Researchers in Schools

# Living in Water-Lands: changing ecologies in river deltas

## Key Stage 3 Programme

Pupil Name

Coursebook Designed by Dr Marina Marouda

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## Uni Pathways launch event

Welcome to Uni Pathways! We are delighted to be able to launch the Uni Pathways programme with you. We hope that you are ready to embark on your Uni Pathways journey and that you enjoy the video.
You will be asked to pause the video at times to complete some work in this workbook, so make sure you have a pen / pencil to hand when you start the video.

By the end of the video, you will have:

- Learnt about what studying at university means
- Learnt about some of the skills that you will develop during Uni Pathways
- Heard from pupils who have participated in Uni Pathways or The Scholars Programme (which is the same programme!)
- Heard from current university students talking about what life is like at university

If you are in school your teacher will play the video. If you are at home and logged in to a session with your teacher, your teacher will play the video and show it to you. If you are participating independently your teacher will email you the link to the video or the video file. There are opportunities for you to answer some questions, and you will be told when to pause the video to answer them.

### Introduction to Uni Pathways

1. Write down what you think a supra-activity is.

_____
_____
_____

2. Independent learning is

_____
_____
_____

3. Write down in your own words what resilience means, and come up with a different example to the one mentioned in the PowerPoint.

_____
_____
_____
_____

4. Why do you think analysis and evaluation skills are useful in your academic career?

_____
_____
_____
_____
_____

5. Why do you think analysis and evaluation skills are useful in life in general?

_____
_____
_____
_____
_____

6. What are the different types of learning that university students do?

## Pupils' experience of Uni Pathways

You will now watch some pupils talk about their experience of learning a PhD topic and producing a final assignment. Some may refer to The Scholars Programme rather than Uni Pathways. As you heard in the introduction PowerPoint, The Scholars Programme is a very similar programme to Uni Pathways. Listen carefully and then respond to the questions below. Be prepared to share some of your responses with your peers.

1. How did the pupils describe talking about writing a long essay for their final assignment?

2. Write down something that one of the pupils mentioned was particularly interesting in their course.

3. What were some challenges that the pupils met?

## Virtual campus tours

You will now go on a virtual tour of some universities! Once you have seen some of the university campuses, respond to the questions below.

1.Note down something that you liked out of any of the campus tours you saw. It may be a particular building, space, city etc.

2. Were there any similarities between the different university campuses? If so, what are the similarities?

3. If you had to pick one of those universities to go and visit in person, which one would it be and why?

4. Note down some of the societies that you could join at different universities

## Meet university students!

You are about to virtually meet or hear from some current university students.
If you are virtually meeting them, think about what questions you would like to ask the students, share your questions with a partner and note those questions down in the space below.

If you are not meeting them but watching some videos that they have made, use the space below to note down what else you would like to find out about university. You can then ask your teacher during Uni Pathways tutorials!

## Reflection

Congratulations on completing the launch of the Uni Pathways programme. Before you go, take some time to reflect on what you have learnt by answering the following questions:

1. Are there any aspects of university style learning that you would look forward to? If so, what are they?

2. What challenges do you think students face when learning at university? How would you try to overcome these challenges?

3. What skills do you hope to develop during your Uni Pathways course?

4. What part of Uni Pathways seems the most challenging for you?

5. What are you most looking forward to about Uni Pathways?

## Timetable and Assignment Submission

### Timetable – Tutorials

| Tutorial | Date | Time | Location |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 (Feedback) | | | |
| 7 (Feedback) | | | |

### Timetable – Homework Assignments

| Homework Assignment | Description | Due Date |
|---|---|---|
| Tutorial 1 | What are the features that make river deltas a unique landscape and rich biodiverse habitat? | |
| Tutorial 2 | Explain the diversity of economic activities in the Mekong delta. | |
| Tutorial 3 | Discuss in detail one key economic activity in the Mekong delta. | |
| Tutorial 4 | What is the future of the seafood farming industry in the Mekong delta in your opinion? | |
| Tutorial 5 | How can we build sustainable deltas? | |

### Assignment Submission – Lateness and Plagiarism

| Lateness | |
|---|---|
| Submission after midnight on due date | 10 marks deducted |
| **Plagiarism** | |
| Some plagiarism | 10 marks deducted |
| Moderate plagiarism | 20 marks deducted |
| Extreme plagiarism | Automatic fail |

## Course Rationale

The course takes a close look at the dynamic relations between people and environment. We focus on a distinctive geographical and social environment: the wetlands formed by mighty rivers, also known as 'river deltas'. Rich in water and fertile soil, these wetlands are significant for global food production and trade, supporting much of the world's fisheries as well as grain and fruit farming. River wetlands sustain large human populations and a dazzling variety of life forms, from monstrous crocodiles to tiny algae. In this course, we zoom in on one of the largest and most productive delta environments in the world, the Mekong delta in southern Viet Nam. Considered a 'food basket' not only for Viet Nam but also for many countries in Asia and Europe, the Mekong delta is today at risk due to climate change and human activities.

As part of the course, you will learn to analyse complex human-environment relations by looking at the specific example of river deltas, which are a major concern for scientists, governments and development organisations around the world. You will learn how to use a specific 'case' to study complex issues and draw general conclusions, an approach used in various disciplines. This case study offers an opportunity to study the global effects of local actions. It traces the impact that environmental damage in the Mekong delta has for global food security and the world's rapidly changing climate. The course highlights not only the challenges facing people and environment in river deltas today but also ideas about 'sustainability' and efforts to build environments and economies fit to meet the needs of the future.

