

## **River boundary definition exercises**

The exercises below are designed to test your interpretational skills relating to the definition of river boundaries. In some cases there is no 'correct' answer, but hopefully you will have fun debating the options.

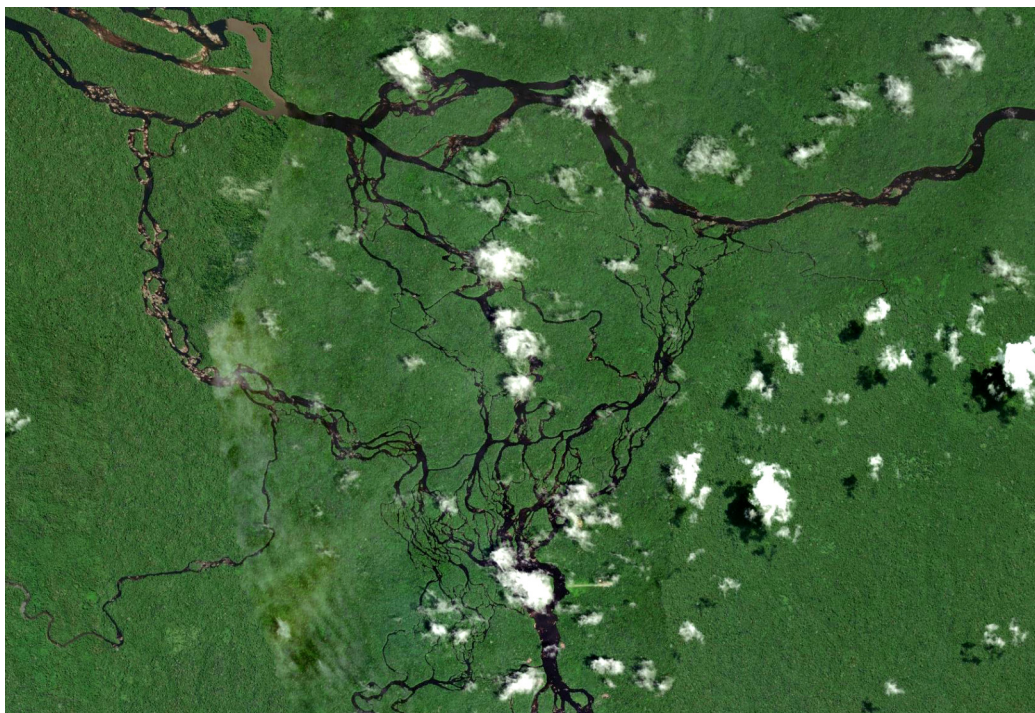
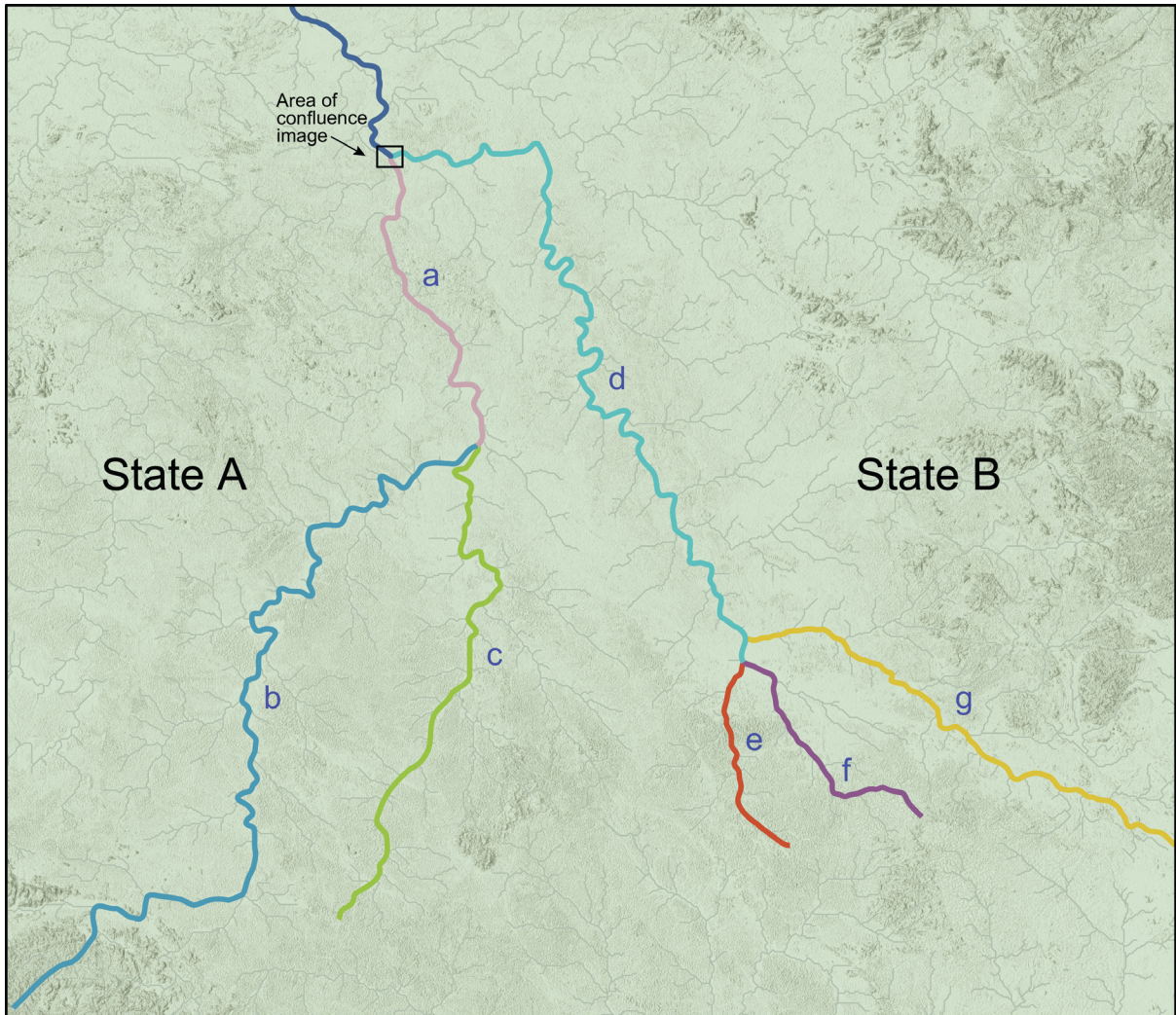
Larger versions of all the maps and graphics in this document will be made available to each group. Feel free to mark the A3 sized versions as much as you wish.

