

Introduction to Urban Planning
Prof. Harshit Sosan Lakra
Department of Agriculture and Planning
Indian Institute of Technology - Roorkee

Module No # 04

Lecture No # 16

Contextualizing Cities (Egyptian, Mesopotamian, and Indus Valley Civilization)

Welcome to course introduction to urban planning in this session today we are going to contextualize our cities. We are going to review their employment we shall see how did we reach here? Where we see such giant cities we will walk through narratives of evolution from the perspective of urban planning. We shall explore when did all this urban cities came into picture and where did to exist. How did we progress and how did we reach here where we say that our future is in cities?

In the current cities and settlements we see that how our life choices are guided by innovation with regards to tools and technology discovery perspectives. We develop about society, environment and progress we make. Invention discoveries perspective and progress guides how we choose to live? Where we choose to live? What we choose to do? How we choose to interact with each other where we choose to travel how frequently we use to travel? How we decide to organize ourselves and so on.

It was same since the beginning some cities fails some succeeded there were innovations which we still continue to adopt in our cities. There are so many aspects we can learn from reviewing the employment of our cities. At this juncture when it is estimated by the old population study that by 2050 the world will be more than two-thirds urban there is nearly 68% roughly the reverse of the global rural urban population distribution of the mid twentieth century.

Therefore it is in important for us to learn from our journey to plan for our future our people and our environment. For that reason we study the employment of the cities.

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COVERAGE

- ① **Emplotment**

- ② **Mesopotamian Civilization**

- ③ **Egyptian Civilization**

- ④ **Indus Valley Civilization**

Try to contextualize the current cities we see today and set a base for present and future interventions. Accordingly the learning outcomes which are expected would be that after completion of the session.

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THE LEARNING OUTCOMES

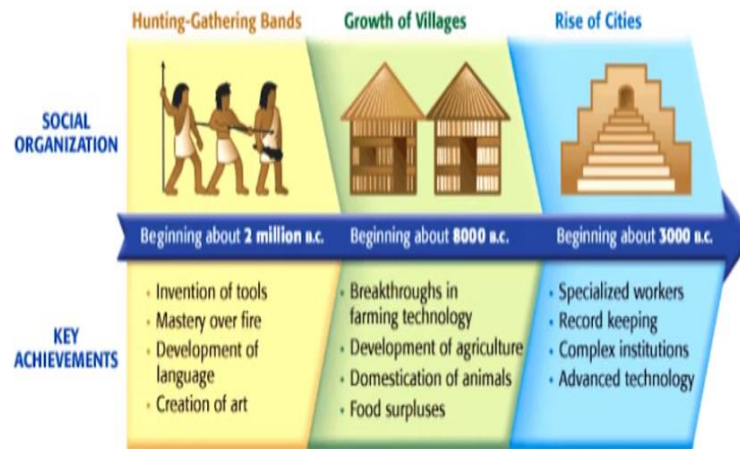
- ① **Able to identify the Phases, Specific Elements of Urban Planning in the Settlements**

- ② **To Distinguish and Identify the Unique characteristics of Mesopotamian, Egyptian and Indus Valley Civilization**

You should be able to identify these phases we should be able to label all this specific elements of the urban planning in the settlements. You should be able to distinct them and identify the unique characteristic and how do they really guide and what do we really learn and adopt from these settlements which we study.

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EMPLOYMENT



(Duncan, 2018)

Like we study today in the beginning we evolved as hunting gatherer band in about 2 million BC with the invention of tools mastery over the fire with the development of language and the creation of art. As we can see in the left hand side of the illustration by Duncan we led a nomadic life and moved from place to place for hunting and gathering. We started living a settle life around 8000 BC with the break through informing technology we learned how to grow food rather than gathering it.

We learned how to domesticate animals they experienced food surplus because of which we need to store protect exchange have a system in place to manage all these things. These led us to settle in one place then being on a regular move and also choose to be close to the water and add element like store defense and market place to our settlements. In this period around 7500 BC ask even by professor Jason Loger we think the development of first form of city Cattal Hayuk now in turkey happened .

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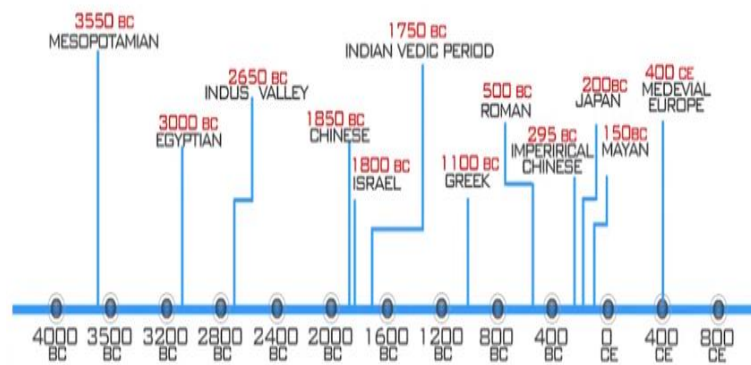
Catal Hayuk, Turkey

(Lugar, 2021)

In the rendered image you can see proximity to water which also acted as defense. You may be able to reflect to current cities planning elements which you can see in here. Likewise we see that as we attained understanding on specialized workmanship and organized ourselves as specialized workers. We learnt to keep records learn to document we learn to organize ourselves through complex system of institutions and we use advanced technology including technology in construction.

This led to rise of cities in 3000 BC this led to rise of cities in 3000 BC and mostly this period.

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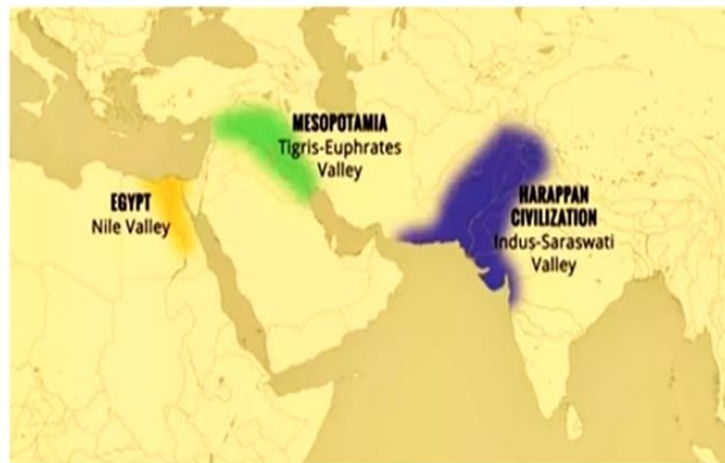


Chronology of Ancient Civilizations

We see the record of many civilizations include including Mesopotamian Egyptian civilization Indus valley civilization, Vedic period, Chinese civilization we see Israel Greek and Roman civilization, Japan, Mayan and Chinese Civilization. We see Israel, Greek and Roman civilization, Japan, Mayan and Medeval or Europe. These civilizations had huge influences on cities of today many innovations of that time we can see even today in our cities.