The course will support you in developing a set of academic skills. It will introduce you to university-style learning and will help you develop skills in critical analysis, presenting scientific arguments and writing essays. You will also learn how to think and study independently as well as how to collaborate with others, competencies that are highly valued by top universities and employers.

## Uni Pathways Mark Scheme 2020 – Essay-based assignments

| | Subject Knowledge | Critical Thinking | Written Communication |
|---|---|---|---|
| 1st | The essay shows a breadth of knowledge and understanding of the key concepts and issues, through engaging with and interpreting a wide range of relevant sources.<br>Knowledge is used to build and support highly effective arguments. | Analyses, key ideas, information, and arguments. Interprets meaning and makes connections.<br>Identifies and critically evaluates key arguments and statements, deciding on their credibility, strength and relative significance, drawing convincing conclusions. | The essay has a clear and engaging structure, taking the reader on a journey from the introduction to the conclusion.<br>The writing style is appropriate; key terms are used with fluency.<br>There are no, or very few, errors in spelling or grammar.<br>Referencing is used consistently and matches the style taught in the course. |
| 2:1 | The essay shows an understanding of key concepts and issues, drawing on a range of relevant sources<br>Knowledge is used to build and support effective arguments | Analyses key ideas, information and arguments.<br>Identifies relevant arguments and statements, deciding on their credibility and strength, drawing reasonable conclusions.<br>Shows some understanding of the relative importance of arguments. | The essay has a clear structure and the arguments are easy to follow. The introduction outlines the essay effectively and the conclusion summarises the arguments.<br>The writing style is appropriate; key terms are used correctly.<br>There are few errors in spelling or grammar.<br>Referencing is mostly consistent and matches the style taught in the course. |
| 2:2 | The essay shows an understanding of key concepts and issues, with no major misconceptions.<br>Beginning to apply this knowledge to build and support arguments. | Begins to analyse ideas, information and arguments.<br>Identifies some arguments and statements and attempts to evaluate their quality.<br>Not yet showing understanding of the relative strengths and weaknesses of arguments. | The essay structure could be made clearer to better guide the reader through the arguments.<br>The writing style can sometimes be informal.<br>Occasionally key terms are not used when it would be appropriate to do so.<br>There are some errors in spelling or grammar, but they do not get in the way of communicating the content. |

| | | | |
|---|---|---|---|
| | | | There is some consistency to the referencing. |
| 3rd | Shows a developing understanding of key concepts and issues, with some misconceptions. Not yet applying this knowledge to build and support arguments. | Begins to analyse ideas and information.<br>Describes statements and arguments while not yet evaluating them. | The grammar, spelling, style, and structure of the work need improving in order to communicate ideas to the reader.<br>The essay has no or a limited introduction and conclusion.<br>Key terms and references are not always used correctly. |

## Baseline Assignment (essay based): Pupil Feedback Report

| | |
|---|---|
| Name of Pupil | |
| Name of School | |
| Name of RIS teacher | |
| Title of Assignment | |

How your assignment is graded?

| Grade | Marks | What this means |
|---|---|---|
| 1st | 70+ | Performing to an excellent standard at A-level |
| 2:1 | 60-69 | Performing to a good standard at A-level |
| 2:2 | 50-59 | Performing to an excellent standard at GCSE |
| 3rd | 40-49 | Performing to a good standard at GCSE |
| Working towards a pass | 0-39 | Performing below a good standard at GCSE |
| Did not submit | DNS | No assignment received by The Brilliant Club |

| Lateness | |
|---|---|
| Any lateness | 10 marks deducted |
| **Plagiarism** | |
| Some plagiarism | 10 marks deducted |
| Moderate plagiarism | 20 marks deducted |
| Extreme plagiarism | Automatic fail |

Marks

| | | | |
|---|---|---|---|
| OVERALL MARK / 100 | | FINAL MARK / 100 (including any deductions) | |
| DEDUCTED MARKS | | FINAL GRADE | |

If marks have been deducted (e.g. late submission, plagiarism) the teacher should give an explanation in this section:

Mark Breakdown and Feedback

| Subject knowledge | |
|---|---|
| | *mark* |
| | |
| | |
| **Critical thinking** | |
| | *mark* |
| | |
| | |
| **Written communication** | |
| | *mark* |
| | |
| | |

## Final Assignment (essay based): Pupil Feedback Report

| | |
|---|---|
| Name of Pupil | |
| Name of School | |
| Name of RIS teacher | |
| Title of Assignment | |

How your assignment is graded:

| Grade | Marks | What this means |
|---|---|---|
| 1st | 70+ | Performing to an excellent standard at A-level |
| 2:1 | 60-69 | Performing to a good standard at A-level |
| 2:2 | 50-59 | Performing to an excellent standard at GCSE |
| 3rd | 40-49 | Performing to a good standard at GCSE |
| Working towards a pass | 0-39 | Performing below a good standard at GCSE |
| Did not submit | DNS | No assignment received by The Brilliant Club |

| Lateness | |
|---|---|
| Any lateness | 10 marks deducted |
| **Plagiarism** | |
| Some plagiarism | 10 marks deducted |
| Moderate plagiarism | 20 marks deducted |
| Extreme plagiarism | Automatic fail |