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1. An early nineteenth century boundary agreement between states A and B defines the boundary as being along the left bank of the Rio Blanco from its mouth to its source. Half way up its course, the Rio Blanco divides into two tributaries and the site of the Rio Blanco's source has never been agreed by the two states. Early explorers only mapped the eastern tributary and the area between the tributaries remains virgin rainforest with no acts of administration from either side. As a neutral observer can you decide where the true source of the Rio Blanco should be located?

The geographic characteristics of the tributaries are as follows (west to east):

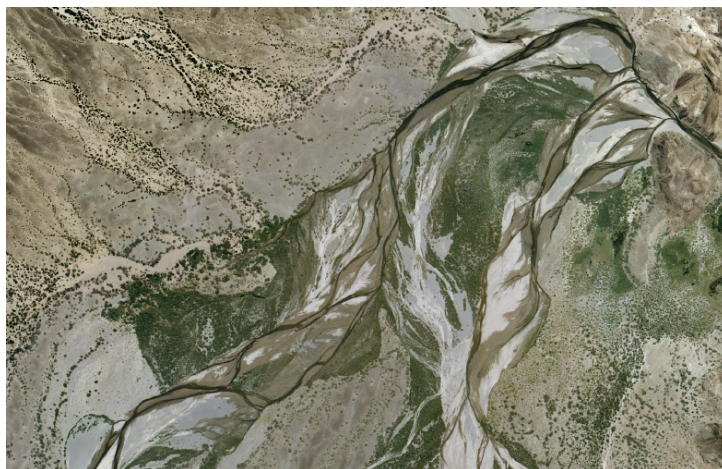
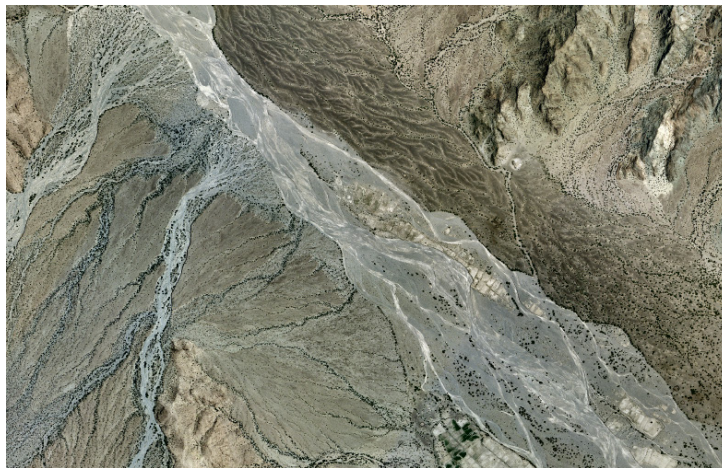
- a. 91.8 km in length
- b. 357.1 km, elevation at source: 515 m
- c. 185 km, elevation at source: 303 m
- d. 273 km in length
- e. 67.5 km in length, elevation at source: 336 m
- f. 90.3 km in length, elevation at source: 543 m
- g. 142.4 km in length, elevation at source: 463 m



Inset of the confluence of the two main tributaries



2. A delimitation commission has determined that the boundary in a seasonal river should follow the middle of the main channel, identified during the dry season. In each of the aerial photographs supplied, locate where you think the boundary ought to run. Where you feel that you cannot determine the location of the boundary from the photography alone, identify what further steps need to be taken in order to define a trouble-free international boundary.

