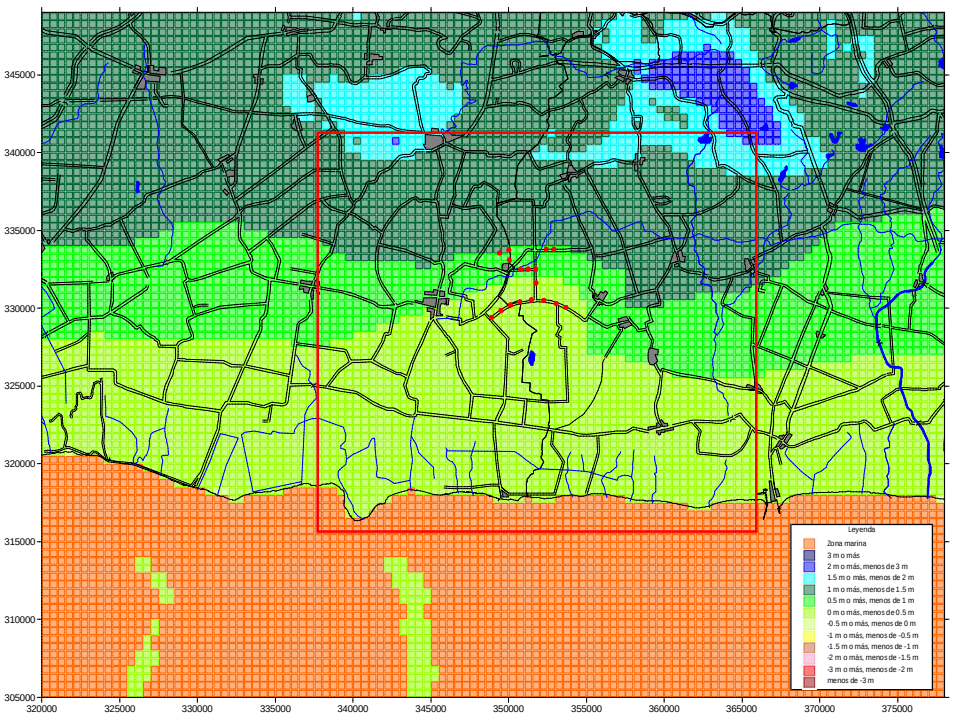
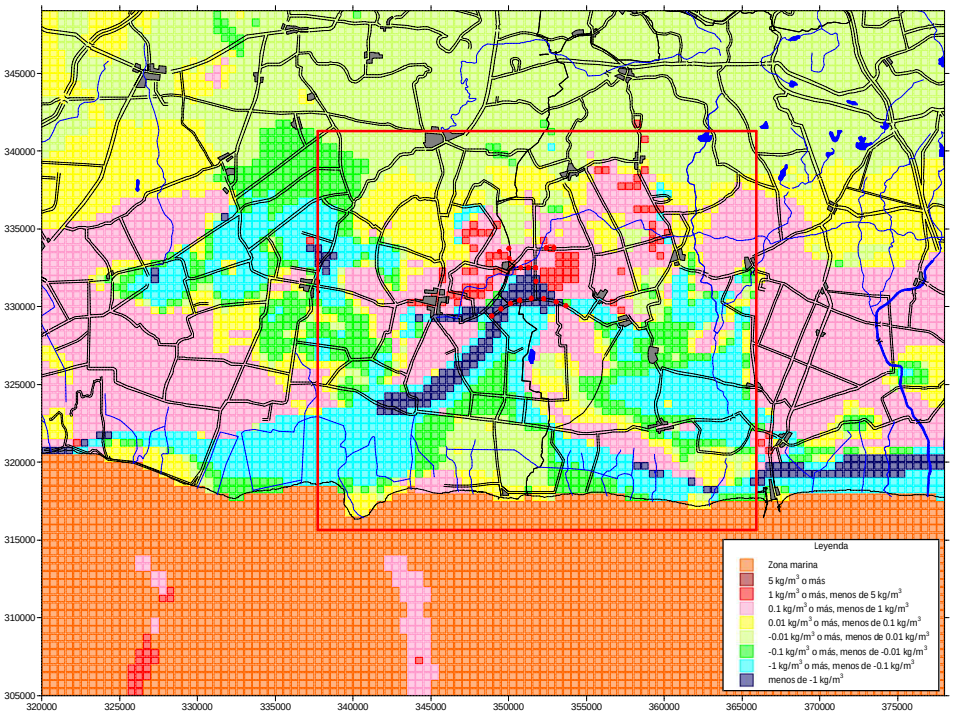


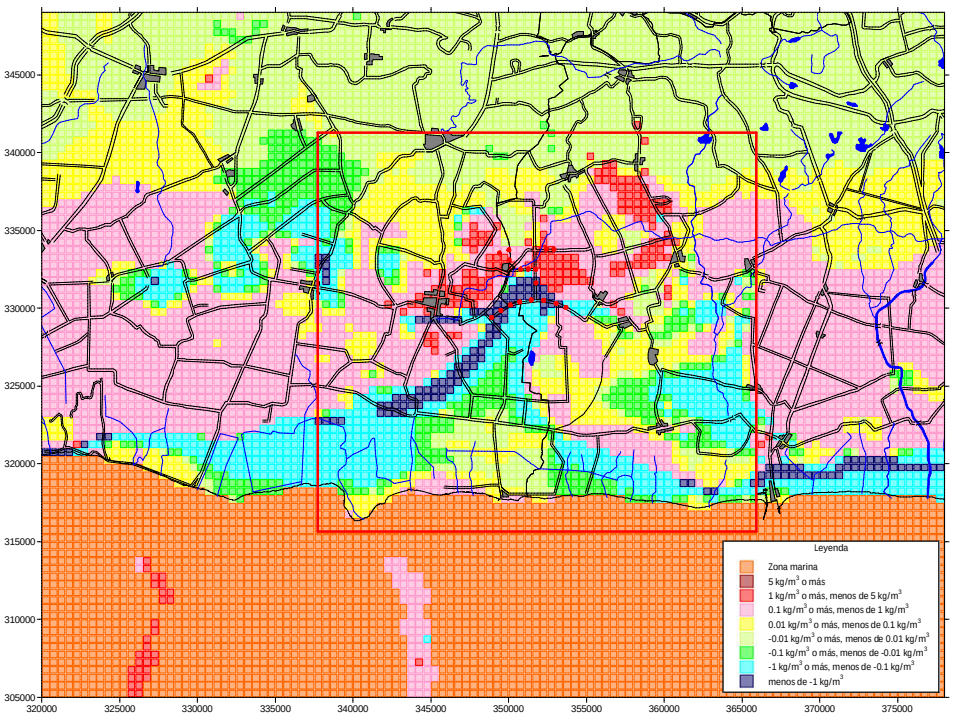
(Last month (December 2035))

Figure 5-18: Comparison of calculated groundwater level distribution (17th layer) of [Q0-RP0 Model] and [Q0-RP3 Model]

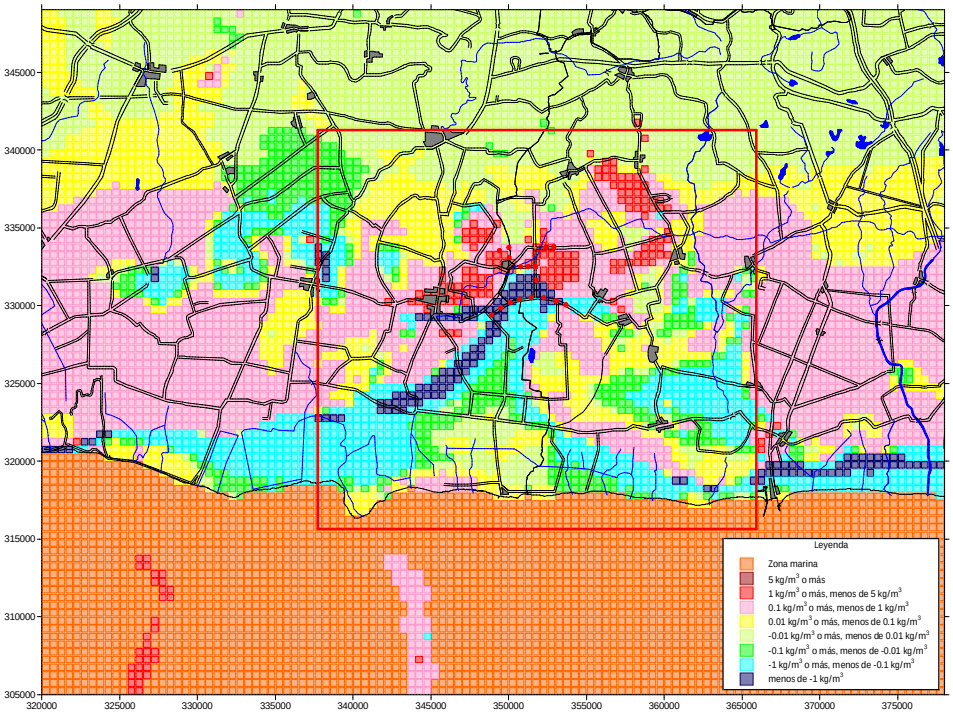
The comparison figures of the calculated salt concentrations (17th layer) between Basic Model 2 and the three described cases are also shown below. The comparison period is the same as that of basic model 1.