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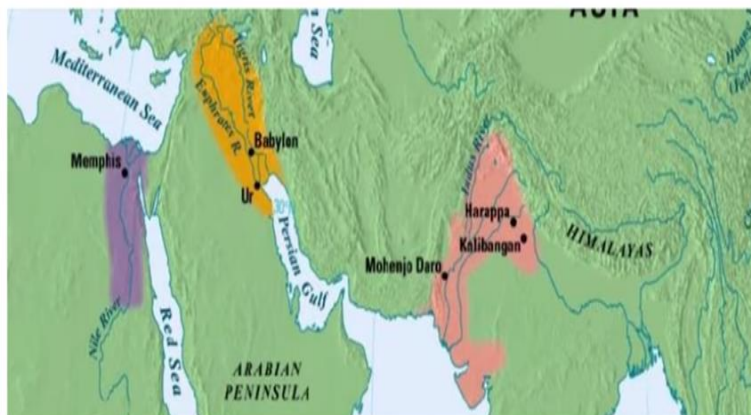
RIVER VALLEY CIVILIZATIONS



<https://www.quora.com/What-did-the-four-ancient-River-Valley-civilizations-have-in-common-How-did-they-differ>

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RIVER VALLEY CIVILIZATIONS



Geographical Spread along with Rivers

(Robertson,2021)

Looking at the early or ancient documented civilizations such as Mesopotimian civilization, Egyptian civilization, Indus valley civilization all of them developed along the river.

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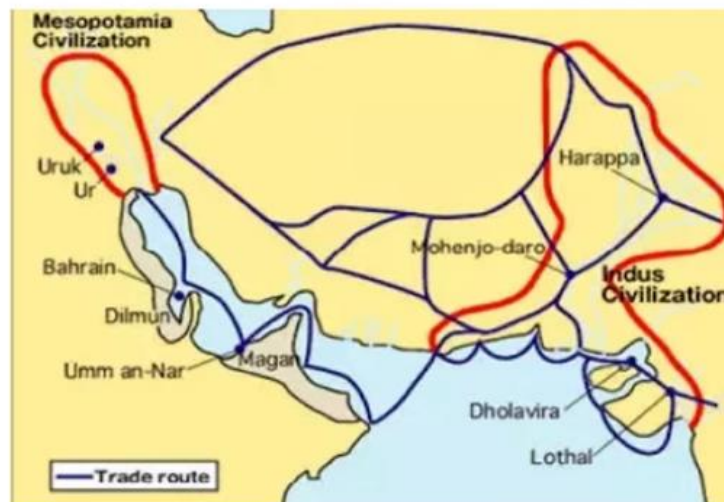
RIVER VALLEY CIVILIZATIONS



Geographical Spread along with Rivers (Shawn Wilson, 2015)

Mesopotamian civilization developed along the Tigris river Egyptian civilization developed along Nile river, Indus valley civilization developed along, Indus, Sindhu river. We can call them as river valley civilization all the river valley civilization survival growth and success of economy relied on agriculture. Majority of population were farmers unlike; today where non-agriculture based economy is one of the prime indicator urban in many of the countries.

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Trade Routes among various civilizations

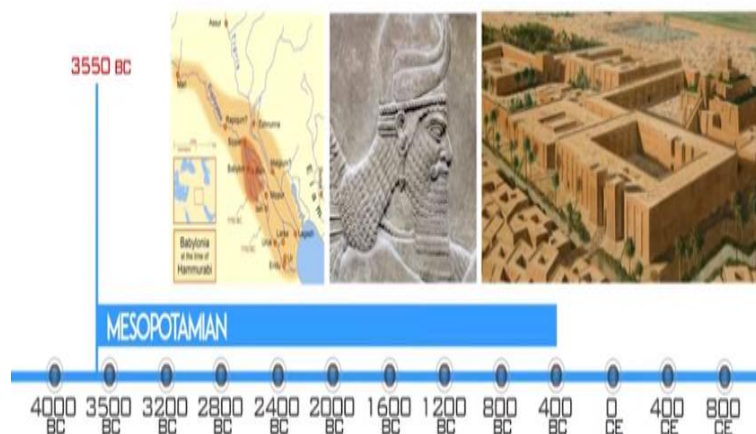
We further see interactive trade, were observed in Indus and Mesopotamian Civilization. Most river valley civilization declined around 1200 BC.

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MESOPOTAMIAN CIVILIZATION (3550-550 BC)

Now looking at the Mesopotamian civilization which as per documentation shows spread from 3500 to 550 BC.

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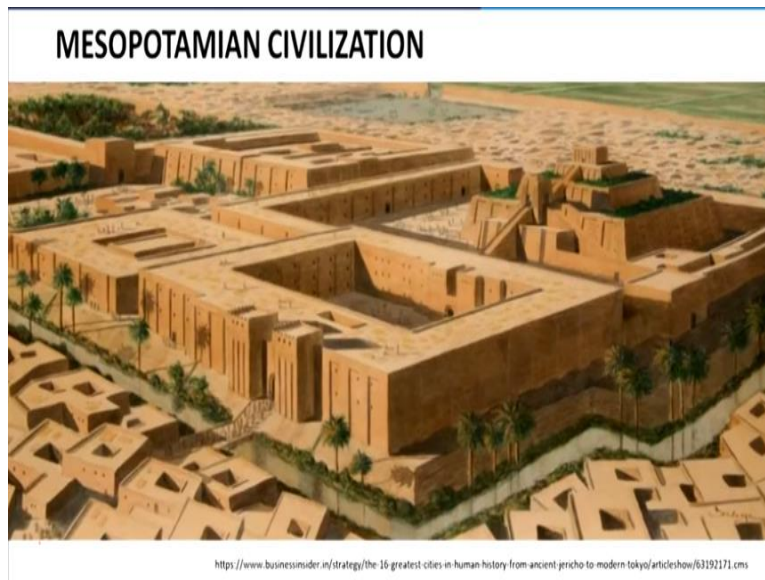


Mesopotamian Civilization on Time-Scale

Mesopotamia is Greek word that means the land between 2 rivers Mesopotamia does not refer to any particular civilization over the course of several millennia. Many civilization developed collapsed and were replaced in this region including, Sumerians, Accordians, Babylonians and Assyrians. Initial settlements on northern plains with movement; out to the southern and west from 6000 BC.