Marks

| | | | |
|---|---|---|---|
| OVERALL MARK / 100 | | FINAL MARK / 100 (including any deductions) | |
| DEDUCTED MARKS | | FINAL GRADE | |

If marks have been deducted (e.g. late submission, plagiarism) the teacher should give an explanation in this section:

Mark Breakdown and Feedback

| Subject knowledge | |
|---|---|
| | *mark* |
| | |
| | |
| **Critical thinking** | |
| | *mark* |
| | |
| | |
| **Written communication** | |
| | *mark* |
| | |
| | |

## Subject Vocabulary

| Word | Definition | In a sentence |
|---|---|---|
| **Aquaculture** | Farming fish, shellfish or plants in water, using ponds or tanks. | Aquaculture is an environmentally responsible way to produce food and commercial products. |
| **Biome/Ecosystem** | A community of plants and animals and other organisms living in a specific location and interacting with each other. This community forms a distinctive environment. | Rivers provide a freshwater ecosystem that is home to a variety of fish, plants and animals. |
| **Climate change** | Important changes in the climate patterns that we are used to experiencing. | Emissions produced by human activities, like air travel, have long been identified as contributing to climate change. |
| **Fish farming** | Breeding and raising fish in tanks or ponds in order to sell them in the market. | As fish stocks are diminishing and demand for seafood is rising, fish farming offers a solution to global food security. |
| **Fisheries** | The techniques and tools humans use to catch or produce fish to eat. It includes both fishing and fish farming. | Fisheries as the enterprise of catching and raising fish provide food for millions of people.<br>Commercial fisheries play an essential role in helping feed the world's growing population. |
| **Landscape** | The material and physical surroundings in which our lives unfold. | The river Thames is integral part of the London's urban landscape. |
| **Livelihood** | The mix of activities, skills and material resources through which a person or a household makes a living. | He went to Berlin, earning a livelihood there by giving private lessons in math. |
| **Mangroves** | Small trees or shrubs that grow near the coast where a river meets the sea. Mangroves grow in swamps that are a mix of saltwater and fresh water. | Mangrove forests are commonly found in estuaries and coastlines, where there is saline water. |
| **River delta** | Where rivers empty their water creating another large body of water, that usually comes in the form of a triangle.<br>(Delta is the shape of a letter in the Greek alphabet that looks like a triangle). | Deltas are usually located in river mouths.<br>ver deltas are important habitats for a variety of wild life species. |
| **Wetland** | An area of land that is covered by water. The area covered varies according to the season and time of year and how much rainfall there is. | Deltas, marshes and swamps are wetlands. |

## Tutorial 1 – What is a River Delta?

### Tutorial Summary

Why do rivers split into smaller streams before flowing into the sea or a lake? Does this triangle of land and water created by split rivers form a unique environment for life? In this tutorial we examine how river deltas are formed, looking at how the fusion of land and water create a unique delta ecology. We focus on the example of the Vietnamese Mekong delta, one of the world's most biodiverse and fertile deltaic environments. One of the distinctive features of the Mekong delta landscape is mangrove forests. Mangrove forests provide a uniquely welcoming habitat for a variety of species that live in land as well as in sea and fresh water.

### What is the Purpose of Tutorial 1?

By the end of the tutorial, pupils will be able to:

- Explain how river deltas are formed and describe three distinctive features of this unique geography using specialist terms.
- Describe the unique features that create a rich and fertile landscape in the Mekong river delta in Vietnam.
- Describe the rich diversity of wild life species and farmed plants and animals that the Mekong delta landscape supports. Objective 1

**Activity 1- What is a river delta and how is it formed?**

Study closely the maps and photos provided. Answer the following questions:

1) How are river deltas being formed? What are the physical processes taking place?
2) What is unique about a delta landscape? Name three distinctive features.
3) Which plants, animals and other life forms live in this environment?

**Answers**

1) ----------

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2) A. ----------

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B. ----------

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C. ----------

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3) ----------

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### Activity 2 – Keyword Bingo

What are the terms we use to describe delta landscapes?

1) Look at the words and definitions that appear on the screen.
2) Fill in the table with the words that are used to describe the landscape of river deltas.
3) Match each word with the correct definition and add to the table.

| Word | Definition |
|---|---|
| | |
| | |
| | |
| | |

### Activity 3 – The Mekong river delta

Watch video on the Mekong delta, its diverse landscape and the lives of its inhabitants.
Answer the following questions.

1) Can you name and describe some of the features of this landscape?
2) What plants, animals and other species live in the Mekong?
3) How did people make a living in the Mekong delta?

### Answers

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**Mangrove – A remarkable plant!**

Read the information sheet on mangrove forests in the Mekong Delta and the ecosystem these forests create. Fill in the blanks writing full sentences.

Mangrove is a plant species that grows in

……

……

……

Mangrove forests are located in

……

……

……

There is high/low biodiversity in mangrove forests. That is because
……

……

……

Working in pairs, read your answers to your partner. Supplement each other's answers. What did you have in common? What did you miss in your answers? Make notes.

**Notes**

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One student of each pair to report their answers and what they have learned from their partners to the rest of the class. Class discussion to focus on the following questions:

1) What is distinctive about mangrove plants?
2) Do mangrove forests form a unique ecosystem and why?
3) Why are mangroves important for the lives of people, plants and animals?

## Quiz Time!

Working in teams, answer the following questions. The team with the highest score wins a prize!

