**The future of Venice**

**Lesson 2 plan: Physical environment and flooding**

**Lesson aim:** To learn about the physical environment of Venice and its lagoon, about the history and nature of flooding in the city, and about managing the flood risk.

**Lesson objectives:**

* To know about the lagoon of Venice (LoVe)
* To know how the lagoon has historically been managed by Venetians
* To understand the contemporary changes that are happening to the lagoon
* To understand the reasons why flooding (*acqua alta*) is becoming increasingly frequent and what can be done about it

**Learning activities and tasks:**

**Starter (15 minutes)**

Students to study the **PowerPoint slides** (either individually or teacher led) to review general concepts related to coastal lagoons and coastal flooding and also to understand the specific case of Venice and its vulnerability to storm surge.

Students browse the images in the article below for an introduction to the flooding problem, called *acqua alta*, in Venice

A history of flooding in the sinking city of Venice – in pictures *The Guardian* (2015)
<https://www.theguardian.com/cities/gallery/2015/jun/16/history-flooding-sinking-city-venice-in-pictures>

**Main activities**

**Activity 1** **(30 to 40 minutes)**

Students watch the video titled LoVe interview Cristiano Gasparetto (12 minutes) and make notes on the following themes:

* Physical changes to the lagoon including impacts of shipping and changes to the lagoon’s dimensions and sediment budget (first half of the Gasparetto interview)
* Other environmental problems and links with tourism and demographic change (second half of Gasparetto interview)

**Activity 2** **(30 to 40 minutes)**

Students read through the lagoon environment factsheet and the physical environment and flooding in Venice factsheet, then they should compile a condensed set of notes to draw out the most important facts. In pa rticular, this should include the ways in which the lagoon is currently changing and why Venice has been subsiding, the problems that acqua alta poses for the city, and the various ways the city is trying to manage acqua alta. By looking back at The Guardian online article, students could consolidate understanding and add more to their notes.

**Activity 2 (30 to 40 minutes)**

Students read through the **Lagoon Environment Factsheet** and the **Flooding Factsheet** and compile a condensed set of notes to draw out the most important facts. In particular, this should include the ways in which the lagoon is currently changing and why Venice has been subsiding, the problems that *acqua alta* poses for the city, and the various ways the city is trying to manage *acqua alta*. By looking back at *The Guardian* online article, students could consolidate understanding and add more to their notes.

**Plenary (10 to 15 minutes)**

Students to study the **PowerPoint** (either individually or teacher led) for further images of problems relating to flooding and various mitigation approaches. Classroom discussion to follow on the question: “Assess the extent to which the future of Venice depends on how its lagoon is managed”. Students should be able to offer multiple links between the lagoon and the city, e.g. taking into account changes in water levels, changes in tidal flows, and changes to the sediment budget (erosion and deposition). This could then be written up as an essay for a homework assignment.