Most of these developmental especially between 2 rivers the Tigris and the Euphrates around 3500 BC small agriculture pottery making and cloth weaving in villages were transmitted through societies of cities. Initial settlement on northern plan with the movement out to the southern and the western from 6000 BC cities were located on the river banks and surrounded by the land scape with circles of irrigated agricultural land.

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The area supported per individual was estimated between 0.9 to 1,5 hectare per person the daily travel distance from city to countryside did not exceed 3 to 4 kilometers from maximum agriculture productivity. You may reflect upon the current density which we use to define urban today in our countries and the distance we travel to our workplace and current types.

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Mesopotamian Civilization



Render of Mesopotamian City

(Imgur, 2019)

It is said that Mesopotamian cities were some of the first examples of urban planning though the discipline was visualized very late in timeline. The Sumerians were the first society to construct the city itself as a built form. The city was partly planned and part of its growth was organic we can see the elements of flexibility.

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Mesopotamian Civilization



Render of Mesopotamian City

(Learnodo newtonic,2018)

Planning is evident in the walls height temple district main canal with harbor and main street. You may see that the elements of planning such as division of spaces such as residential, mixed use commercial and civic spaces were witnessed in these cities. As we see that in this period record keeping was also started.

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Mesopotamian Civilization



We see evidences of Sumerians record of real estate transactions record of property value and measurements. Because of these records the historians have been able to reconstruct much of the urban growth pattern density property value and other metrics from cuny form text sources. They were proud of this achievement as is attested in these epics of Gilgmesh.

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Mesopotamian Civilization

URUK



Render of Mesopotamian City : URUK

(Science magazine digital, 2019)

As per the literature at the end of the fourth millennium URUK was said to be largest city in the world estimated by some scholars at 400 hectares the size of Rome in the first century of our common era.

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Mesopotamian Civilization

URUK



Plan of URUK



Ziggurat of Inanna

(Businessinsider,2021)

In the image you can see the size of circles covering the area URUK was centered around the important temples Ziggurat of Inanna the great goddess of love and war.

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Mesopotamian Civilization



Canal-Acting as a Moat

(Learnodo newtonic,2018)

As you can see in the image at the center the city produced beautiful sculptures depicting the temple flocks of sheep's and goats. The city is believed to have been surrounded by moats. So we see that how the religion development in creative representations innovations in the building technology greater understanding of spatial organization at last scale can be seen evolving here.

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Mesopotamian Civilization

City UR



Render of Mesopotamian City : UR

(Mozaik Education, 2018)

We further see that this city of our city known to Abraham another prophet who lived long before Mohammed was founded on the river Euphrates which had surprising progress in civilization. It was here that the Mesopotamian king are Namo had erected the famous Ziggurat the holy mountain. The entire city was surrounded by canal acting as a moat we also see tile streets and also see narrow streets in the place.

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Mesopotamian Civilization

ZIGGURAT AT UR NAMMU

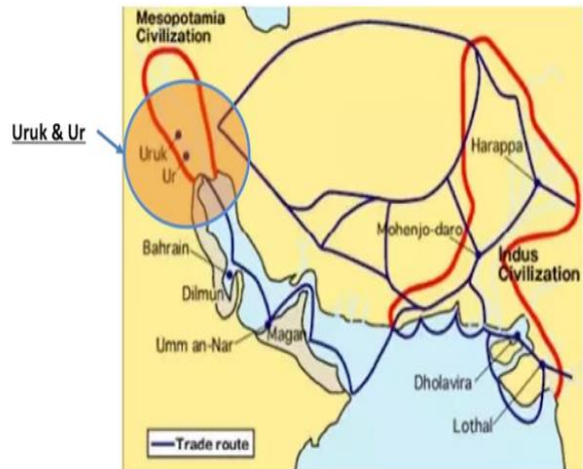


Render of Ziggurat at UR : Nammu

(Ancientorigins.2021)

In the image you can see Ziggurat Holy Mountain at UR we see how we were moving from food to the spiritual or the religious centric cities. The discovery of Sumerian city of UR has shed light on the lives of early Mesopotamians.

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Uruk & Ur had its trade links from Arabia to Indus Valley.

(Indian History, 2017)

The rich had double storey houses the city of UR had its trade link with Arabia to the Indus valley. It was an important warehousing center meanwhile the river Euphrates which had brought so much glory prosperity to earth suddenly changed its course and started running some 14 kilometers east of the city. As a result the canal became dry lost its shipping and ultimately the city lost its value.

So here we see how we learn about organizing other religious places housing support structures and infrastructure to support trade. So we see the canal coming in and how the trade coming in with that and how with sudden unexpected scenario. How the entire city the value goes down with the sudden change in the river stream. Now looking; at the Mesopotamian city Babylonia around 1780 BCE as king of the small town of the Babylon how more happy united sudden Mesopotamian into a single empire.

Hamuraphi's death caused his empire to fall apart despite this the city of Babylon was to remain the capital of southern kingdom.

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Mesopotamian Civilization

Mesopotamian City : Babylonia



King Hammurabi's



King Nabonidus



Persian king Cyrus

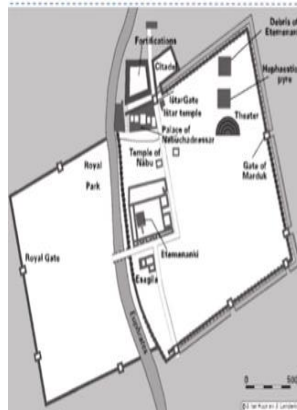
(Internet, 2021)

60 years of Babylonian supremacy was threatened during the reign of Nabonidus when Mesopotamia was faced with the expansion of yet another eastern power the Persians. In 1539 BCE the armies of the Persian king reviewing the pattern of urban, planning in this in Babylon. We see massive size of settlement compared to previous settlements.