(End of the dry period (April 2035))

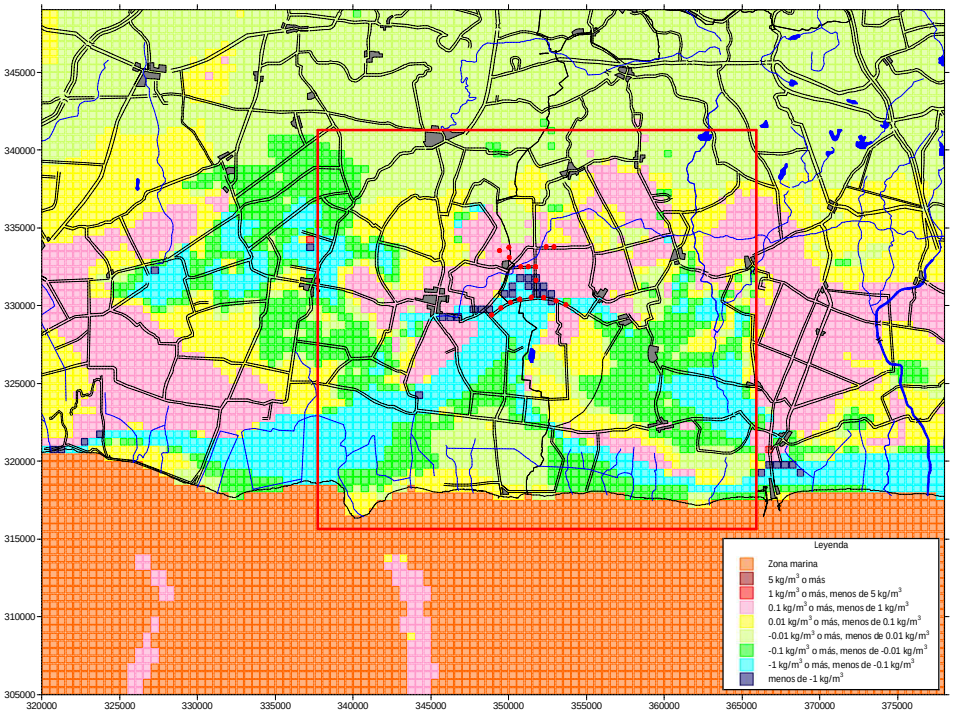


(End of the rainy period (October 2035))

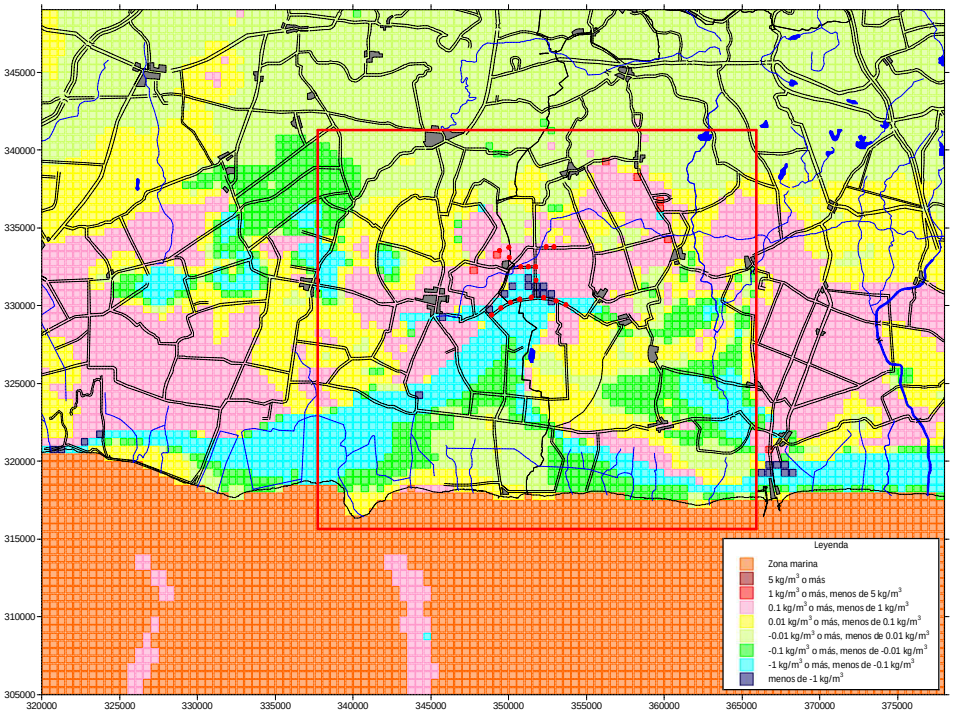


(Last month (December 2035))

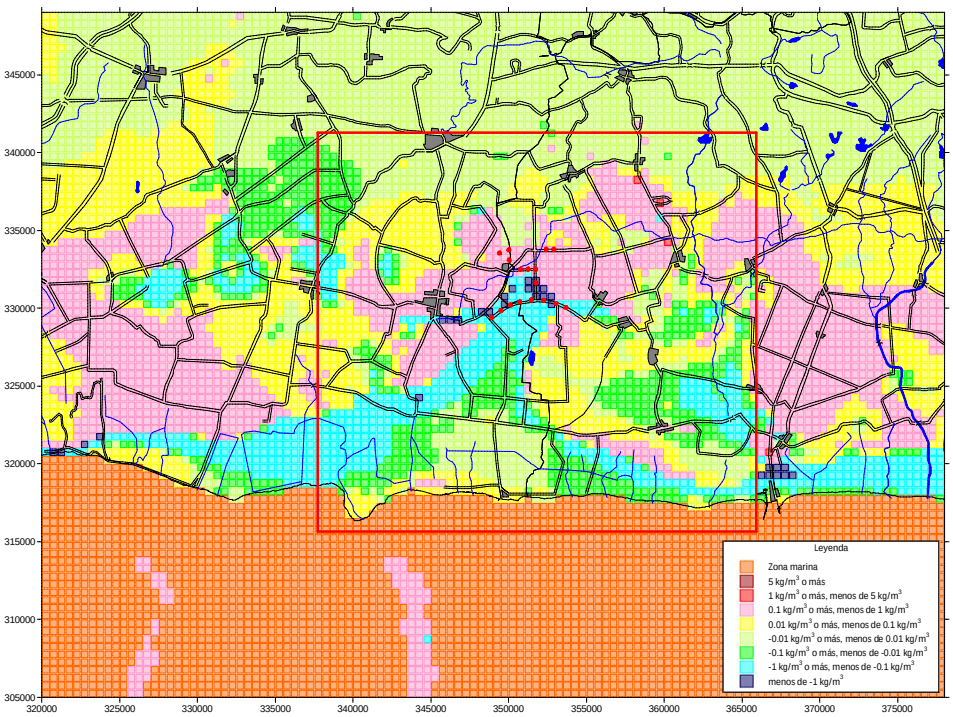
Figure 5-19: Comparison of calculated groundwater salt concentration distribution (17th layer) of [Q0-RP0 Model] and [Q0-RP1 Model]



(End of the dry period (April 2035))

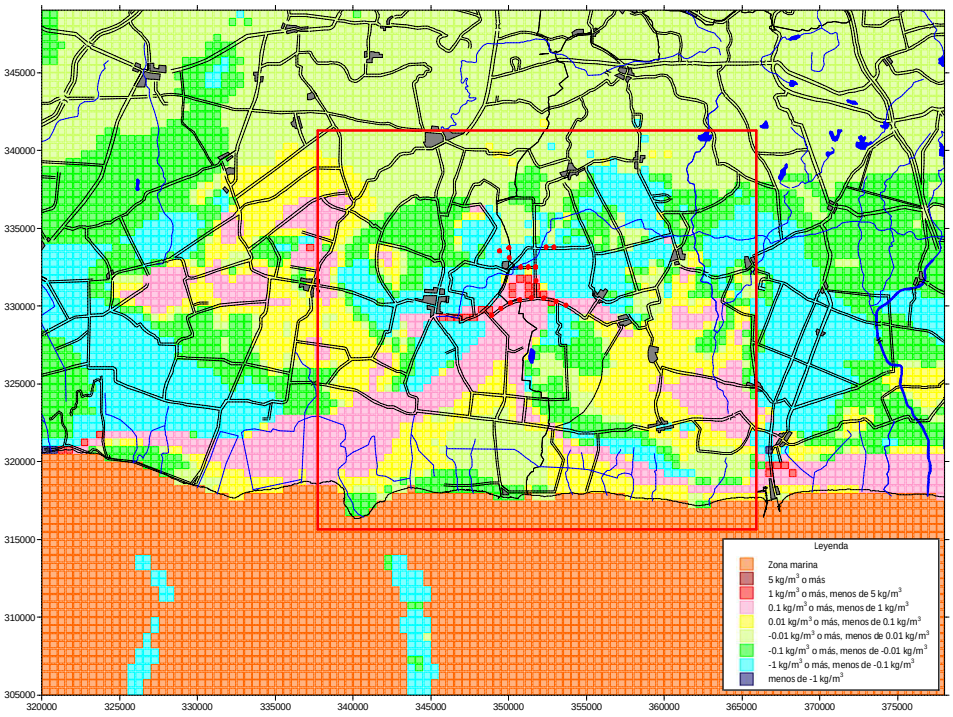


(End of the rainy period (October 2035))