1. Explain the physical processes through which river deltas are formed.
2. Name two features that are unique to river deltas.
3. Give two terms that are used to describe the geography of deltas.
4. Mangrove is a plant that grows in freshwater ponds. *True* or *false*?
5. Algae is an organism that lives in mangrove forests. *True* or *false*?

## Baseline Assignment

Re-read the information sheet and extracts studied in class and write an essay (500 words) answering the following question:

***What are the features that make river deltas a unique landscape and rich biodiverse habitat?***

**Success criteria:**

1. Structure your essay in clear paragraphs using the suggested structure below.
2. Draw on examples and evidence found in the handouts given in class.
3. Provide explanations. How does this example and evidence show that deltas are a unique landscape or not? Give more than one reasons.
4. Develop your point further. Explain why and how these examples shape the landscape and life in river deltas.
5. Additional points for essays that draw on evidence and examples from texts in the reference section or from their own research.
6. Possible sentence/paragraph starters. You could start your sentences/paragraphs as follows:

River deltas form a uniquely rich and biodiverse ecosystem ….
That is because/ One of the reasons for that is ……..
One example of is…. For instance, ……
This example demonstrates/shows that….

## <u>Essay Structure</u>

**Three main parts:**

1. **Introduction** (0-100 words). Introduce the issue you are writing about and the main point you are arguing.
2. **Main text** (250-350 words). Here you provide examples and evidence to support the main points you are making. Then you explain how these examples and evidence support your main point. Use different paragraphs for each point/example.
3. **Conclusion** (80-100 words): Summarise what you have argued in the previous sections. Do not repeat sentences.

## References

Nardin, W. et al. (2016), 'Dynamics of a fringe mangrove forest detected by Landsat images in the Mekong river delta, Vietnam'. *Earth Surface Processes and Landforms* 41, pp. 2024–2037.

Veettilab et al. (2019), Mangroves of Vietnam: Historical development, current state of research and future threats. *Estuarine, Coastal and Shelf Science* 212, pp. 216-236.

**Can Gio Mangrove Biosphere Reserve** (also named Lam Vien Can Gio) in Ho Chi Minh City. This is one of the most popular weekend venues that attract weekend visitors and international tourists.

## Tutorial 2 – Delta Livelihoods

A field in the Mekong Delta. Integrated rice and shrimp farming helps generate economic profits and lessens harm to the environment. Source: Viet Nam News, VNA/VNS.

### Tutorial Summary

River deltas create exceedingly rich and fertile landscapes, where an array of productive activities can be undertaken. Water flowing through a number of different lands and soil enriched with lots of nutrients create a landscape that allow for distinctive uses of land and natural resources. Today, we will examine the wealth of economic activities that the Mekong delta ecology supports. We look at the example of wet rice cultivation that turns abundant crops as well as fish farmed for export. We also look at manufacturing that has expanded in recent years due to the Mekong delta's proximity to large urban centres.

### What is the Purpose of Tutorial 2?

By the end of this tutorial I will be able to:

- Explain how the Mekong river delta ecology supports a set of economic activities, and give two examples of how people make a living in the Mekong delta.
- Describe the distinctive uses of land and natural resources in the Mekong delta, and define two farming methods unique to the delta.
- Discuss historical transformations in the economy of the Mekong delta, and explain how commercial farming and manufacturing developed by drawing on specific examples.

*"The (Mekong delta) region is familiarly known as the "rice bowl" of the country. Yet, although it is the principal rice-producing region in Vietnam, agricultural outputs go beyond rice production alone as the delta is also a main producer of fruits and vegetables as well as of aquaculture products. Economically, the delta is therefore very important for the country as a whole, however the region remains one of the poorest when compared to other regions in Vietnam."*

Renaud & Kuenzer 2012, The Mekong Delta System (pp. 3-4).

### Activity 1 – Rich livings

First, read the assigned texts, each discussing an economic activity in the Mekong delta. Then write a paragraph describing in your own words the economic activity discussed in the text. In writing your paragraph consider the following:

- What type of productive activity is this? Describe it.
- What are the resources (land, water, labour etc.) needed for this activity?
- How does this productive activity contribute to family incomes, the local and national economy?

Put all paragraphs in a common pot. Draw a random paragraph from the pot and read to the class. What do you learn about other economic activities in the Mekong delta?

Now let's organise all these different economic activities together to see the bigger picture. Focus on the screen and the definitions and explanations given.

### Activity 2 – Fill in the Table

On the board we list a set of economic activities in the Mekong delta. We organise the answers into economic sectors (e.g. agriculture, farming, manufacturing) and other categories (e.g. labour-intensive, land-use reliant). Some examples are given on the whiteboard. Now, you fill in the rest!

| Agricultural | Commercial | Manufacturing |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

**Activity 3 - Quiz Time!**

1. Which of the following is an economic activity in the Mekong delta today?
   a. Intensive wet rice cultivation.
   b. Commercial seafood farming.
   c. Processing foods industry.
   d. Grain and food exports.
   e. Markets selling goods.
   f. All of the above.

2. What is integrated farming?
   a. Combining growing crops with fisheries.
   b. A particular method for growing rice.
   c. Growing fruit and vegetables in the same plot of land.
   d. None of the above.

3. What trade activity is thriving in the Mekong delta?
   a. Local food and clothes markets.
   b. Seafood exports.
   c. Rice and fruit crop exports.
   d. All of the above.

