

LESSON 1

Flood plains and
river systems:
The case of
the Irrawaddy
and the Kingdom
of Bagan

Subject	History/Social Studies
Topic	Flood plains and river systems: The case of the Irrawaddy and the Kingdom of Bagan
Level	Lower secondary
Key idea	Across time, people respond to the varied natural environment of a region in multiple ways that shape their worldviews and ways of life
Key concepts	Environment, highlands, lowlands, coastlands People, worldviews, way of life Commonalities and diversities
No. of periods/lessons	1 period (1 period is approximately 50 minutes)
Facilities needed	Sources and handouts for distribution
Prerequisite knowledge	No prerequisite knowledge required

Learning objectives

By the end of the lesson, the students will be able to:

KNOWLEDGE	SKILLS	ATTITUDES
<ol style="list-style-type: none"> 1. Define what lowlands are and identify key attributes of lowlands. 2. Explain the rationale for the location of early civilization in lowlands near water bodies. 3. Describe the way location in lowlands shaped agricultural activities and infrastructure built in these areas. 	<ol style="list-style-type: none"> 1. Analyse photos and maps to draw out attributes of a place. 	<ol style="list-style-type: none"> 1. Demonstrate awareness that people respond in multiple ways to the environment, which can influence their way of life. 2. Cooperate in groups to complete task assigned.

Section	Lesson Development	Resources	Rationale
<p>Introduction [5 minutes]</p>	<p>Teacher adopts a deductive approach to concept development. This lesson (and Lesson 2) focuses on lowlands whilst highlands will be the focus of Lessons 3 and 4 and coastlands will be the focus of Lessons 5 and 6.</p> <p>Note: If Lesson 3 and/or Lesson 5 from Unit 1 have already been taught, then this introduction can be shortened.</p> <p>1. Introduction to topic</p> <p>1.1 Provide a definition of lowlands (a portion of a plain that has a low elevation, usually not higher than 200m above sea level).</p> <p>1.2 Show pictures of lowlands in different countries in Southeast Asia to bring across the concept of sharedness. Through questioning, elicit from the students that there are similarities among lowlands in different parts of Southeast Asia.</p> <p>1.3 During the process, ask students what they see, so as to identify attributes of lowlands.</p> <p>1.4 Next, show a set of pictures of highlands, lowlands and coastlands (Source 1). Ask the students to identify lowlands and point out the attributes that led them to classify the image as showing a lowland area.</p> <p>1.5 Show images of communities in lowlands in different countries (Source 2). Through questioning, elicit from students the commonalities and diversities among these communities.</p>	<ul style="list-style-type: none"> • Source 1: Images of lowlands, highlands and coastlands • Source 2: Images of communities in lowlands 	<p>The lesson starts with the development of the concept around which all lessons in Unit 1 are built on. Since students might not be familiar with varied geographical landscapes of the region, a deductive approach to concept development is adopted. Such an approach will allow students to learn more about the attributes of a particular concept.</p> <p>Through images of communities in lowlands, there is an attempt made to show that communities in lowlands share similar yet diverse characteristics, though separated by political boundaries.</p>
<p>Development [40 minutes]</p>	<p>2. Group work: Map analysis</p> <p>2.1 Provide groups with Source 4, a current map of Southeast Asia (with political divisions), and Source 3, a map of early Southeast Asian kingdoms (classical Southeast Asia).</p> <p>2.2 Students work in groups to do a think-pair-share that involves comparing the two maps and offering observations about the borders (in order to show how national boundaries are different from the way early civilizations defined their territories).</p> <p>2.3 Point out that early civilizations began in lowlands near water bodies.</p> <p>2.4 Ask students:</p> <ul style="list-style-type: none"> • Why do you think these early civilizations were located in lowlands near water bodies? • What do rivers provide that could support the population of an early kingdom? 	<ul style="list-style-type: none"> • Source 3: Map of early Southeast Asia (Classical Kingdoms from the ninth to fourteenth centuries) • Source 4: Map of contemporary Southeast Asia 	