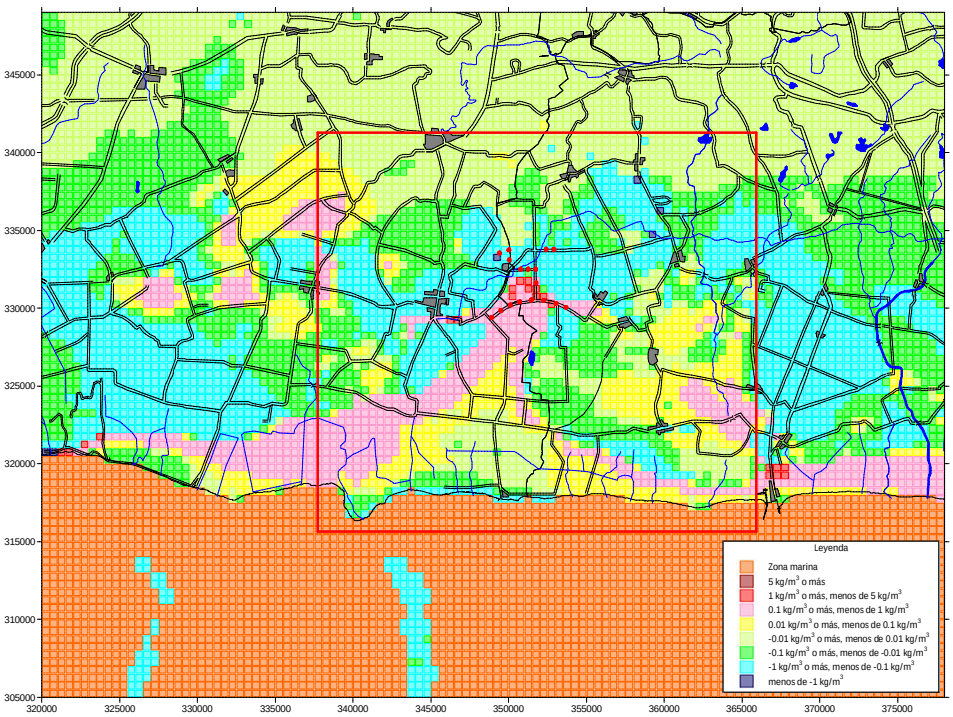


(Last month (December 2035))

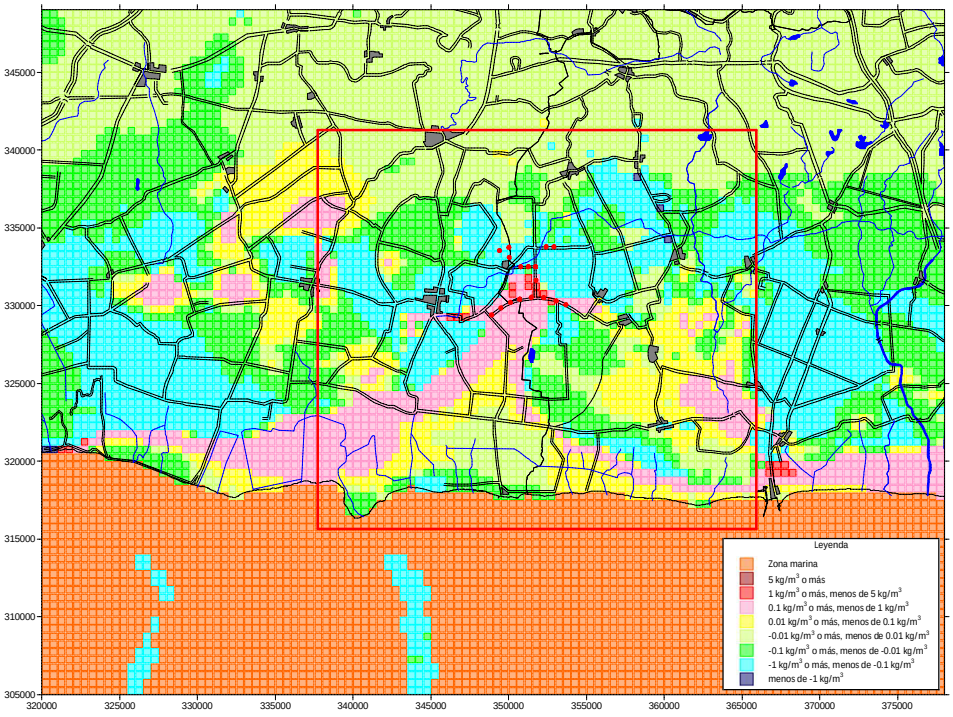
Figure 5-20: Comparison of calculated groundwater salt concentration distribution (17th layer) of [Q0-RP0 Model] and [Q0-RP2 Model]



(End of the dry period (April 2035))



(End of the rainy period (October 2035))



(Last month (December 2035))

Figure 5-21: Comparison of calculated groundwater salt concentration distribution (17th layer) of [Q0-RP0 Model] and [Q0-RP3 Model]

c. Scenario of groundwater discharge fluctuation

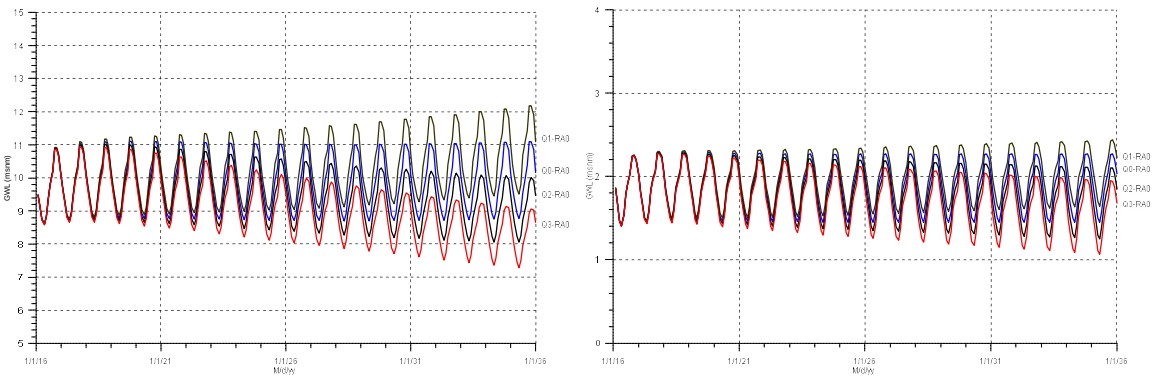
Three cases of assumption for the pumpage volume were undertaken in which the groundwater recharge volume was the same as Basic Model 1 (Q0-RA0 Model).

① Q1-RA0 Model
- Volume of groundwater pumped: The volume was reduced annually at the same rate so the recharge volume in 2035 will be 90% of the recharge volume of Q0-RA0 model.

② Q2-RA0 Model
- Volume of groundwater pumped: The volume was increased annually at the same rate so the pumpage volume in 2035 will be 110% of the Q0-RA0 model.

③ Q3-RA0 Model
- Volume of groundwater pumped: The volume was increased annually at the same rate so the pumpage volume in 2035 will be 120% of the Q0-RA0 model.