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Mesopotamian Civilization

BABYLONIA



(Livius, 2017)



(Casals, 2019)

Map of Babylon in the Hellenistic Age

It shows the developed ability to govern large population and do intermix lot of components layers in the plant area. We also see the location of city near river in order to control waterways we see the new urban farm citadel with close linked temple palace unit separate from rest of the town by height or walls. We see geometry coming in the lay out Mesopotamian tradition of universe as square reflected in the ground plants.

So we also see the how the geometry came up here further we see that they had complex central administration with all security system like gates.

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Mesopotamian Civilization

BABYLONIA – ISHTAR GATE



(Worldhistory, 2021)

We see explicit integration of artwork in the planning and built environment they also had devoted spaces for gardens, grazing, lands and so on.

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Mesopotamian Civilization

BABYLONIA – HANGING GARDEN



(DeLong, 2018)

In the image you can see beautiful hanging gardens shows the knowledge of landscaping, building and planning. We see how politics, safety, beauty, water, religion, trade all aspects were incorporated in the planning and the understanding was evolving by this time.

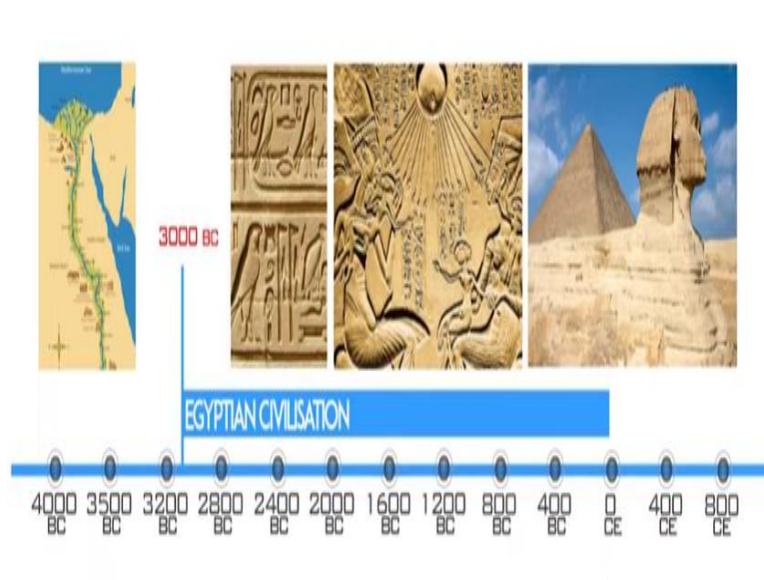
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EGYPTIAN CIVILIZATION

(3000-150 BC)

Now let us see the Egyptian civilization which stretched from 3000 to 150 BC.

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EGYPTIAN CIVILIZATION

Geographic Spread



(Journey to Egypt, 2021)



(Marie, 2018)

Ancient Egypt was a civilization of ancient North Africa concentrated along the lower reaches of the Nile river situated in the place that is now the country Egypt. Ancient Egyptian civilization followed e-historic Egypt and merged around 3100 BC with the political unification of upper and lower Egypt under Menace. Egypt has sometimes means regarded as civilization without cities.

This view stems largely from the comparison with the contemporary Sumerian civilization where most people lived in large dense urban settlements. There are the prototypical cities of the ancient world we see different types of cities in ancient Egypt.

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EGYPTIAN CIVILIZATION

Types of Cities in Ancient Egypt

Egyptians divided the cities into two types:

- NUT
- DEMI

Nut : City which grew and formed Naturally under the Influence of Nature and Climatic Conditions.

Demi : Cities that were Built and settled according to predefined Planning

Examples of these cities were evident in the city of **Lahoun**, **Tell el-Dab'a**, and **Deir al-Madina**.

The ancient Egyptian divided the cities in 2 types the first the first type and they called it NUT and second type they called it DEMI. NUT refers to the city which grew and formed naturally under the influence of nature and climatic conditions. DEMI refers to cities that were built and settled according to the predefined planning.

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An examples of these cities were evident in the city of Lahoun, Tell el-Dab'a and Deir al-Madina. The Dab'a hill area is one of the main cities in the early middle kingdom around 2000 BC. Lahoun returned to reign of Sanrusat 2 of the twelfth dynasty the town lies on the banks of Nile canal on the road to Feyon Oasis. The city is the home of the workers who build the Pyramids of Sanrusat with some priest who kept the royal right.

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EGYPTIAN CIVILIZATION

LAHOUN CITY



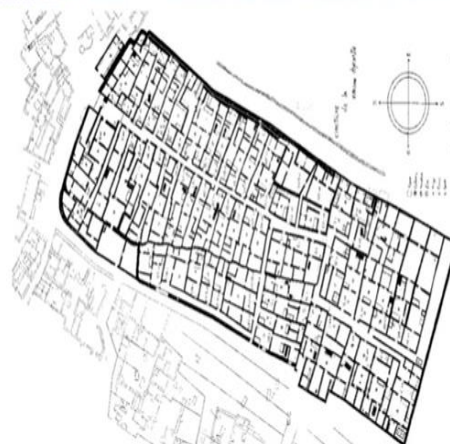
(Irek., 2021)

Flinders Petrie who discovered the city of Lahoun said the streets were designed in an organized manner as well as the sewerage system to transport dirty residuals outside home. Due to the interest of ancient Egyptians in the category of workers and peasants of the time who; in turn contributed greatly to the construction of ancient Egyptian civilization. The village of workers was built in the monasteries of the city which was located on the west bank of the Nile and the city of Taiba was first constructed under Tutmosis I of the nineteenth dynasty.

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EGYPTIAN CIVILIZATION

DEIR EL-MEDINA



Plan of Deir el-Medina in the 18th and 19th Dynasties.

(FAO, 1939)

Whose purpose was to shelter the workers who had built tombs in the valley of the king. So you also see how the construction for the working class was also initiated in this period. Further we

see that it was found that the design of Deir EL- MEDINA contains the main street and is surrounded by wall made of mud bricks.

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EGYPTIAN CIVILIZATION

DEIR EL-MEDINA



(Madainproject,2021)

It is decorated on both sides by the rows of houses which are connected with almost a single roof. After many expansions of the city the number of houses reached 120 and it had 600 inhabitants. So we can see how the row housing also coming in the picture here.

