Date: February 11, 2019 **Speaker: SOLA Joan** **Place: Geoserver**

Theme and objective of the activity: The aquifers of the Muga alluvial plain.

Summary of the activity:

The Muga river rises in the Pyrenees in ancient volcanic rocks, then circulates on the reliefs composed of metamorphic rocks to finally reach the alluvial plain and the Mediterranean Sea.
In the plain settled sedimentary rocks of continental origin: alluvial or fluvial and of marine origin: beach and shallow sea. These rocks are dated from the Quaternary (-2.58 Ma to the present) and the Neogene (-23.03 Ma to -2.58 Ma).

Two aquifers make up the plain. The Neogene aquifer is composed of rocks originating from the dismantling of reliefs forming a deltaic alluvial cone. On the top of the cone, the granulometry is large (blocks, gravel) while in its most distal part, the granulometry is fine (clay, silt). The drainage channels in the cone drive the largest blocks and form lenses in the alluvial cone.
The Quaternary aquifer is composed of different layers. A deep captive part from alluvial deposit covered by a layer of clay but this one not covering it completely. Above, there is another aquifer layer partly marine and partly continental.

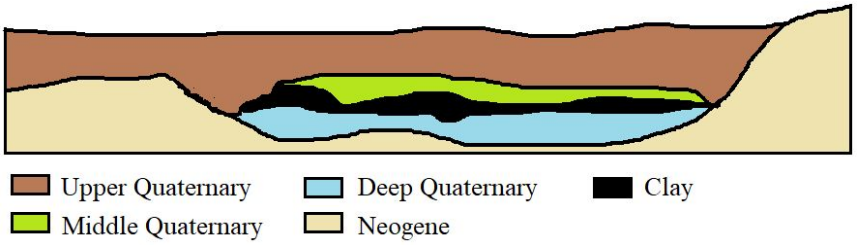
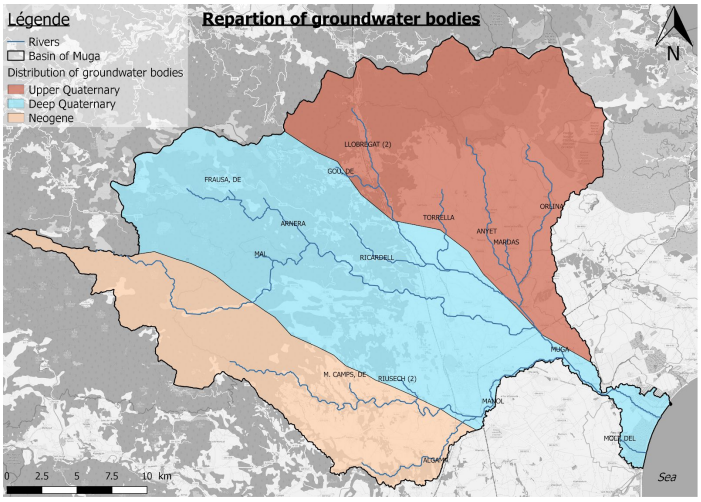


Figure 1 : Section of quaternary deposits



All aquifers are affected by current saline intrusion. This intrusion is due to the overexploitation of aquifers and the fact that they are connected to each other. Their spatial distribution leads to a conflict of interest between water users.

Figure 2: Distribution map of groundwater bodies