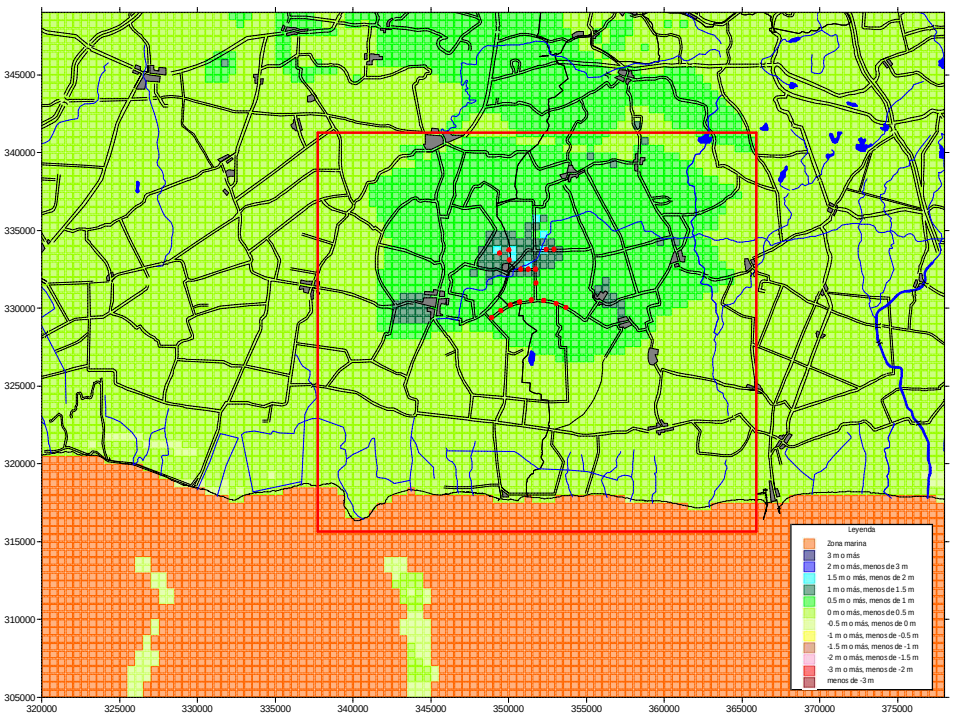
The transition result of the calculated groundwater level of the Basic Model 1 and the three cases described are shown in the figure below.



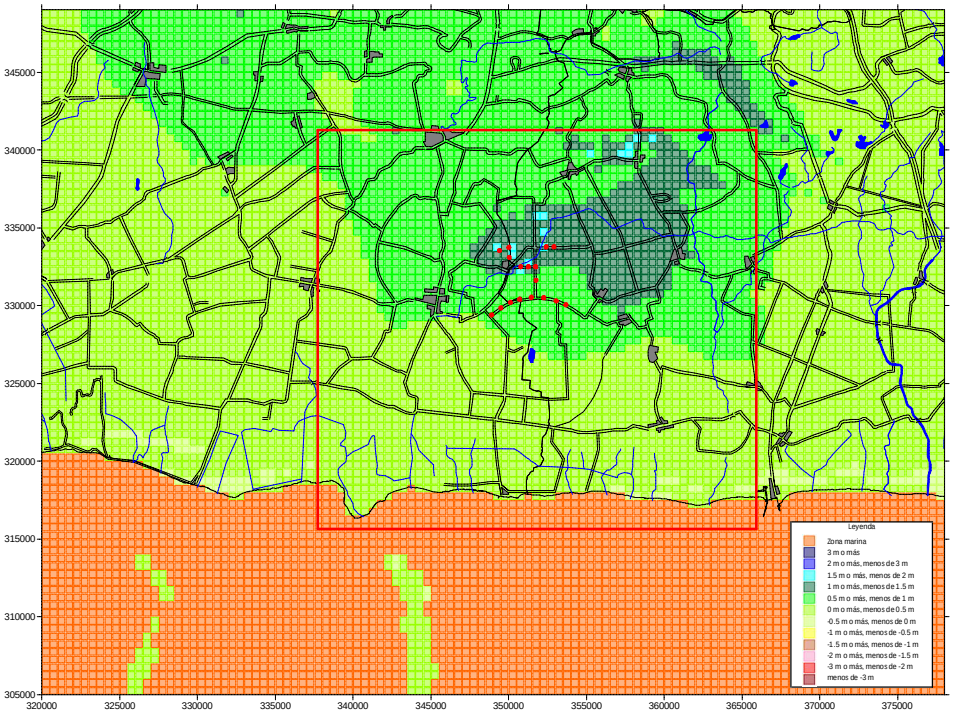
(HS-563) (LSU-8)

Figure 5-22: Fluctuation of the calculated groundwater levels ([Q0-RA0 Model], [Q1-RA0 Model], [Q2-RA0 Model] and [Q3-RA0 Model])

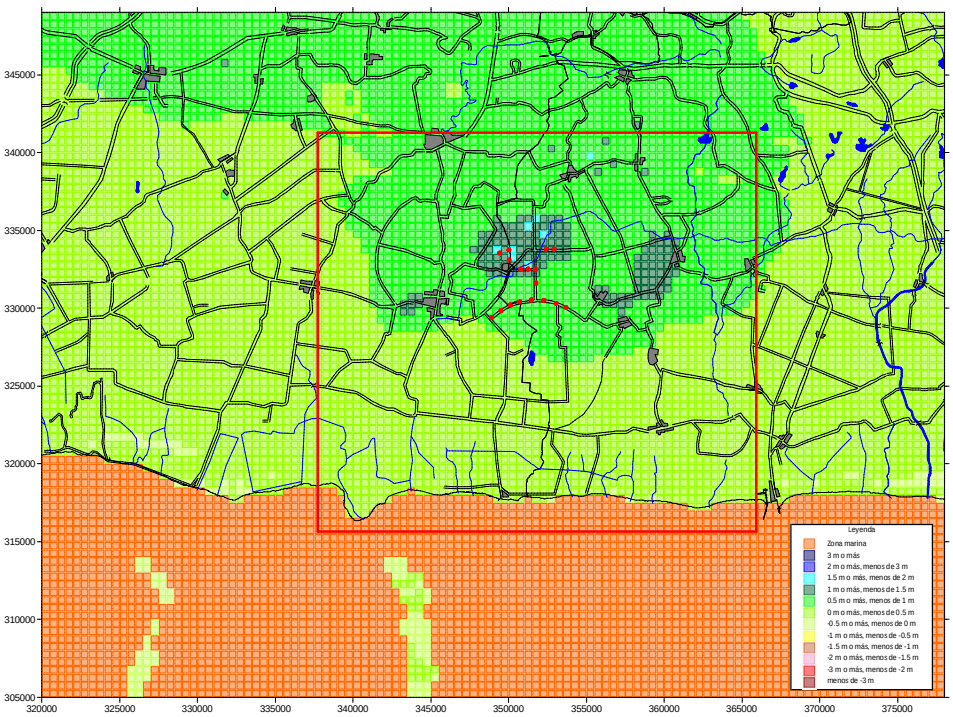
The comparison figures of the calculated groundwater level distribution between Basic Model 1 and the three cases (17th layer) are shown below. The comparison period is the same as that of the previous section.



(End of dry period (April 2035))

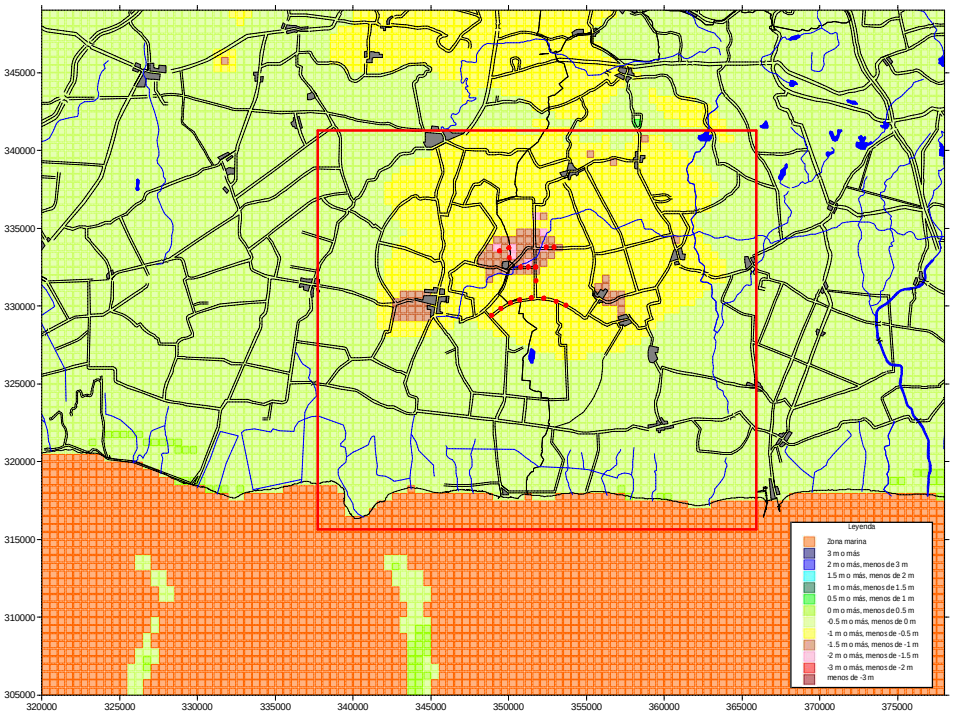


(End of rainy period (October 2035))