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EGYPTIAN CIVILIZATION

Patterns of Urban Planning in Egyptian Civilization

- Residential structures arranged in an **Orthogonal pattern** and approached by a **right-angled grid** of streets and alleys.
- Town walls were aligned with the adjacent **Ritual Complexes**.
- Towns contained their own **Administrative and Religious Buildings**.
- Residential houses were oriented toward the **Interior of their lots**.
- The outer walls also often contained **Gardens and Pools**.

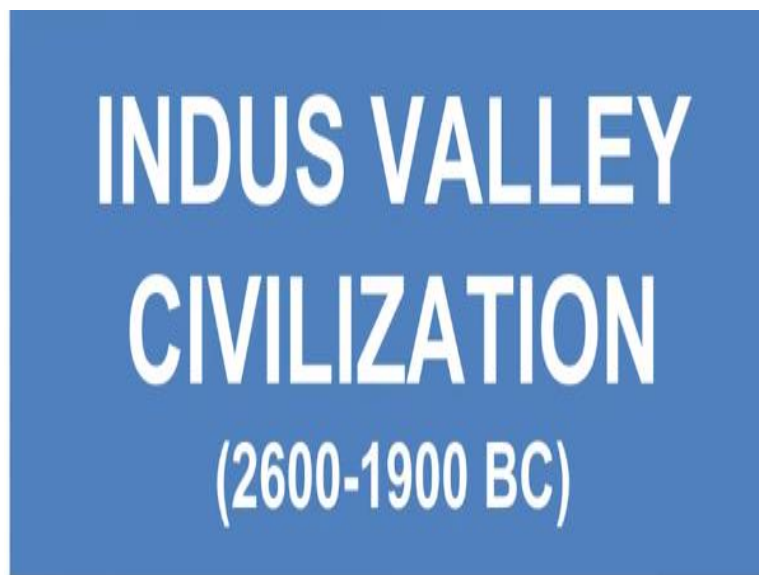
Looking at the pattern of urban planning in the Egyptian civilization towns comprised of blocks of residential structure arranged in an orthogonal pattern and approach by right angle grids of streets and alleys. We see it also facilitated the army structure and ease of movement from area

to other. Town walls were aligned with the adjacent ritual complexes towns contained their own administrative religious buildings.

Residential houses were oriented towards the interior of the lots and included large reception living rooms designated bathrooms sleeping quarter's storage areas. Preparation and sometimes residential craft areas the outer walls also often contain gardens and pools. So you can see now how the residential areas were getting complex with the living spaces the sanitation facilities the elements for storage and then also the kind of craft and other areas was also coming in and also all the spaces were being integrated.

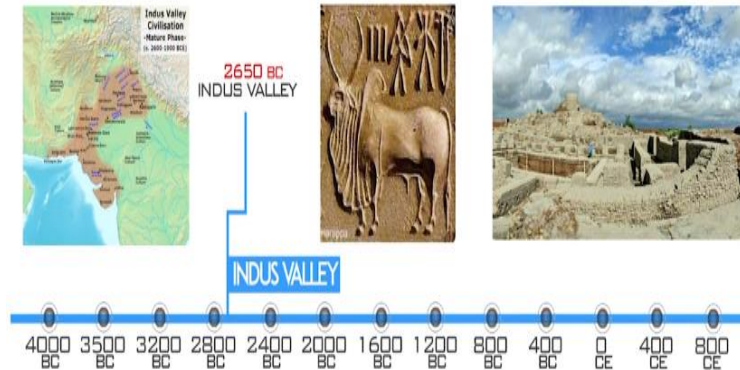
So we see that we evolved in understanding of organized form also sanitation system in this period which we are trying to deal with even today.

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Now we look at Indus value civilization the earlier date was 2600 to 1900 BC however the recent study done by IIT Kharagpur and ASI scientist it is said to be 8000 year old civilization or between the with falling between 7000 BC to 5000 BC.

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So according to that it is one of the oldest of the first found elements of an civilization and planning intervention.

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Indus Valley Civilization

Geographic Spread

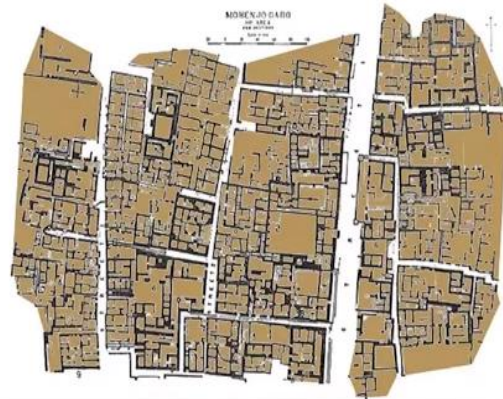


<https://www.objectiveias.in/harappa-geographical->

Indus valley civilization also referred to as Harappa civilization and Saraswati Sindhu Civilization between Indus river and Garger which is in north western part of India. We can see town planning concept evolving in this period we see that it had this civilization had sophisticated and advanced urban culture.

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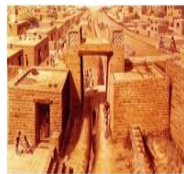
Indus Valley Civilization Town Planning Concept



Streets in Perfect grid patterns

It showed evidences of streets in perfect grid pattern in both Mohenjodaro and Harappa.
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Indus Valley Civilization Town Planning Concept



Sanitation system



Individual Wells



Separate covered drains



Inner Courtyards & Smaller lanes



Dockyards



Granaries

(Discovery of Harappa, 2016)

We also see that it had world's first sanitation system we also see that it had different sources of water like we can also individual wells and sub separate covered drains along the streets for waste water. Houses opened in the inner courtyards and smaller lanes we can see there were dockyards granaries warehouses brick platform and protective walls.

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Indus Valley Civilization

Town Planning Concept



Citadel



Drainage facilities

We also notice massive Citadels protected the city from the floods and attackers. So we also see the element of protection and resilience for them city dwellers traders and artists were also found all the houses had access to water and drainage facilities.

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INDUS VALLEY CIVILIZATION

- Houses opened to inner courtyards & smaller lanes
- Impressive dockyards, granaries, warehouses, brick platforms & protective walls
- Massive citadels protected the city from floods & attackers
- City dwellers – traders & artisans
- All the houses had access to water & drainage facilities

So there was lot of inclusion which took place and these facilities reached to all dwellers. Cities grew out of earlier villages existed in the same locality for 100 years.