4. Give an example of an economic activity that has changed the Mekong delta landscape in contemporary times.

**Homework**

Read the extracts from the articles given. Write an essay describing two economic activities in the Mekong delta and how these have changed over time. Draw on specific examples from the readings.

**Instructions:**

- Your essay should be approximately 700 words.
- In writing your essay refer to these extracts so that you have concrete examples to draw on. You may also draw on your own knowledge and do your own research on the topic.
- Your essay should be structured as suggested on page 12 of the workbook (tutorial1).

**References**

Gorman, T. (2020), Underdeveloping the Mekong? Extraction and Unequal Exchange in Vietnam, *Sociology of Development*, 6 (2) pp. 174-193.

Cramb, R. (2020), The evolution of Rice Farming in the lower Mekong delta basin. In White Gold: The Commercialisation of Rice Farming in the Lower Mekong Basin.

International Institute for Environment and Development (Working paper) 2016. Urbanisation and rural development in Vietnam's Mekong delta. Revisiting livelihood transformations in three fruit-growing settlements 2006-2015.

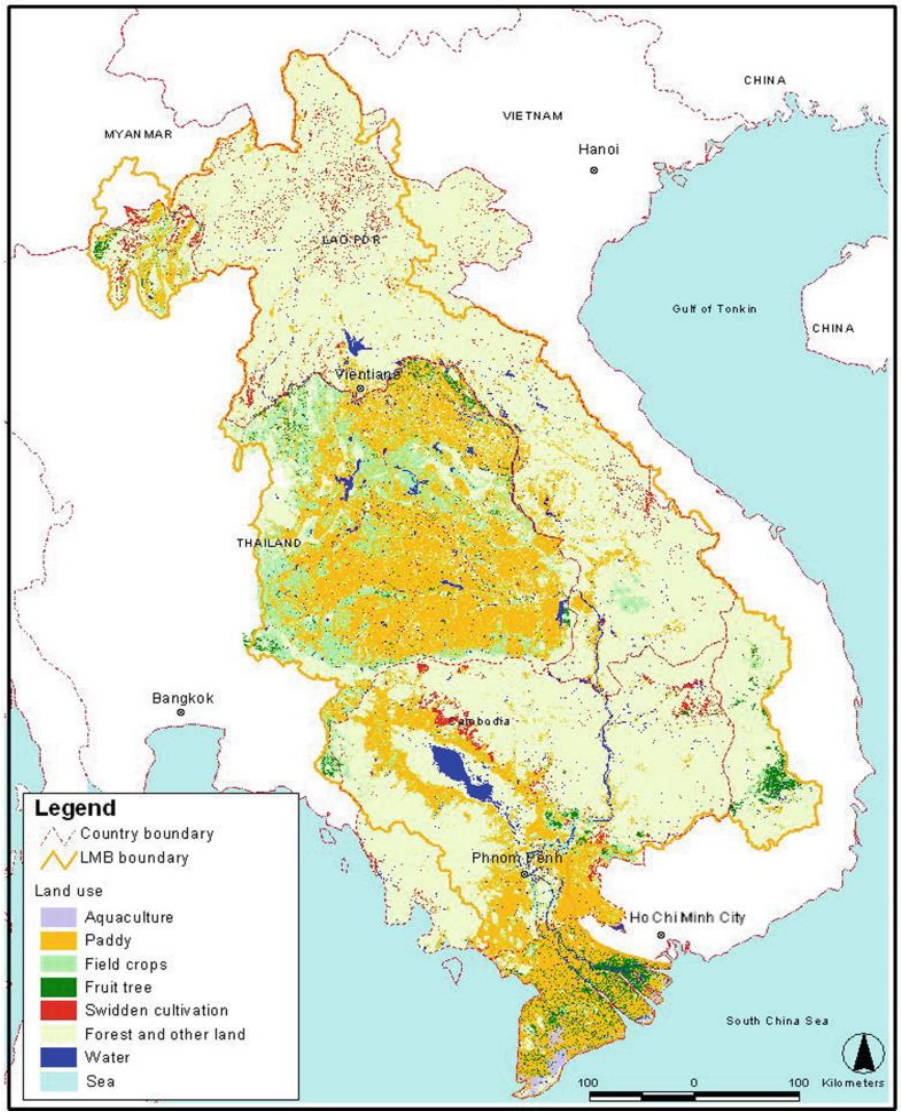
Renaud, F. & Kuenzer, C. (2012), The Mekong Delta System. Interdisciplinary analyses of a river delta. Dordrecht: Springer Netherlands.

Pham, T.T.H., Revilla Diez, J. and Garschagen, M. (2020), A typology of household livelihood changes in rural coastal areas of the Vietnamese Mekong Delta. *Singapore Journal of Tropical Geography*.

Wilder &Nguyen, T. P. (2002) 'The Status of Aquaculture in the Mekong Delta Region of Vietnam: Sustainable Production and Combined Farming Systems', *Fisheries Science* 68, Supplement I.

Marschke, Melissa & Betcherman, Gordon. (2015). Vietnam's seafood boom: Economic growth with impoverishment? Environ Dev Sustain 18, 1129–1150.

**Land use**



## Tutorial 3 - The Social Life of Deltas

One of famous Khmer temple in Mekong Delta, Vietnam. The Mekong Delta is home to many people of Khmer (Cambodian) origin.