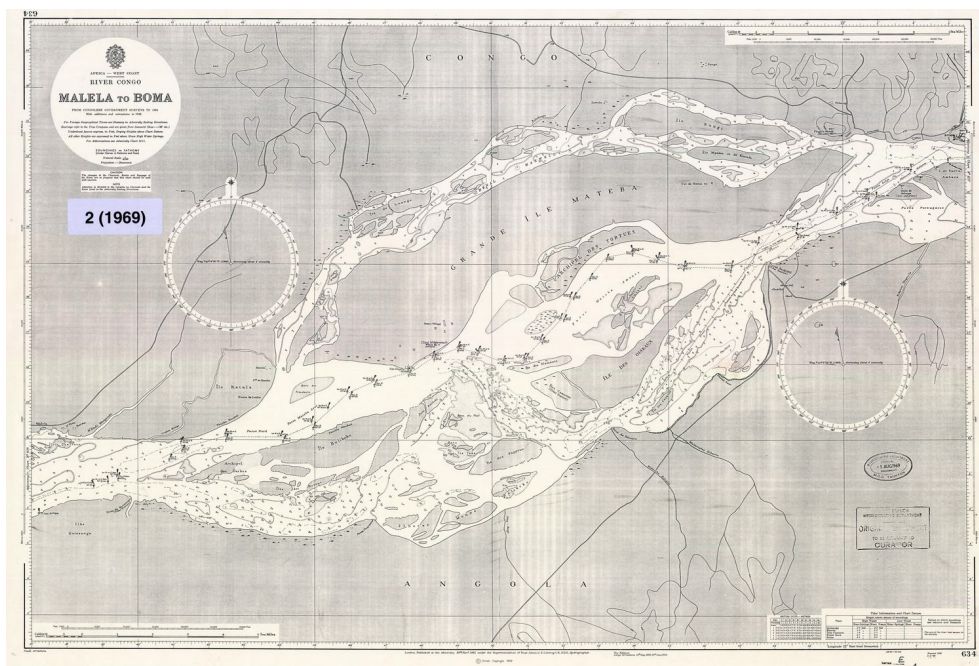
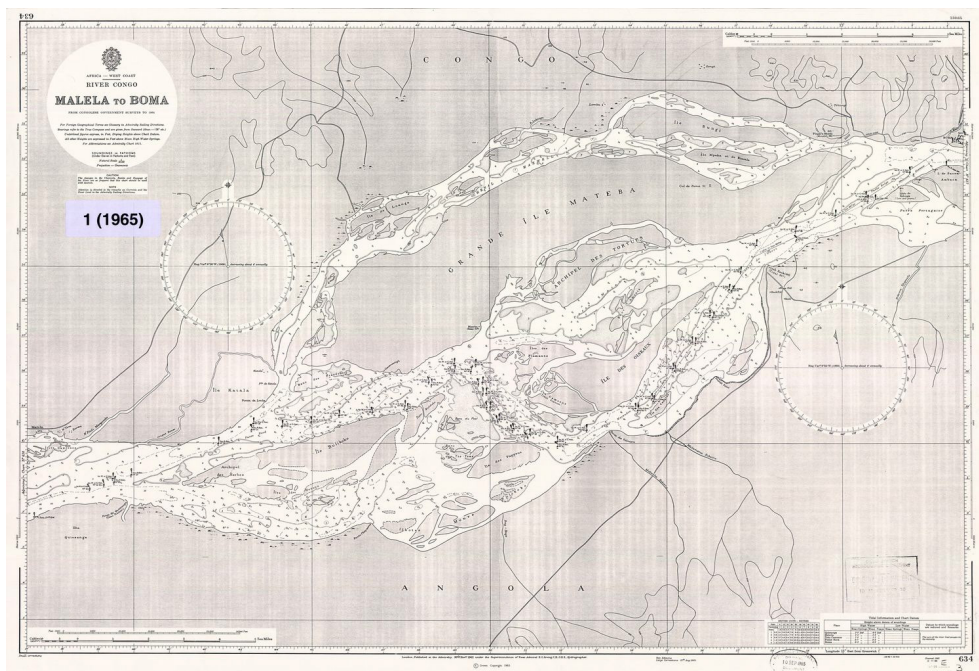