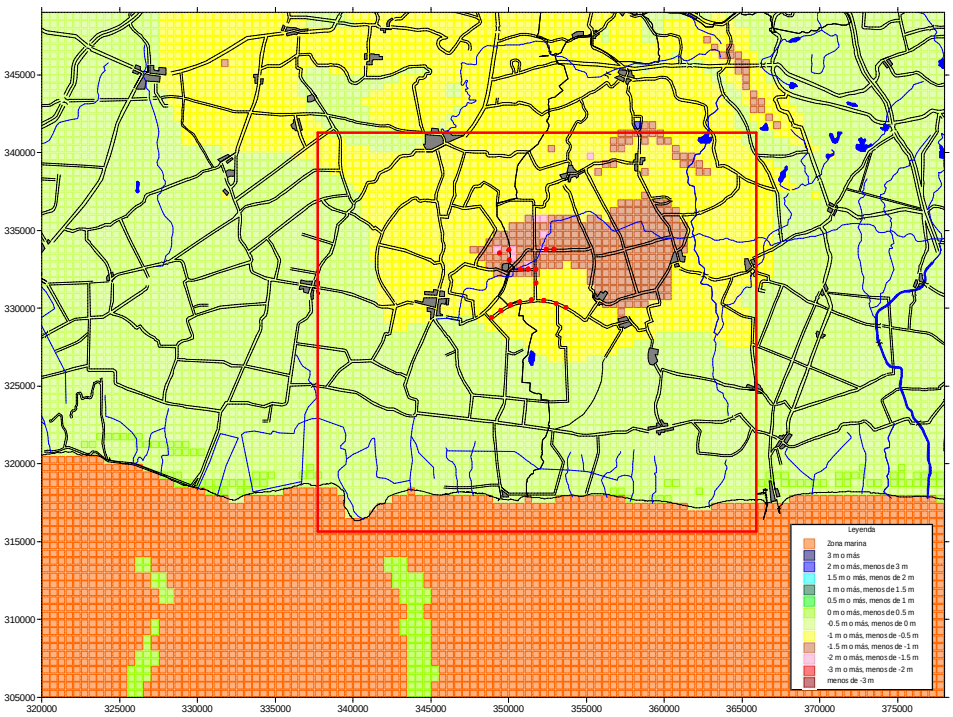


(Last month (December 2035))

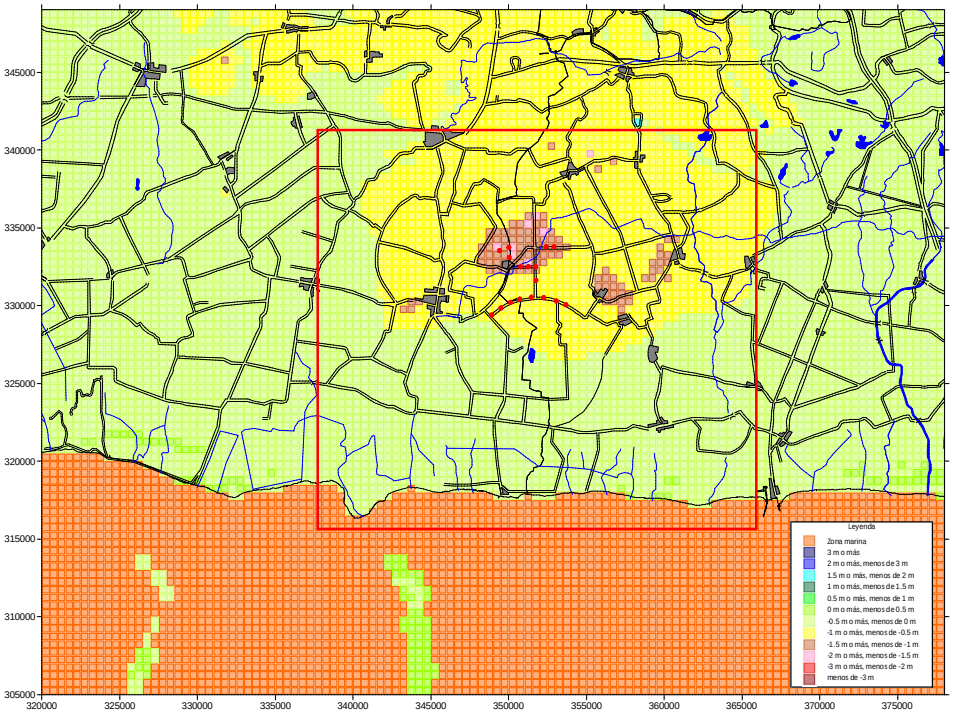
Figure 5-23: Comparison of calculated groundwater level distribution (17th layer) of [Q0-RA0 Model] and [Q1-RA0 Model]



(End of dry period (April 2035))

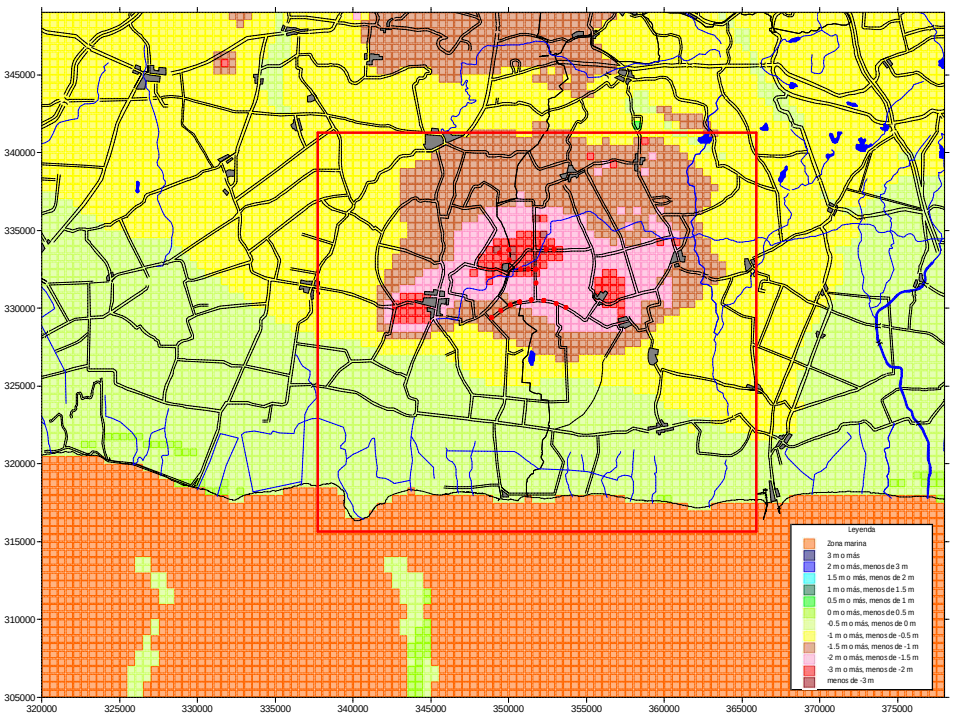


(End of rainy period (October 2035))

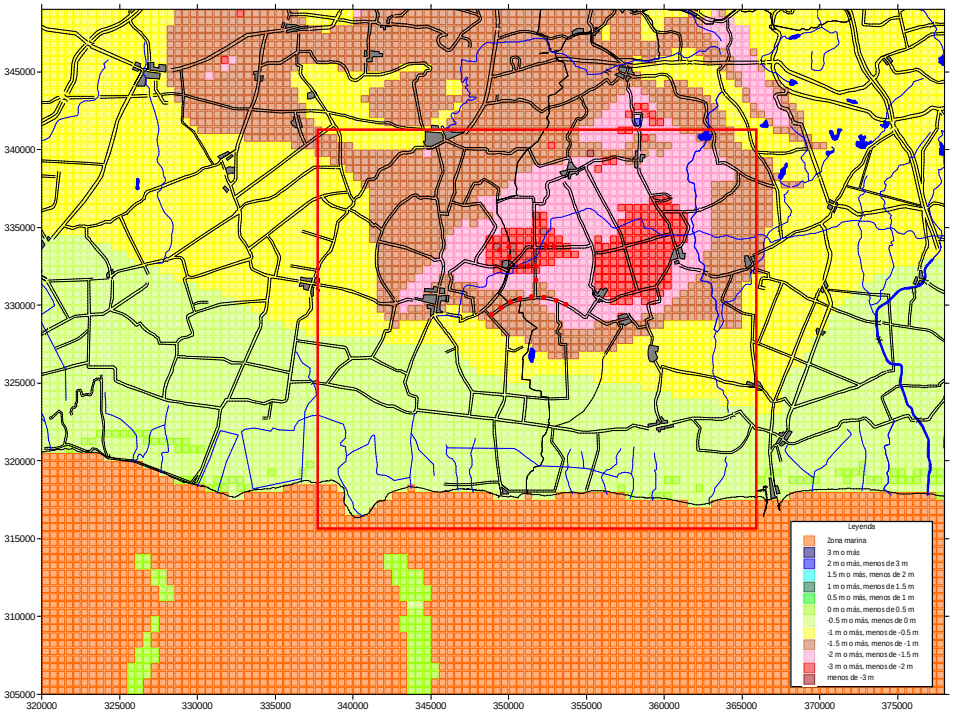


(Last month (December 2035))