### Tutorial Summary

In this tutorial we examine the characteristics of human life in the Mekong delta. We look at how technological innovation in farming and the development of a manufacturing sector have led to population growth and urbanisation in the Mekong. Fertile and productive, the Mekong delta has historically been a region where people of different ethnic and religious background have converged. The Mekong's diverse communities have contributed in developing unique methods in farming, create technological innovation and generate opportunities for trade. We examine three significant transformations in the Mekong delta ecology and economy.

### What is the Purpose of Tutorial 3?

By the end of this tutorial I will be able to:

- Identify and explain significant transformations in the environment and people's lives in the Mekong delta.
- Discuss through specific examples how migration and cultural diversity have historically contributed to innovation in farming and opportunities for trade in the delta.
- Demonstrate by drawing on examples the ways in which the Mekong delta's landscape and social life have changed over the past century.

### Activity 1 – Tracing Changes

Read the extracts from the different texts assigned. Consider one significant change in the history of the Mekong delta discussed in the text. Write a paragraph summarising in your own words the changes that took place describing the following:

- When did this change happen? Which period in time?
- What exactly changed?
- What impact did this change have on people and environment in the delta?

Working in pairs, explain the transformation you identified to your partner. Discuss these changes focusing on the following:

- ❖ Which changes happened first and which followed second?
- ❖ How did each change affect the economy and environment in the Mekong delta?

### Activity 2 - The Mekong Delta Timeline

Working in groups, take one of the large sheets provided. Create a timeline of key changes in the Mekong delta using the examples you discussed earlier today. Make sure to include changes in economy, environment and social life. Put these changes on paper using words and images.

**Timeline checklist:**
On your Timeline Sheet, make sure to include the following information.

- ✓ Period when important changes took place?
- ✓ What was the key change that took place?
- ✓ How did this change alter the landscape in the delta?
- ✓ What changed in social and cultural social life of the delta?

Hang your Timeline Sheets on the wall. One student from each group to explain their sheet to the rest of the class. The other groups to supplement and comment. Compare changes that happened at different periods.

Discussion to focus on answering the following question:
How have these economic activities evolved over time and re-shaped the landscape and people's lives in the Mekong delta?

### Homework

Choose one of the following topics and write an essay (500 words). Draw on examples and evidence from the texts discussed in the lesson or the readings suggested here below.

1. How has wet-rice cultivation revolutionised production in the Mekong delta? In what ways has this agricultural revolution changed the physical and human environment in the Mekong delta?

OR

2. How has the shift from farming mainly rice to farming shrimps and fish for export transformed the environment and people's lives in the Mekong delta?

## Tutorial 4 - Fragile Biospheres

The Mekong Delta suffers from severe drought and salinity intrusion in 2016 (Photo: VNA).

### Tutorial Summary

What are the threats facing river deltas today? In this tutorial we examine how human activities and changes in climate affect life and the environment in the Mekong delta. Heavy rainfall and severe flooding during the wet season as well as the intrusion of salty sea water during the dry season are transforming the delta landscape and threatening people's livelihoods. In addition, fish farms discharge chemicals that pollute water supply and destroy mangrove forests that are important habitats for wildlife species. In this tutorial, we consider the range of challenges facing the Mekong delta ecology today. We also examine in depth how water pollution and mangrove destruction present a serious risk for the health of humans, fish and animals.

### What is the Purpose of Tutorial 4?

By the end of this tutorial I will be able to:

- Identify and explain the set of challenges facing human, plant and animal populations in the Mekong delta today.
- Comprehend that threats to delta ecologies, have economic, social and environmental aspects, all closely interrelated.
- Explain the positive and negative impacts of the rapid expansion of economic activities in the Mekong delta.

### Activity 1 – What is the 'environment'?

Using post-its, write words that come mind when you hear the word 'environment'. Use one post-it for one word. Stick your notes on the **Environment Chart** provided.

Working in pairs choose some of the words you wrote on pots-its. Use these words to work out your own definition of the term 'environment'. Read your definitions in class and add them to the Environment Chart.

### Activity 2 - What is a good or bad environment?

Study the Environment Chart and the images and examples on the board. Think and write down answers to the following questions:

- What makes a good and bad environment?
- How does a good or bad environment affect people's lives?

Working in pairs. discuss your answers and compare. One student to report findings and learnings to the whole class. Main findings will be added to the Environment Chart. Next, pay attention to definitions and explanations on the whiteboard.

### Activity 3 – Environment, People and Economy in the Mekong delta

A. Watch the video on contemporary life in the Mekong delta. Focus on the impact human activities have on the environment, economy and social life in the delta.

B. Write down two actions and the impact these actions have on people and the environment in the delta.

### Notes

1. ----------

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2. ----------

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C. Working in pairs, pass your answers to your partner. Add to each other's answers. Working with your partner, separate between impacts on environment, people and economy.

D. We fill in the table together in class. Copy answers form the board in your workbook.

| Cause | Impact on environment | Impact on people | Impact on Economy |
|---|---|---|---|
| | | | |
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## Activity 3 – The example of fish farming

Read the allocated text on fish farming and the challenges it presents for people, economy and the environment in the Mekong delta.

Split into three groups.

**Group A:** Write four positive impacts that the growth of commercial fish/shrimp farming in the Mekong delta has. For instance, was is the impact on the environment, on climate, on the local and global economy and on people's lives.

**Group B:** Write four negative impacts that the growth of commercial fish/shrimp farming in the Mekong delta has on the natural and built environment, climate and people's livelihoods. Group A and B to read their answers to group C and explain why they chose these four impacts.