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Indus Valley Civilization

DEVELOPMENT OF CITIES

- Cities grew out of earlier villages that existed in the same locality for 100 yrs.
- Grew in **Size & Density** and surrounded by numerous towns & villages
- Cities interlinked by
 - Trade & Economic Activities
 - Religious Beliefs
 - Social Relations
- Vast **Agricultural Lands, Rivers & forests** by **Pastoral Communities, fisher folk** and **hunters** surrounded each city.

We see that they grew in size and density and were surrounded by numerous towns and village's cities interlinked by trade and economic activities religious beliefs. Social relations and so on we also see that vast agricultural lands rivers and forests by pastoral communities fishers folk and hunters surrounded each city. We also find that they were classification of towns with in this era.

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Indus Valley Civilization

CLASSIFICATION OF TOWNS

- **Small villages / hamlets – 0 – 10 hectares**
- **Large towns – 10- 50 hectares**
- **Cities – 50 hectares**

We see that these small village hamlets were like which ranged from 0 to 10 hectares we see large towns which were like 10 to 50 hectares and cities which were like 50 hectares.

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Indus Valley Civilization

IMPORTANT CITIES

City	Size in hectares	Population
Mohenjodaro	200	35k-41000
Harappa	150	23500
Ganweriwala	80	
Rakhigarhi	80	
Dholavira	100	
Rehman Dehri	22	12000

We also see some of the important cities in this particular time we see Mohenjodaro, Harappa, Ganweriwala, Rakhigarhi, Dholavira, Rehman Dehri. So you can see the sizes vary from you can see from 22 hectares to you can find 200 hectares size variations Mohenjodaro being the biggest of 200 hectares. And population variations also you can see though we do not have it for all of them.

But we you can see that Mohenjodaro had more than 41000 population and Rehman Dehri nearly 12000 population. Mohenjodaro meaning mound of dead men is an archeological site in the province of Sindh Pakistan built around 2500 BCE.

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Indus Valley Civilization

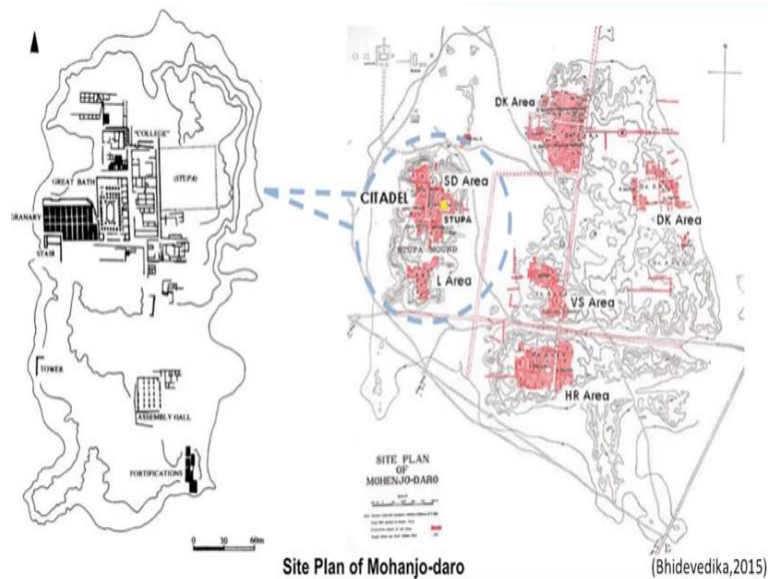
IMPORTANT CITIES : MOHENJO-DARO



(Discovery of Harappa, 2016)

It was one of the largest settlements of the ancient Indus valley civilization and one of the world's earliest major cities. If you look at the details of the city there was no fortification the major streets were in the north south direction.

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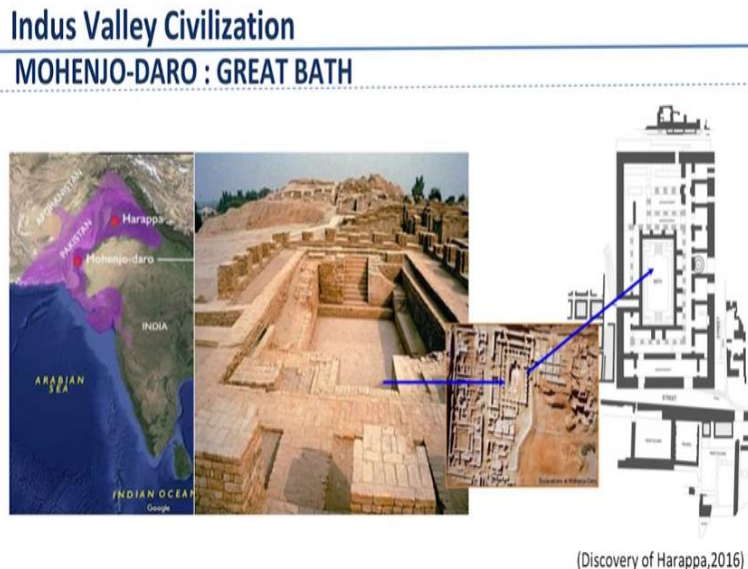
We see that the intersections were at right angles streets were within the built up areas and they were narrow. They were distinct zoning for different groups we see religions institutional and cultural areas around monasteries and great bath in western part. We also see that the north was given dedicated for agricultural industry and the south had the administration trade and commerce.

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We also see find details on the construction techniques we see that building was constructed with masonry which were sun dried bricks. We also see the construction ranging from 2 rooms to main masons with many rooms. We also see underground sewerage and drainage from houses. We see helical pumps for pumping water in great bath we note that principle such as monastery and bath indicated religious culture.

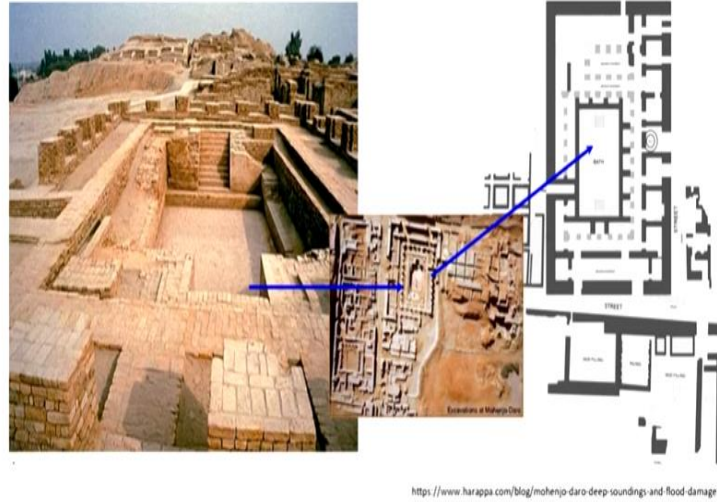
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We also look at the detail of great bath we see that it had a dimension 12 by 7 by 3 meters and then it was one of the earliest public water tank in the ancient world. It had the ledge extends for the entire width of the pool we also see the, what it had water light floor thick layer of bitumen was present. We also see that floor slopes in the south west corner with a small outlet connecting to a brick drain.