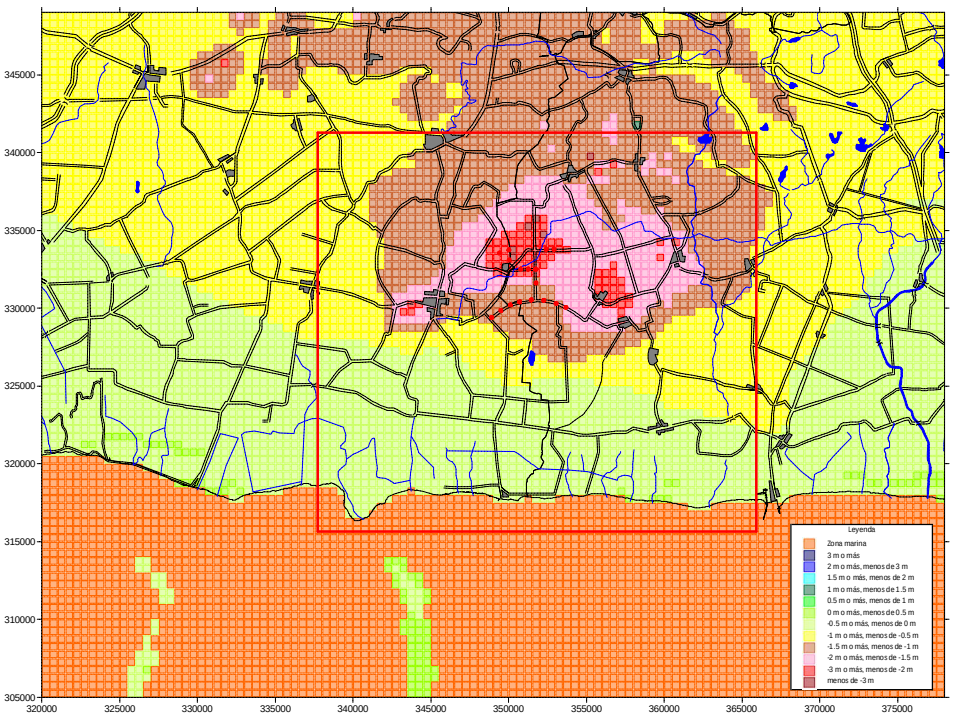
Figure 5-24: Comparison of calculated groundwater level distribution (17th layer) of [Q0-RA0 Model] and [Q2-RA0 Model]



(End of dry period (April 2035))



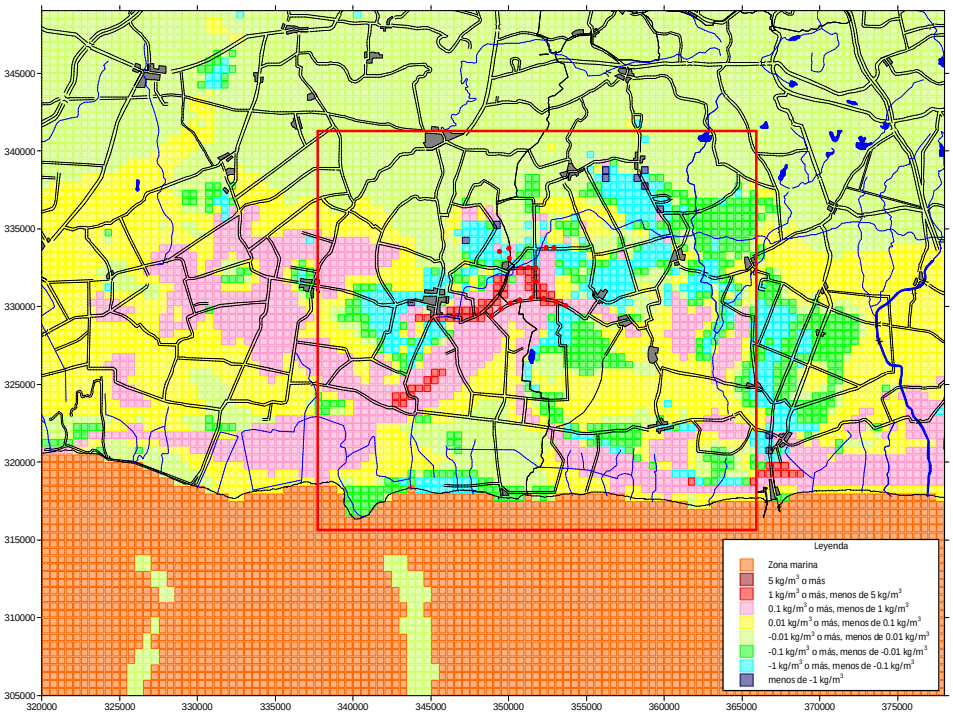
(End of rainy period (October 2035))



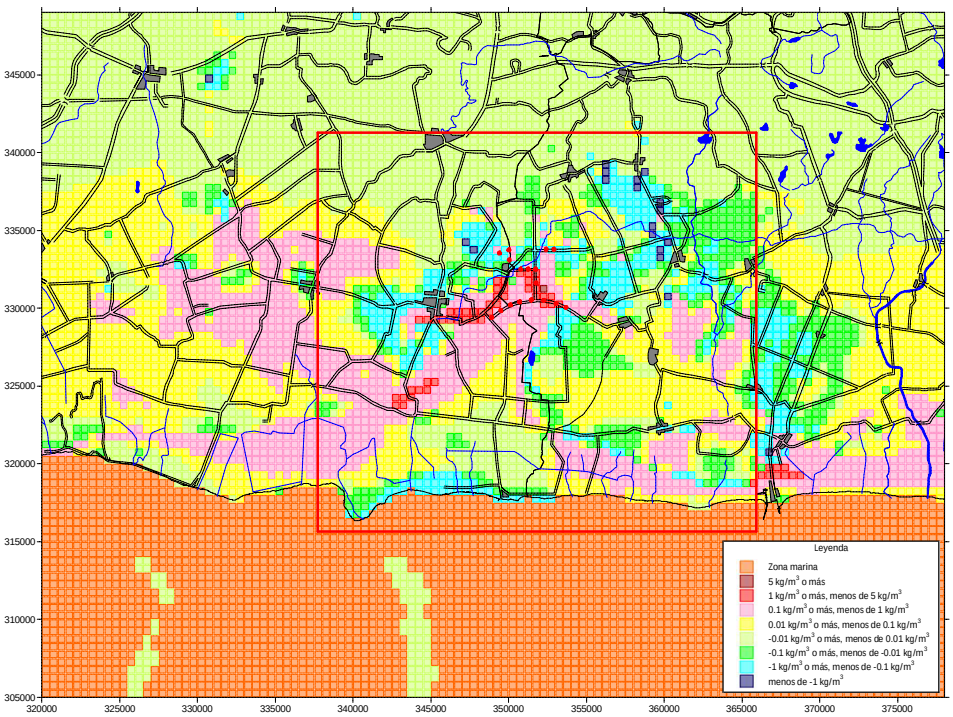
(Last month (December 2035))

Figure 5-25: Comparison of calculated groundwater level distribution (17th layer) of [Q0-RA0 Model] and [Q3-RA0 Model]

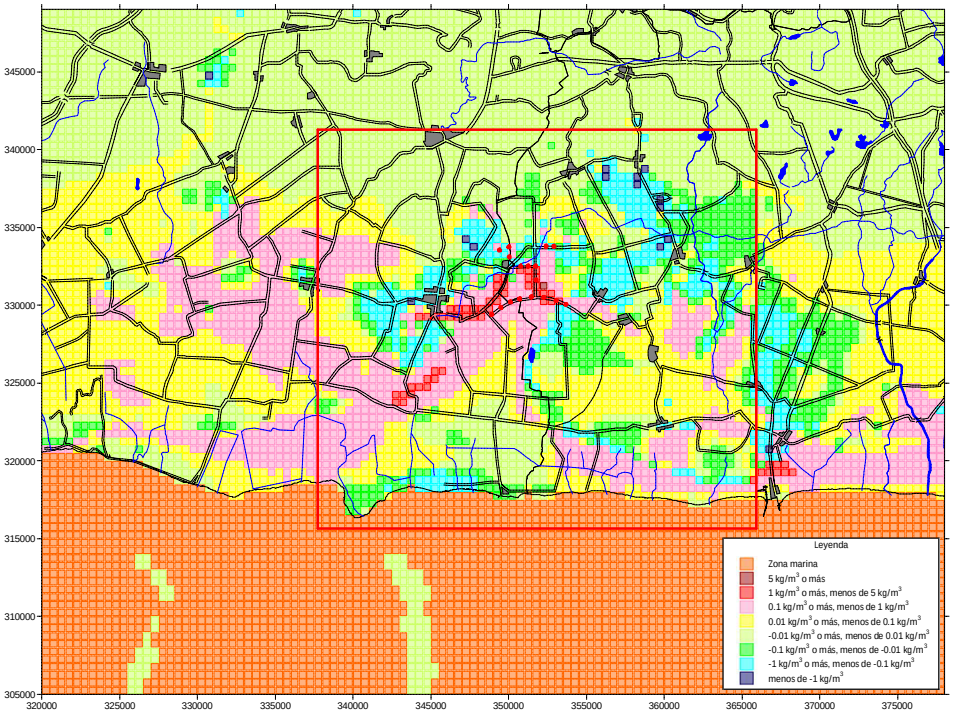
The comparison figures of the calculated salt concentrations (17th layer) between Basic Model 1 and the three cases described are also shown below. The period of comparison is the same as that of the previous section.