**Group C:** Consider the answers of Group A and B and compile a list with all the positive and negative impacts. Choose 2 negative and 2 positive impacts that you think are the most important. Explain why to the rest of the class.

In class, we compile a list together with all the positive and negative effects of commercial fish farming.

**Class discussion:** What are the effects of intensive fish farming on local communities and environment? The case of mangroves – water pollution and the loss of rich habitats.

## Homework

Write a 500-word essay discussing the following:

***What is the future of the seafood farming industry in the Mekong delta in your opinion?***

Support your answers by drawing on evidence and information from the texts distributed in class or further readings suggested. For essay structure look on page 12 of this workbook.

## Tutorial 5 - Building sustainable deltas

Replanted mangroves mark a shrimp pond in the Mekong Delta. Photo: Greater Mekong Subregion Atlas of the Environment (2nd edition).

### Tutorial Summary

How could we plan and act to ensure that deltas are preserved for future generations? How can we develop and protect the Mekong delta's rich ecology and productive economy? Today, we are examining efforts to safeguard the future of river deltas undertaken by national governments, international organisations and local inhabitants. We study how such sustainability projects are designed and put into action. What does taking action to ensure the sustainability of environment and economy in deltas involve? Who are the stakeholders involved and affected by these projects? Why is it important to build economically and ecologically sustainable deltas?

### What is the Purpose of Tutorial 5?

By the end of this tutorial I will be able to:

- Understand what sustainability is and that it has economic, social and environmental aspects.
- Explain the reasons why it is important to build economies and ecologies that can provide for the needs of future generations.
- Devise ways to act to ensure that the Mekong deltas' rich ecologies and productive economies are preserved for the future.

### Activity 1 – What is sustainability

Read the definitions and examples of sustainable development provided in Teacher Sheet 1.

*"To meet the needs of the present without compromising the needs of the future."*
When considering sustainability, a key question to ask is: Will future generations be able to do the same?

Think of the differences between conservation, protection and sustainability. Write down the differences in your workbook.

Conservation means ----------

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Protecting the environment means ----------

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An example of environmental sustainability is ----------

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Working in pairs, read your answers and compare them. Which points do you agree and disagree with? Share your learnings with the class.

### Activity 2 – Planning for Sustainability

Human activity relies on effective functioning of natural systems for its health and wellbeing. Human and physical processes interact to influence, and change landscapes, environments and the climate. Sustainability depends on the interaction of society, economy, environment.

Look at Teacher Sheet 2 that includes a Venn diagram describing sustainability and specific examples of sustainable development.

1. Working on your own, read the extracts from the report on the Mekong delta. Highlight in the text sentences discussing actions and plans for protecting the environment and people's livelihoods in the Mekong delta.

2. Working with your group, make a list of all the actions to protect the environment and people in the Mekong delta suggested in the report. Analyse and assess these projects adding the following information on your table.

- What is the identified problem?
- What is the proposed solution?
- Who are the people, organisations or institutions involved in this sustainability project.
- Evaluate this project. Will it achieve its aims? Why yes or why not?

## Final Assignment

You are going to take part in a conference organised by the United Nations Development Program (UNDP). The conference will discuss how to best protect the environment and people in the Mekong Delta. Write an essay to send to conference delegates explaining which specific aspects of the physical and human geography of the Mekong delta you would like to protect and why.

## Instructions

1. Your essay should be approximately 2,000 words.
2. Remember that there is no right or wrong answer, as long as your answer is well argued and uses evidence and data.
3. The essay should have a brief introduction, a main body where you develop your argument and a conclusion that summarizes your argument (see below).
4. Draw on examples and evidence from the texts referenced in your workbook. You may use evidence that are not included in the workbook as long as these are found in published work such as research papers, journal articles or official reports.

## Success Criteria

- Write clearly and succinctly. Follow the suggested essay structure (below).
- Use specific examples to illustrate main points.
- Demonstrate a clear understanding of the course content.
- Critically reflect on the topic and synthesise tutorial content. In what ways are ecology, economy and people linked when it comes to sustainability?
- Describe the physical and human characteristics of the Mekong river delta. What makes the river delta unique and worth protecting?
- Give reasons why it is important to protect the environment, economy and people in the Mekong delta. How does the ecology and economy of the Mekong delta affect the lives of people in Viet Nam and the world more generally?
- Explain in detail what the dangers and risks that people and environment face in the Mekong delta today.
- Discuss one or two sustainability projects that have been implemented in the Mekong delta. What aspects of the environment and life did these projects focus on? To what extent have these projects been successful in achieving their aims?
- What more could be done to protect the Mekong delta? Suggest possible actions.
- Support your argument with clearly cited references.
- Use words from the subject vocabulary (p. 7) and from tutorials correctly.

## Essay Structure

**Three main parts:**

1. **Introduction** (0-300 words). Introduce the issue you are writing about and the main point you are arguing.
2. **Main text** (1300- 1500 words). Here you provide examples and evidence to support the main points you are making. Then you explain how these examples and evidence support your main point. Use different paragraphs for each point/example.
3. **Conclusion** (200-300 words): Summarise what you have argued in the previous sections. Do not repeat sentences.