Section	Lesson Development	Resources	Rationale
	<p>3. Teacher talk about the Kingdom of Bagan</p> <p>Note: The Bagan and Irrawaddy case study can be replaced by one that is more familiar to the class, such as the Mekong River, Red River, or Chao Phraya River. To emphasize the idea of sharedness, it is useful to make a comparison of the case study with another ancient kingdom that developed in lowlands around water bodies.</p> <ul style="list-style-type: none"> • The lesson will look at one river-system kingdom in Myanmar. • Some of the earliest kingdoms in Southeast Asia emerged during the first to fifth centuries CE. By the eleventh century, Bagan had emerged as the most powerful kingdom in the area. The kingdom was based on agriculture and rice production. The river provided water for rice farming. • Historians and archaeologists suggest that the culture of Bagan spread from its capital to other areas in the kingdom. • Annual flooding of the Irrawaddy provided water for rice farming. 		
	<p>4. Discussion</p> <p>4.1 Provide images of old irrigation canals and other water technology from the period (see Source 5 examples from Angkor Wat); initiate a class discussion about what students can observe in the pictures of old irrigation canals and water technology.</p> <p>4.2 Point out that irrigation enabled people to control the floodwaters and direct water to the lands that required it. This allowed farmland to expand into adjacent areas.</p> <p>4.3 Point out that the irrigation technology was similar in other early Southeast Asian kingdoms located near rivers and other bodies of water.</p>	<ul style="list-style-type: none"> • Source 5: Ancient irrigation systems 	

Section	Lesson Development	Resources	Rationale
	<p>5. Group work: Source analysis</p> <p>5.1 Distribute the two inscriptions in Source 6 to groups. The first inscription is from the Bagan period and shows that the wealth of the kingdom was based on wet-rice agriculture. It was the responsibility of the king to support irrigation works. The second inscription is from another Southeast Asian kingdom (Sukhothai) which shows the responsibilities of the king in relation to agriculture.</p> <p>5.2 Students work in groups to answer the following:</p> <ul style="list-style-type: none"> • Who produced the source? • When was it produced? • What does it say about agriculture in the ancient times? <p>5.3 Point out that across the region the kings and queens had responsibilities related to agriculture.</p>	<ul style="list-style-type: none"> • Source 6: Inscriptions in Bagan and Sukhothai 	
<p>Closure [5 minutes]</p>	<p>6. Reflection</p> <p>6.1 Students fill in Handout 1, a 3-2-1, as part of the formative assessment:</p> <ul style="list-style-type: none"> • 3 facts that I have learned in the lesson. • 2 questions that I have about the lesson. • 1 thing that I would like to study further. <p>6.2 Summarize the lesson:</p> <ul style="list-style-type: none"> • Early civilizations in Southeast Asia began around water bodies. • Many of the early peoples of Southeast Asia focused on agriculture and adapted their environment to fit their needs and priorities. • It was the king or queen's responsibility to support the livelihoods of the people through the maintenance of irrigation works. 	<ul style="list-style-type: none"> • Handout 1: Exit pass 	<p>An Exit pass allows the teacher to gauge students' understanding of the concepts and provide feedback based on students' learning needs.</p>

Sources and handouts

Glossary

Agriculture:	the science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool and other products.
Flooding:	the covering or submerging of normally dry land with a large amount of water.
Irrigation canal:	a man-made open channel for transporting water from a natural water source to a cultivated field.
Lowlands:	a portion of a plain that has a low elevation, usually not higher than 200 metres above sea level.
River system:	a number of rivers including one main river, which drains into a lake or into the ocean, and all the rivers that flow into it (the river's tributaries).
Water technology:	all technologies related to water, such as water treatment, water management, etc.

Source 1: Images of highlands, lowlands and coastlands

Highland: Batad, Philippines



Source:

Aranas, Uwe. [commons.wikimedia.org/wiki/File: Banaue_Philippines_Batad-Rice-Terraces-04.jpg](https://commons.wikimedia.org/wiki/File:Banaue_Philippines_Batad-Rice-Terraces-04.jpg)

Lowland: Mekong Delta, Viet Nam



Source:

Garrett, Wilbur E. www.flickr.com/photos/13476480@N07/17850359166

Coastland: Bali, Indonesia

Source:

Fuhrmann, Martin. www.flickr.com/photos/martinfuhrmann/24068107063

Source 2: Images of communities in lowlands

Farming community, Lao PDR



Source:
AusAID/Homes, Jim. [flic.kr/p/hfc5aH](https://www.flickr.com/photos/hfc5aH/)

Railway towns: Maeklong railway market, Thailand



Source:
Chandran, Prasanth. www.flickr.com/photos/gulfu/12771746633

Royal centres: Ploughing ceremony, Phnom Penh, Cambodia



Source:

www.maxpixel.net/Maritime-Fishing-Boats-Boats-Fishing-Cambodia-4081388

Fishing community: Kuala Sala, Yan, Malaysia



Source:

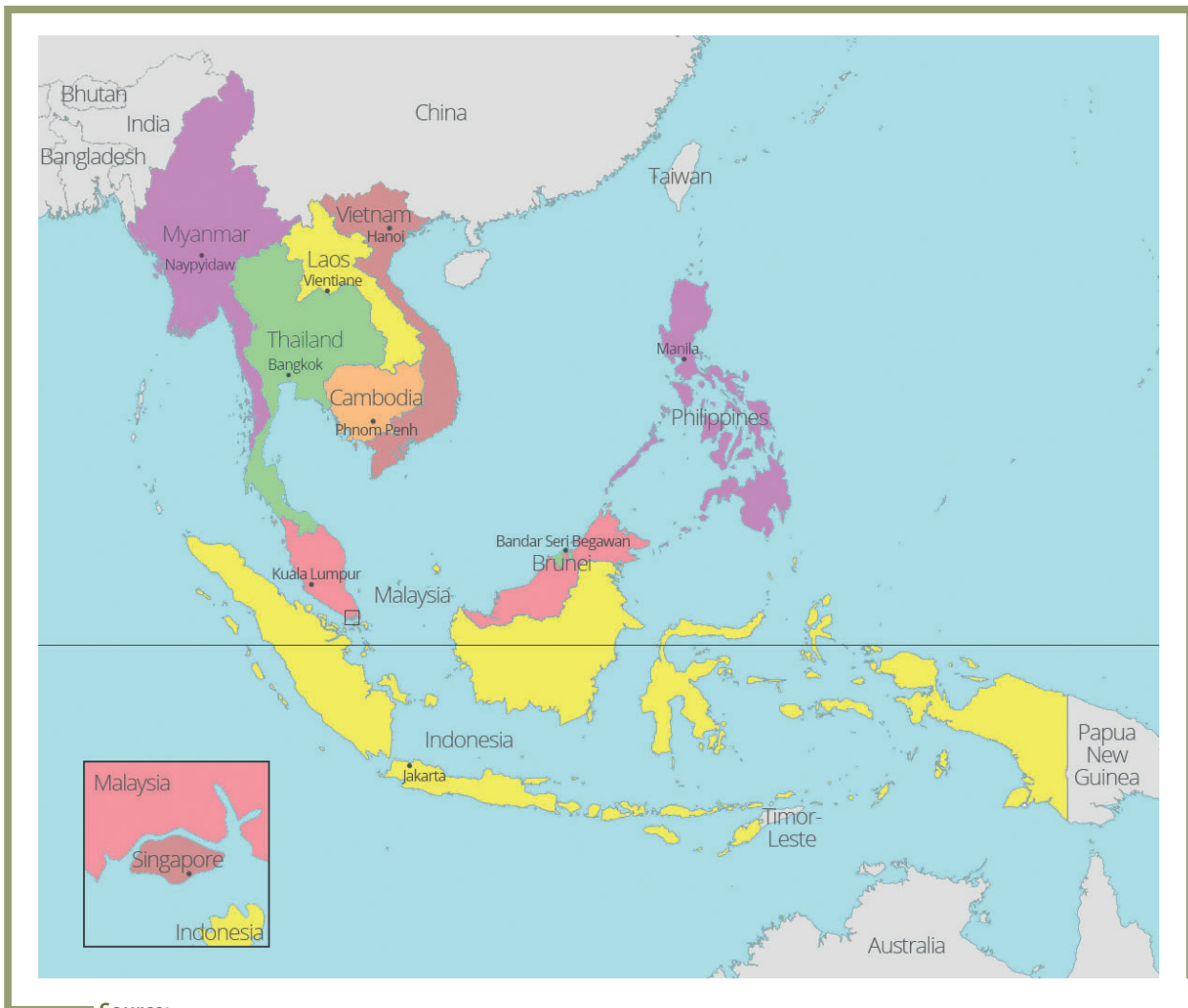
Nasirun, Jusni. www.flickr.com/photos/wickedfilm/4788638476