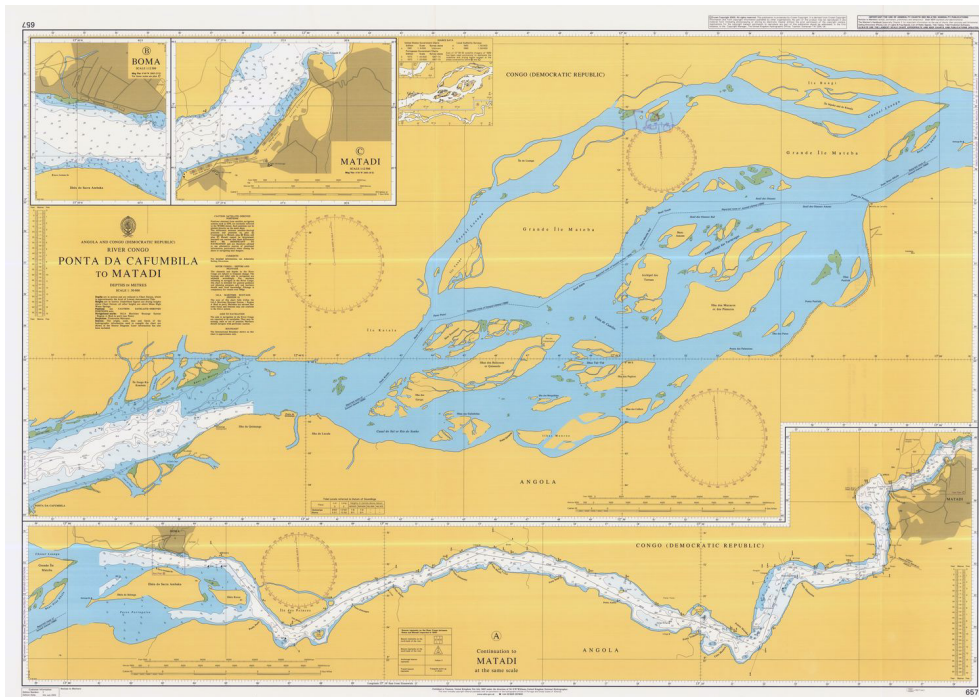
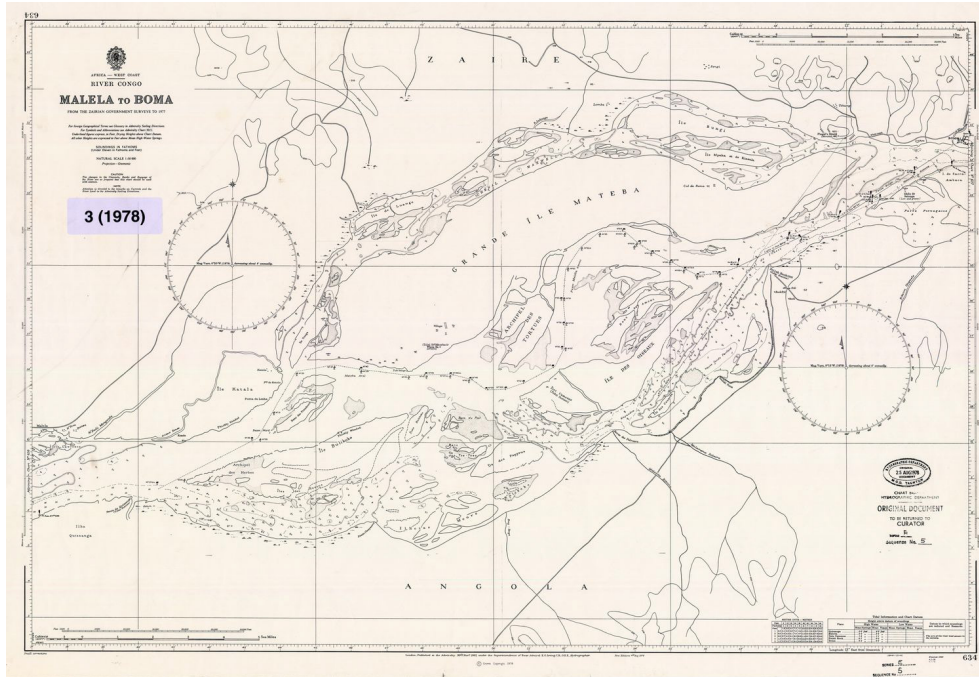


3. A Convention in May 1891 between Portugal and the Congo Free State defined the boundary in the Congo river from Malela to Boma as “the middle line of the channel of navigation generally followed by vessels drawing a large amount of water”. Upstream from Boma, the boundary was defined as “the median line of the river”.

Using the three editions of Admiralty chart 634 and the 2003 edition of chart 657, identify the alignment of the boundary between Angola and Zaire (now the Democratic Republic of the Congo) from Malela to Boma in 1965, 1969, 1978 and 2003. Note major changes to the configuration of the river channel over this period.

On the extract of Admiralty chart 657 draw the best approximation you can of the median line in the Congo upstream from Boma. Note any problems that such a line might create for the riparian states and users of the river.







4. What can we learn about the international boundary between Iran and Iraq in the Shatt al 'Arab from Admiralty charts 3842 and 3843?