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## Tutorial 6 – Feedback tutorial

### What is the Purpose of Tutorial 6?

- To receive feedback on your final assignment
- To respond to the feedback from your Uni Pathways teacher
- To write targets for improvement on your final assignment

### Final assignment feedback from your Uni Pathways Teacher

(Remember to look at the mark scheme to help you understand what you have done well so far, and how you can do even better in your final assignment)

| Here are three things that my Uni Pathways Teacher thought I did well in my draft assignment |
| --- |
| • <br> • <br> • |

| Here are three things that my Uni Pathways Teacher thinks that I could do to get a higher mark in my final assignment |
| --- |
| • <br> • <br> • |

| Tasks from my Uni Pathways Teacher to do during the feedback tutorial to help me improve |
| --- |
| • <br><br>• <br><br>• |
| My response: |

| Actions I will take to improve my final assignment after this tutorial… |
| --- |
| • <br><br>• <br><br>• |

| Hand in date for my final assignment: | |
| --- | --- |

## Tutorial 7 – Final tutorial

**What is the Purpose of Tutorial 7?**

- To receive feedback and a grade on your final assignment.
- To reflect on the programme including what you enjoyed and what was challenging.
- To ask any questions you may have about university.

**Final assignment feedback from my Uni Pathways Teacher**

| Final mark: | University style grade: |
|---|---|
| Feedback: Here are three things that my Uni Pathways teacher thought I did well in my final assignment<br>•<br>•<br>• | |

| Here are three things that my Uni Pathways teacher thinks I should remember for when I am doing this kind of study in the future |
|---|
| •<br>•<br>• |

**University**

| What questions do you still have about University after taking part in Uni Pathways? |
| --- |
| • <br> • <br> • |

**Reflecting on Uni Pathways**

| What did you most enjoy about Uni Pathways? |
| --- |
| • <br> • <br> • |

| What did you find challenging about the programme? | How did you overcome these challenges? |
| --- | --- |
| • <br> • <br> • | • <br> • <br> • |

## Appendix 1 – Referencing correctly

When you get to university, you will need to include references in the assignments that you write, so we would like you to start getting into the habit of referencing in your Brilliant Club assignment. This is really important, because it will help you to avoid plagiarism. Plagiarism is when you take someone else's work or ideas and pass them off as your own. Whether plagiarism is deliberate or accidental, the consequences can be severe. In order to avoid losing marks in your final assignment, or even failing, you must be careful to reference your sources correctly.

**What is a reference?**

A reference is just a note in your assignment which says if you have referred to or been influenced by another source such as book, website or article. For example, if you use the internet to research a particular subject, and you want to include a specific piece of information from this website, you will need to reference it.

**Why should I reference?**

Referencing is important in your work for the following reasons:

- It gives credit to the authors of any sources you have referred to or been influenced by.
- It supports the arguments you make in your assignments.
- It demonstrates the variety of sources you have used.
- It helps to prevent you losing marks, or failing, due to plagiarism.

**When should you use a reference?**

You should use a reference when you:

- Quote directly from another source.
- Summarise or rephrase another piece of work.
- Include a specific statistic or fact from a source.

## How do I reference?

There are a number of different ways of referencing, and these often vary depending on what subject you are studying. The most important to thing is to be consistent. This means that you need to stick to the same system throughout your whole assignment. Here is a basic system of referencing that you can use, which consists of the following two parts:

1. **A marker in your assignment**: After you have used a reference in your assignment (you have read something and included it in your work as a quote, or re-written it your own words) you should mark this is in your text with a number, e.g. [1]. The next time you use a reference you should use the next number, e.g. [2].
2. **Bibliography**: This is just a list of the references you have used in your assignment. In the bibliography, you list your references by the numbers you have used, and include as much information as you have about the reference. The list below gives what should be included for different sources.

    a. **Websites** – Author (if possible), title of the web page, website address, [date you accessed it, in square brackets].

    E.g. Dan Snow, 'How did so many soldiers survive the trenches?', http://www.bbc.co.uk/guides/z3kgjxs#zg2dtfr [11 July 2014].

    b. **Books** – Author, date published, title of book (in italics), pages where the information came from.

    E.g. S. Dubner and S. Levitt, (2006) *Freakonomics*, 7-9.

    c. **Articles** – Author, 'title of the article' (with quotation marks), *where the article comes from* (newspaper, journal etc.), date of the article.

    E.g. Maev Kennedy, 'The lights to go out across the UK to mark First World War's centenary', Guardian, 10 July 2014.

## Appendix 2 – The environment, sustainability and you.

What could I do to promote sustainability in my community and neighbourhood?

### Activity 1 – How can I help promote sustainability in my local park?

Working in three groups, draw up a sustainability plan for the park next to the school.

Group A – people living around the park
Group B – students attending the school located next to the park
Group C – Haringey Council representatives

Groups A and B:
1. Devise an idea on how to improve sustainability at the local park.
2. Write at least two actions to take to improve sustainability in the park in the Student Sheet provided.
3. "Pitch" your ideas to the leader of Haringey council.

Group C:
1. Write down the criteria for assessing different sustainability projects. Consider the economic, social and environmental factors of the project.
2. Listen to the suggestions made by Group A and B and decide which one to implement. Explain why.

In drawing your plans and answers all groups to consider:

- What could be done to make the park more sustainable?
- How to improve green spaces and the quality of environment in busy metropolitan cities like London?
- What can you do to create a rich in wildlife environment that adults and children can enjoy and learn about nature.
- How can you encourage wildlife species to make a home in the park?
- How can you ensure the improved park will be there in the future?
- How can you make sure the park can be used by many different groups of people?

## Notes

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