati Shiva.
3. Animal worship (200l atry)— Unicorn bull and humped bull.
4. Tree worship — Pipal.
5. Fertility Cult — Phallus worship.
6. Nature worship.
7. Amulets and Talisman (Mohanjodaro)
8. Sacred bath — Water Cosmology

BURIALS

1. Bodies were extended in north-South direction.
2. Cemeteries of Harappa, Mohanjodaro, Lothal, Kalibangan, Rakhigarhi and Ropar located around the outskirts.
3. Three forms of burials — complete burial, Fractional burial and post-cremation burial.
4. General practice was body lying on its back and head to the north.
5. Coffin burial from Harappa.
6. Pot burial from Surkotada (Sacrophagus tradition).
7. Double burial from Lothal.
8. Pit burial from KaIibangan.
9. Cemetety —R-37 (Harappa).
10. Cemetery — (Post Harappan)

WEIGHTS & MEASURE

1. Standard weights and measures, uniformity and accuracy of denominations.
2. Weights were made of a variety of material — state, jasper, chert, alabaster, limestone and quartzile, but main1 polished chert.
3. For larger weights decimal system was used and for smaller ones binary system was followed.
4. The unit weight had the calculated value of 0.8 750 gms, the largest weights was 10970 gms.
5. A few specimens of scales used with the weights appear to be a very ordinary patterns comprising a bronze bar with suspended copper pens.
6. Broken Ivory were used as a scale in Chanhudaro.
7. Bronze scale was used in Lothal.

WEAPONS

1. Mainly offensive weapons were found in Harrappa.
2. Spears, Axes, Arrow-heads.
3. No defensive weapons were found in Harrappa.

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CROPS

1. Main crops: Wheat & Barley.
2. Others Peas, Rai, Linseed, Mustard, Cotton, Dates.
3. No evidence of sugarcane.
4. Rice was produced region (Rice husk has been found from Lothal & Rangpur).

ANIMALS & BIRDS

Elephants, Cats, Dogs, Camels, Asses, Buffalo, Dear, Rhino, Goat, Unicorn, Pigs, Tortoise, Fowls, Ox; Fish, Stag, Antelope, Patridge.

METALS

Copper, Silver, Gold, Jade, Lapis Lazulli, Lead. Tin, Ingot (Lead+Silver), Electrum (Silver & Gold)

TOOLS

Needles, Razors, Sickles, Fish-hooks, Saws, Chappers, Spades, Knoves, Chisels, Spoons

PROFESSIONS

Potters, Copper and Bronze workers, Stone workers, Builders, Brick-makers, Priests, Faience workers, Farmers, Traders.

RARITIES

Rice, Horse, Round Cylindrical seals, Plough, Whetstones.

ABSENCE

Iron, Winows, Tp1e, Fork, Hair dyes, Round columns, Silk fabrics, Swords, Sheilds, Metalic Money, Water closets Brick-Lamps, Footwares, Linen, Wool, Golden finger rings, Indigenous, Gradual decline.

LANGUAGE & SCRIPT

Yet not deciphered, pictographic or ideographic approximately 450 signs have been listed, written from right from left and left to in alternate lines style known as Boustrophedan, inscriptions are short.

TRADE

Evidences

- Sumerian text make a mention of Meluha which is identified with Indus Civilization and two intermediate trading stations Dilmun (Bahrain) and Makan (Makaran Coast).
- Appearance of Indus seals in the Mesopotamian cities of Ur, Kish,Susa, Tell Asmar, Lagash.
- Cylindrical seals of Mesopotamian type have been found in Indus valley (Mohanjodaro).
- "Persian Gulf Seals" of intermediate trading stations have been discovered from Indus region (Lothal).
- Discovery of"Reserved slip ware" of Mesopotamian type from Harappa & Lothal.

Internal Trade

With Saurashtra, Maharastra, South India, Rajasthan, ports of western UP.

Ports

Port was found in Lothal. This is the first man-made port in the world.

External Trade

With Mesopotamia (Modern Iraq), Persian Gulf region and probably Egypt.

Item of Imports

Gold, Silver, Copper, Tin, Lapis Lazuli,-Amethyst, Agate, Jade, Shells.

Items of Exports

- Agricultural products Wheat, Barley, Peas, Oil Seeds
- Finished Products Cotton goods, Pottery1 Beads, Shells, Terrocotta Products, Ivory Products.