(End of dry period (April 2035))

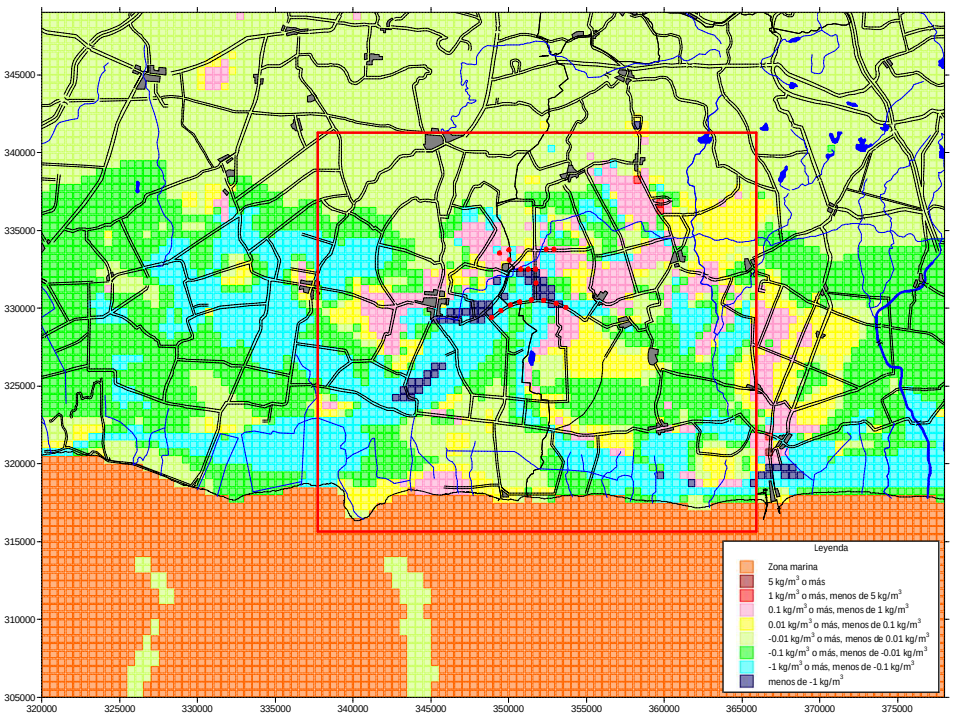


(End of rainy period (October 2035))

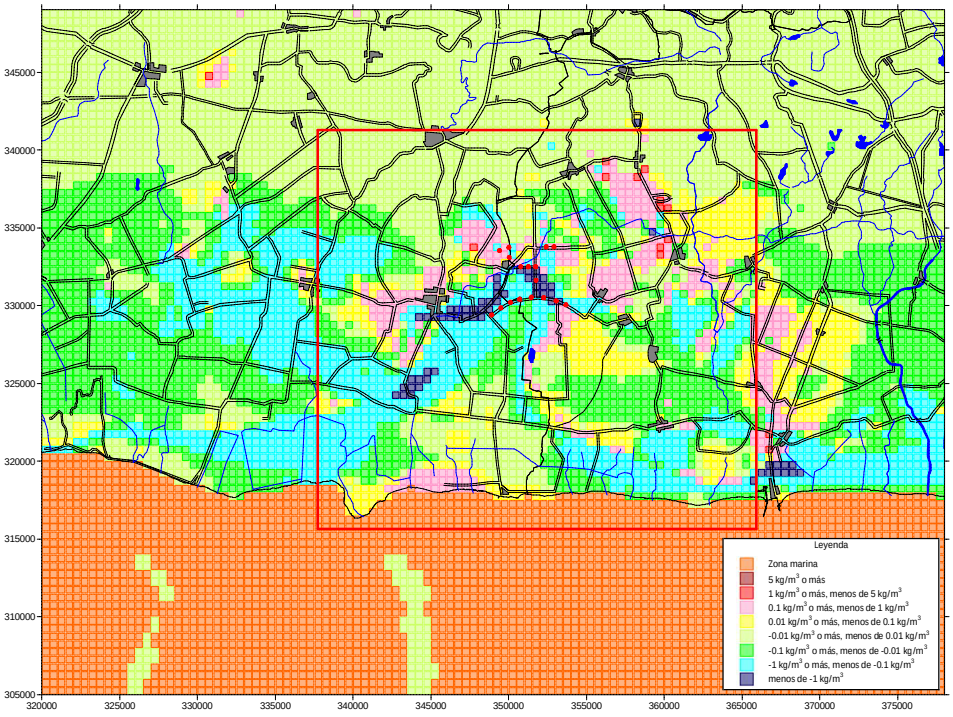


(Last month (December 2035))

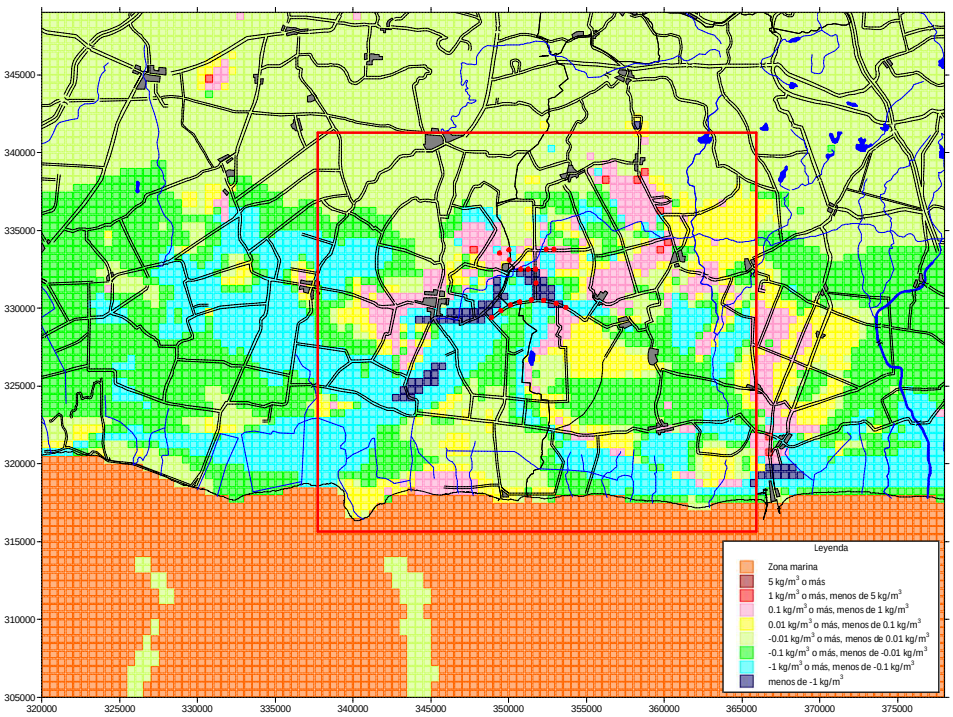
Figure 5-26: Comparison of calculated salt concentration distribution (17th layer) of [Q0-RA0 Model] and [Q1-RA0 Model]



(End of dry period (April 2035))

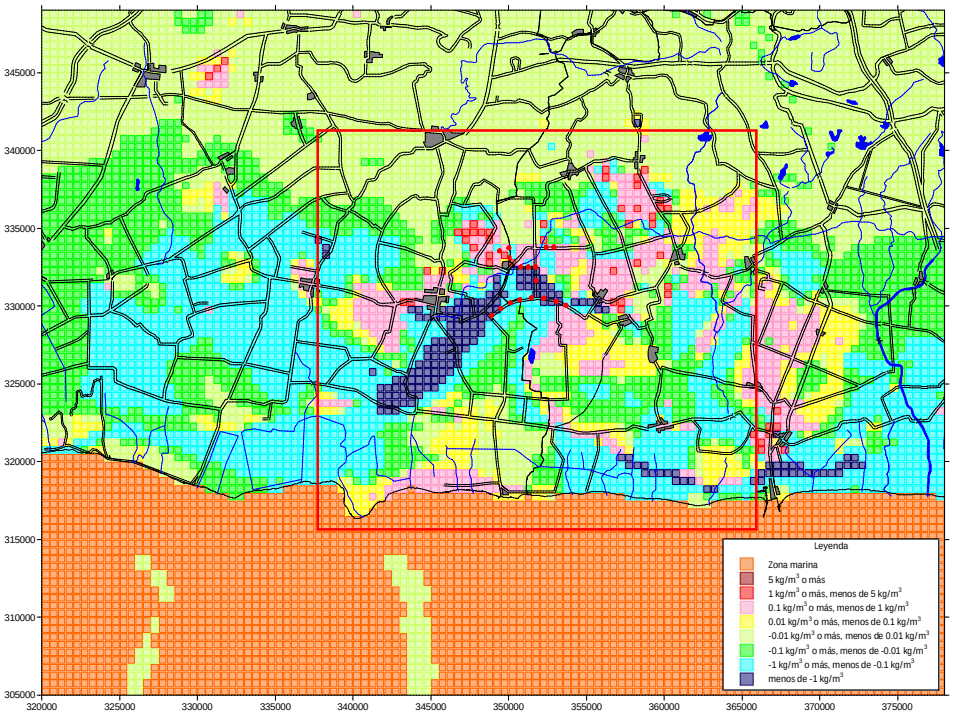


(End of rainy period (October 2035))