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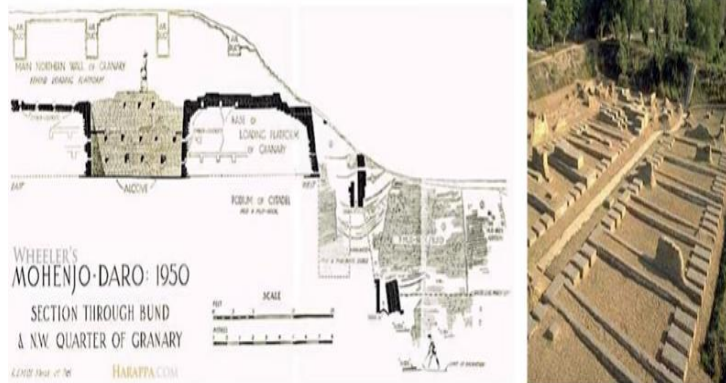
GREAT BATH



So we also see how the drainage was managed and then rooms located in the east. So how all the facilities were aligned and associated with the structure. We also find granary and if you look at how detailed it was.

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Indus Valley Civilization MOHENJO-DARO : GRANARY

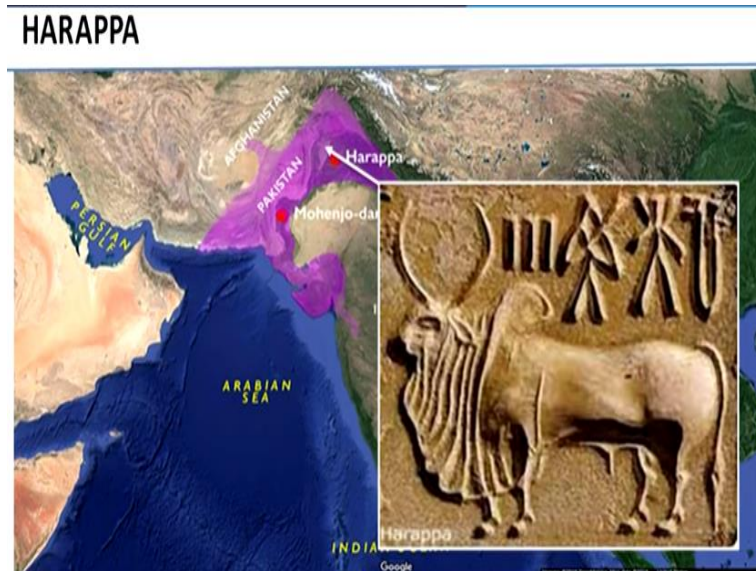


(Discovery of Harappa, 2016)

Like we see that 50 by 40 meter granary was given and 4.5 meter tall it was with the mud brick foundation. 2 rows of 6 rooms along a central passage ways 2 meter wide and paved with baked bricks. Each rooms 15 around 15 by 6 had 3 slipper walls with air space between a wooden strip structure supported in some places by large columns would have been built on top of the brick foundation with stairs leading up from the central passage area.

Small triangular openings air ducts for fresh air beneath hollow floors we see large size of granary probably indicates a high developed agricultural civilization.

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Harappa is an archeological site in Punjab Pakistan about 24 kilometers wide in Sahiwal the site takes its name from a modern village located near the former course of the river Ravi which now runs 8 kilometers to the north. Further we see that Harappa had 23000 populations and was spread across 150 hectares of area.

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HARAPPA

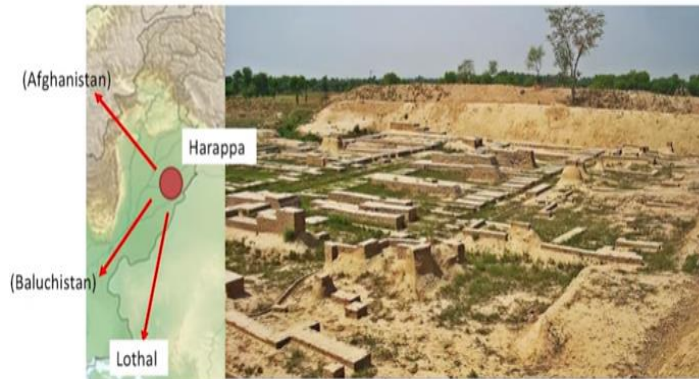
- 23000 population and 150 hectares- Area of the city
- Earliest city may have been formed during the kot diji phase, i.e. 2800-2500 BC
- Earliest city covered an area of 25 ha.
- It became a center for trade networks extending from Baluchistan and Afghanistan to the west of the seacoast in the south.
- Towns built over raised mud brick platforms

It was earliest city and it may have been formed during the kot diji phase that was around 2800 to 2500 BC. It is said to be the earliest city covering an area of 25 hectares.

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Indus Valley Civilization

Important Cities : Harappa



Ruins of City Harappa

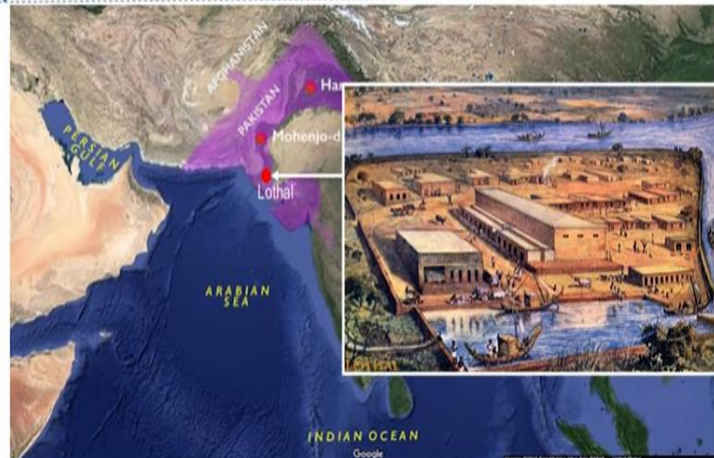
(Naqvi,2018)

It becomes a center for trade network extending from Baluchistan and Afghanistan to the west of sea coast and south. We see that the town was built over raised mud brick platform.