Main Imports And Areas

Agate	Saurashtra
Amethyst	Maharashtra
Carnelians	Saurashtra, West India
Chalcedonies	Saurashtra, West India
Copper	Rajasthan (Khetri), South India, Arabia, Baluchistan
Gold	North Karnataka, Afganistan, Persia
Jade	Central Asia
Lapis Lazuli	Afghanistan
Lead	East India/South India
Shells	Saurashtra, Deccan
Silver	Afghanistan of Iran
Tin	Afghanistan, Jharkhand (Hazaribagh)
Turquoise	Persia

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Important Sites & Archaeologist

Sites	Year	Archaeologist
Harappa	1921	Daya Ram Sahni
Mohanjodaro	1922	R. D. Banerjee
Aniri	1929	M. G. Majumdar
Chanhu-Daro	1931	M. G. Majumdar
Suktagendor	1927	Aurel Stein
Kot Diji	1935	Ghurey
Ropar	1953	Y.D. Sharma
Banawali	1973	R.S. Bist
Kalibangan	1953	A. Ghosh
Lothal	1957	S.R. Rao
Alamgirpur	1958	
Rangpur	1931	M.S. Vats
Surkodata	1964	Jagatpati Joshi
Dholvira		Dr. J.P. Joshi and R.S. Bist

Area-Wise Distribution of Settlements

1. Sind -Mohenjodaro, Amri, Kot Diji, Pandiwahi, Tarkai Quila, Othmaujo Butha, Sukkur, Allahdino, Chanhudaro, Rohri, Lohumjo darn, All Murad, Jhukar.
2. Baluchistan-Mehargarh, Damb Sadaat, Killi Ghul Mohmmed, Rana Ghundai, Siah Damb, Moghul Ghundai, Anjira, Na!, Kulli, Leval, Dabar KOt, Balakot.
3. Afghanistan-Mundigak, Shortu Ghai
4. West Punjab-E-Iarappa, Jalilpur, Ganeriwala, Jhang, Saidhanwala, Derawar.
5. Gujarat-Dholvira, Lothal, Surkotada, Bhagatrav, Rangpur, Rojadi, Desalpur.
6. Rajasthan-Ka!ibangan, Siswal, Bara, Bhagwanpura, Hulas.
7. Uttar Pradesh-Alamgirpur, Manpur, Bargaon, Hulas and Mandi
8. Haryana-Banwali, Rakhigarhi and Kunal.
9. Punjab-Ropar, Sarai Khola, Kotla Nihang Khan.

Settlements and their Riverine Locations

Bhadar	Desalpur
Bhadar	Rojdi
Bhadar	Rangpur
Bhogava and Sabarmati	Lothal
Chenab	Manda
Ghaggar (Left bank)	Kalibangan
Hindan	Alamgirpur
Indus	Chanhudaro
Indus	Gumala
Indus (Left bank)	Kot Diji
Indus (Right bank)	Mohenjodaro
Pravara	Daimabad
Rangoi (Saraswati)	Banwali
Ravi (Left bank)	Harappa
Sutlaj	Kotla Nihang Khan

Other Related Facts

1. Mandu (J & K) Dalimábad (Maharashtra) Sutkagendor (PAK) and Alamgirpur (western U.P.) are the northernmost, southernmost, westernmost and eastemmost points respectively.
2. The four Harappan sites in descending order (the first being jhe largest) are:
   - Mohenjodaro in Sind (Pak)
   - Ganeriwala in Bahwalpur (Pak)
   - Harappa in West Punjab (Pak)
   - Dholvira in Gujarat (India).
2. The largest Harappan settlement in India is Rakhigarhi in Haryana.
3. Mepotamian literature stopped mentioning Meluha by the end of 1990 BC — Indicates closure of trade links.
4. Crossed furrows, widely spaced in one direction and closely spaced in other, gram or seasmum sown at the former and mustard at the later have been found at Kalibangan.
5. The 'great bath' ofMohenjodaro measures l2 x 7 x 3 metres.
6. Harappan wheels were solid without spokes.
7. Harappan Weight & Measures systems were as follows:
   - Of lower denomination — followed Binary system — 1, 2, 4, 8, 64 . . .160

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- Of higher denomination — followed Decimal system — 16, 320, 640, 1600, 3200

8. The largest number of settlements are in Ghaggar — Hakar valleys.
9. Principal Harappan Crops and the areas of their distribution are as follows:
   - Barley — Rajasthan
   - Wheat & Barley — Sind & Punjab
   - Rice & Millet — Gujarat
10 Sinage on wall — Dholavira
11. Double fortification — Kuntasi
12. Thirteen roomed house from the overlap period-Bhagvanpura
13. Double spiral headed copper pin-Manda

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