Source 3: Map of early Southeast Asia (Classical Kingdoms from the ninth to fourteenth centuries)



Source: Javierfv1212.en.wikipedia.org/wiki/Lavo_Kingdom#/media/File:Map-of-southeast-asia_1000_-_1100_CE.png

Source 4: Map of contemporary Southeast Asia



Source:

aseanup.com/wp-content/uploads/2016/11/ASEAN-map.jpg

Source 5: Ancient irrigation systems

Map of water irrigation system (in blue)



Source: Fusan, Stefan. la.wikipedia.org/wiki/Fasciculus:Map_of_Angkor_Archaeological_Park.svg

West Baray/Reservoir, Angkor



Source: Delso, Diego. commons.wikimedia.org/wiki/File:Srah_Srang,_Angkor,_Camboya,_2013-08-16,_DD_08.JPG

Source 6: Inscriptions in Bagan and Sukhothai

Inscription I: Bagan, Dhammayazika Pagoda Inscription, late twelfth century (1196 CE)

Note: *Bagan was Myanmar's 'classical' kingdom that served as a foundation for all subsequent Burmese kingdoms between the eleventh and thirteenth centuries. Known for its nearly 3,000 temples in an area of eight square miles, Bagan was one of the most powerful kingdoms in mainland Southeast Asia.*

[1196 CE] King Narapatisithu...donated for the upkeep of his work of merit, the Dhammayazika, 1563 and three-eighths *pay* of royal lands at Myittha, ten fields at [location], four at [location], thirty at [location]. Four *pay* of dry fields were given to the woodcutters, five *pay* for the granary (a place to store grain) keepers..., five *pay* for the dancers, three *pay* for the drummers. One hundred and forty-one and one quarter *pay* of land was donated at Pyinmana, along with eighty-five *kyun* and 100 heads of cattle. Eighty *pay* of rice lands were donated near Tanton Village, another fifteen at another place... In the *taik* areas over 5,500 *pay* of land was donated... This is that the needs of the Dhammayazika Pagoda may be satisfied, 'tis true.

Vocabulary

Narapatisithu:	King's name.
Dhammayazika:	name of the Pagoda, means 'king of the law'.
Myittha:	name of a town.
<i>Pay</i> :	1.75 acres of land.
Pyinmana:	name of a town.
<i>Kyun</i> :	labourers or bondspersons.
Tanton:	name of a village.
Taik:	newly acquired land across the river from Bagan.

Inscription II: Sukhothai, Ram Khamhaeng Inscription, late thirteenth century (1292 CE)

Note: *The Sukhothai Kingdom flourished in what is now central Thailand starting from the middle of the thirteenth century until it was overwhelmed by a new kingdom called Ayutthaya 100 years later.*

[1292 CE] During the life of King Ram Khamhaeng, this city of Sukhothai has prospered...There are areca and betel orchards in all areas of the country. There are many coconut orchards in this country, many jackfruit orchards in this country, many mango orchards in this country, and many tamarind orchards in this country. Whoever starts an orchard is permitted to do so by the king. In the middle of this city of Sukhothai there is this marvelous well, with clean and delicious water like that of the Mekong during the dry season. To the east of the city of Sukhothai there are sanctuaries and monks. There is a large lake, areca and betel orchards, dry fields and paddy fields, hamlets, large and small villages, and there are mango and tamarind orchards.

Vocabulary

Areca:	type of palm.
Betel nut:	tropical vine and nut that people chew for its caffeine-like effect.
Sanctuary:	temple.
Sukhothai:	a Thai royal city.

Handout 1: Exit pass

Flood plains and river systems Exit pass

Name:

3

New facts I learned today

2

Things I found interesting

1

Big question I still have in my mind