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Indus Valley Civilization

Important Cities : Lothal



(Discovery of Harappa,2016)

Further we see lothal was one of the south most cities of the ancient Indus valley civilization located in the Bhal region of modern state of Gujarat and it was constructed of the city began around 2200 BCE.

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Indus Valley Civilization

Important Cities : Lothal



Drain at Lothal

(Discovery of Harappa,2016)



Layout of Lothal

(Bartram,2018)

So we can see the drain at Lothal here and then we can also see the how different elements the water and all these structures integrated?

(Refer Slide Time: 30:13)

Indus Valley Civilization

Town Planning Characteristics

- **Citadel Mound** and **Lower Town** surrounded by a Massive Brick Wall.
- Citadel had **Square Towers** and **Bastions**.
- Large open areas inside the gateway may have been used as Market or checkpoint for taxing goods coming into the city.
- No division of the society is reflected in the layout of the city.

Looking at the town planning character we see that there was citadel mound and lower town surrounded by massive brick wall. We see citadel had square towers and basins large open areas inside the gateway may have been used as a market or a checkpoint for taxing goods coming into the city. Outside the city walls cluster of houses may represent temporary rest stops for travellers and karavas. No division of society is reflected in the layout of the city.

Since large public buildings market areas large and small houses as well as craft workshops have been found in the same neighborhood.

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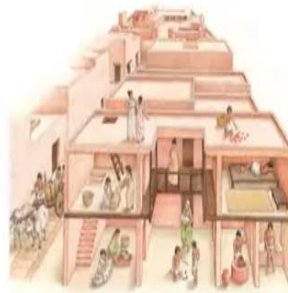
We also see barracks which were like group of single room tenants must be for the poorer classes.

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Indus Valley Civilization

Town Planning Characteristics: Housing

- Central Courtyard
- Private Wells
- Hearths
- Bathrooms, First floor bathrooms also built
- Brick stairways
- Perimeter wall
- Granary
- Burnt bricks mainly used for drains, wells and bathrooms
- Sun dried bricks used mainly for fillings
- Timber used for flat roofs and as frames or lacing for brickwork



Further looking into the details of the housing how housing was provided we see that there were rooms on 3 sites opening into the central courtyard nearly all large houses had private wells. We see the earth brick or stone line fireplace or often use for cooking or eating which was common

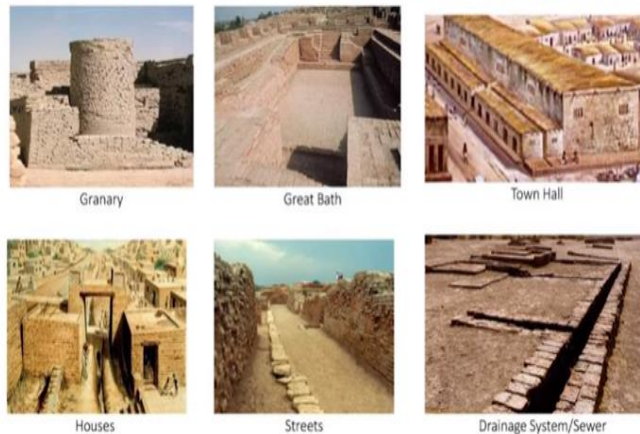
in the rooms. We also find bathrooms in every house with (()) (31:31) leading to drainage tunnels.

First we see that first floor bathroom was also built we see that the brick stairways provided access to the upper floor houses built with perimeter wall and adjacent houses were separated by narrow space of land. Granary with areas of threshing grains burnt brick mainly used for drains wells and bathrooms sun dried bricks used mainly for filling timber used for flat roof and frames or lacing for brickwork.

(Refer Slide Time: 32:05)

Indus Valley Civilization

Town Planning Characteristics: Large Public Structures



(Discovery of Harappa, 2016)

We also see that they were large public structure and they were also known for its architecture. So we see large buildings such as administrative or ritual structure we see access routes which provided thorough fare from one area to another. We also see markets and public meeting held in large open courtyards. We also find details about houses and public buildings grouped with shared walls and formed larger blocks and accessed by white streets.

Most housing private baths and toilets as well as private wells we also find very intricate details of the drainage system.

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Indus Valley Civilization

Town Planning Characteristics: Drainage System



Bathroom Structure at Lothal



Well and Bathing Platforms
(Gujarat Tourism, 2021)

We see there were wells and reservoirs for drinking and bathing we also see that there were wells were lined with specially made wedge shaped bricks to form a structurally sound cylinder. We also see ropes to use to lift the water out probably with leather or wooden bucket. We also see some neighborhood had communal wells so there was also sharing of the resources happening. We further see that bathing platforms with water tight floors and drains were provided.

We also see drains and water shoots in the upper stories were often built inside the walls with an exit opening just about the street drains. We also see tapered terracotta drain pipes were used to direct water out to this street.

(Refer Slide Time: 33:33)

SUMMARY

- ① Emplotment
- ② Mesopotamian Civilization
- ③ Egyptian Civilization
- ④ Indus Valley Civilization

So summarizing like what we really collected today gathered today so we are looking at the history we are looking at the employment of the cities to contextualize where we are today. So in this journey we walked through ancient civilization and we saw Mesopotamian civilization. We saw the Indus valley civilization so we saw the different component and how we did we evolved in time during these different civilization what aspects of planning which layers did we explore and how did our understanding progressed in these different civilization.

(Refer Slide Time: 34:22)

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Our coverage was limited with the scope to make you aware of the topic there are enormous readings and movies available to explore. Few are suggested here this is not an extensive list you may feel free to suggest more from your experience.

(Refer Slide Time: 34:38)

 Please feel free to ask Questions. 

Let us know about any Concerns you have .

 Do share your Opinions, Experiences and Suggestions.

Looking forward to Interacting and  Co-learning with you while exploring Cities and Urban Planning. 

Please feel free to ask questions let us know about your concerns you have to share your opinion, experiences and suggestions. Looking forward to; interacting and co-learning with you while exploring cities and urban planning so that is all for today's lecture we will continue about the employment in our next session thank you.