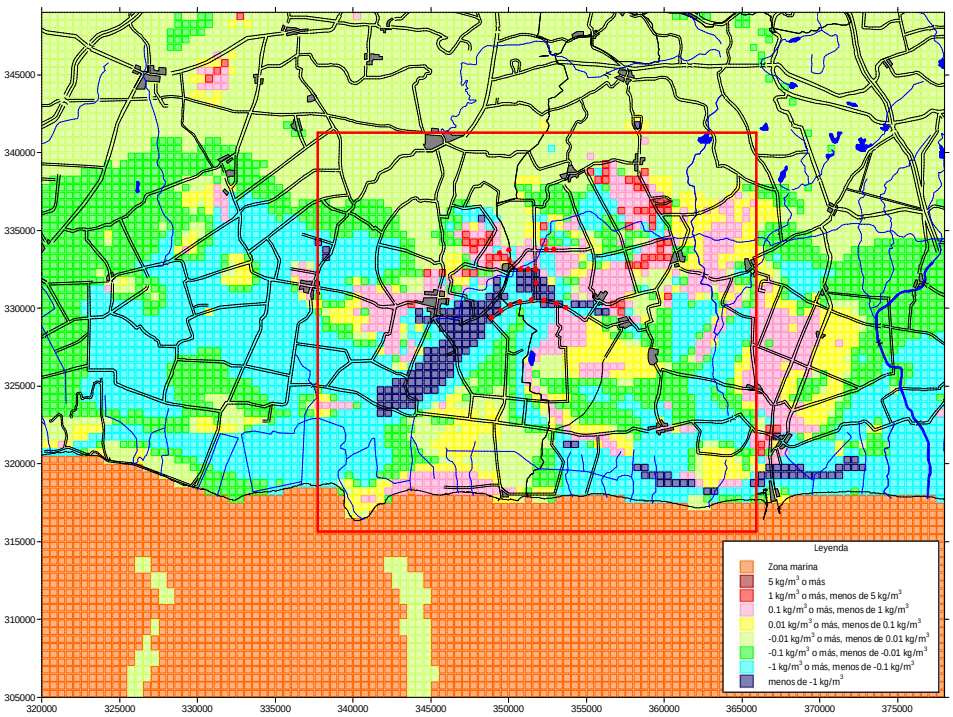


(Last month (December 2035))

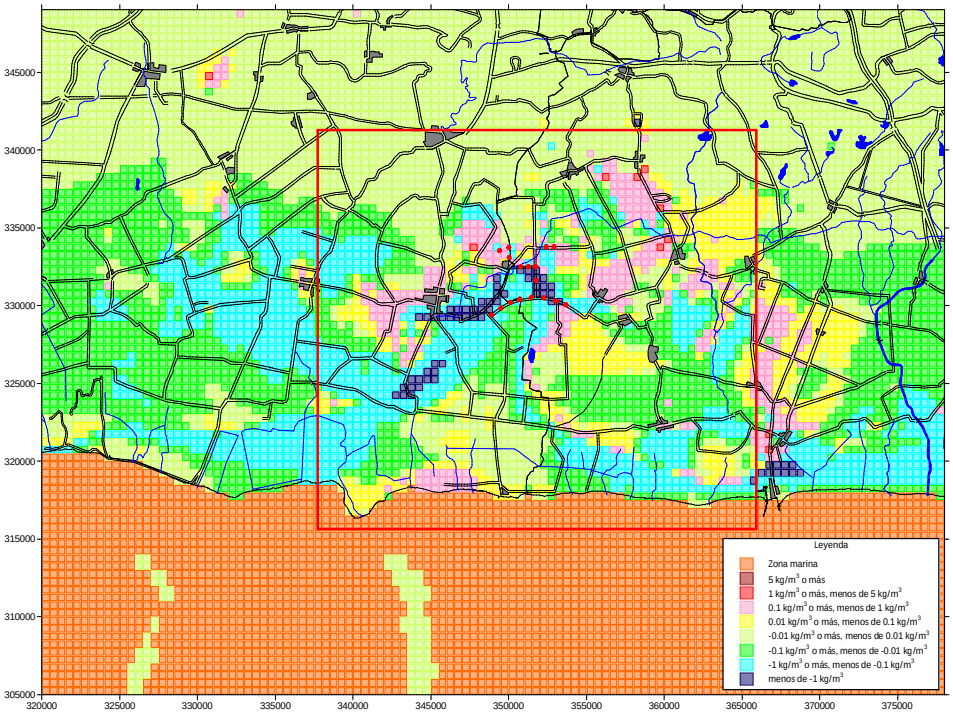
Figure 5-27: Comparison of calculated salt concentration distribution (17th layer) of [Q0-RA0 Model] and [Q2-RA0 Model]



(End of dry period (April 2035))



(End of rainy period (October 2035))



(Last month (December 2035))

Figure 5-28: Comparison of calculated salt concentration distribution (17th layer) of [Q0-RA0 Model] and [Q2-RA0 Model]

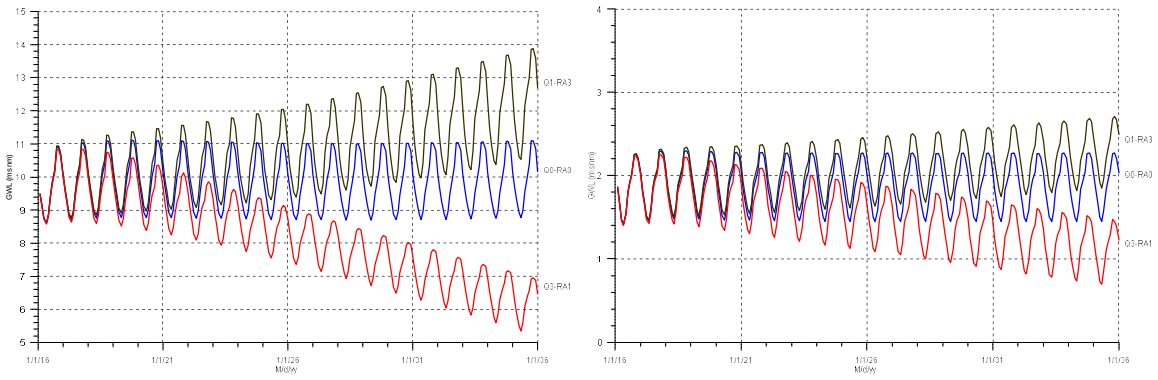
d. The best and the worst scenario for the groundwater recharge and pumpage volume

The best and worst scenarios were established by combining changes in groundwater recharge and pumpage volumes based on Basic Model 1 (Model Q0-RA0).

① Best Case Scenario (Q1-RA3 Model)
- Volume of groundwater pumped: The volume was reduced annually in the same rate so that the pumpage volume in 2035 will be 90% of the recharge volume of the Q0-RA0 model.
- Volume of groundwater recharge: The volume was increased annually at the same rate so that the recharge volume in 2035 will be 110% of the recharge volume of Q0-RA0 model.

② Worst Case Scenario (Q3-RA1 Model)
- Volume of groundwater pumped: The volume was increased annually at the same rate so that the recharge volume in 2035 will be 120% of the recharge volume of Q0-RA0 model.
- Volume of groundwater recharge: The volume was reduced annually at the same rate so that the recharge volume in 2035 will be 80% of the recharge volume of Q0-RA0 model.

The results of the fluctuations in the calculated groundwater levels of Basic Model 1 and the two cases described are shown in the following figure.



(HS-563) (LSU-8)

Figure 5-29: Fluctuation of the calculated groundwater levels ([Q0-RA0 Model], [Q1-RA3 Model] and [Q3-RA1 Model])

The comparison figures of the calculated groundwater level distribution between Basic Model 1 and the three cases described (17th layer) are shown below. The period of comparison is the same as that of the previous section.