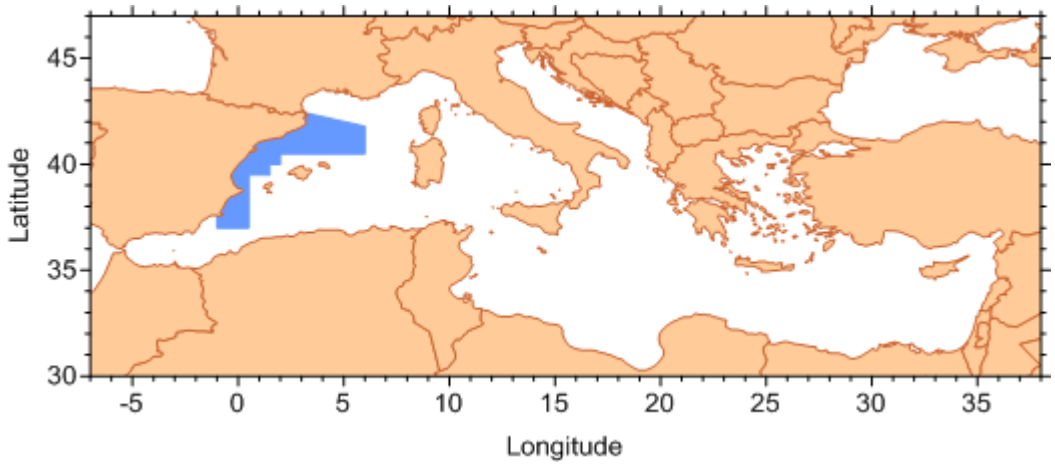
MARE 2014/27

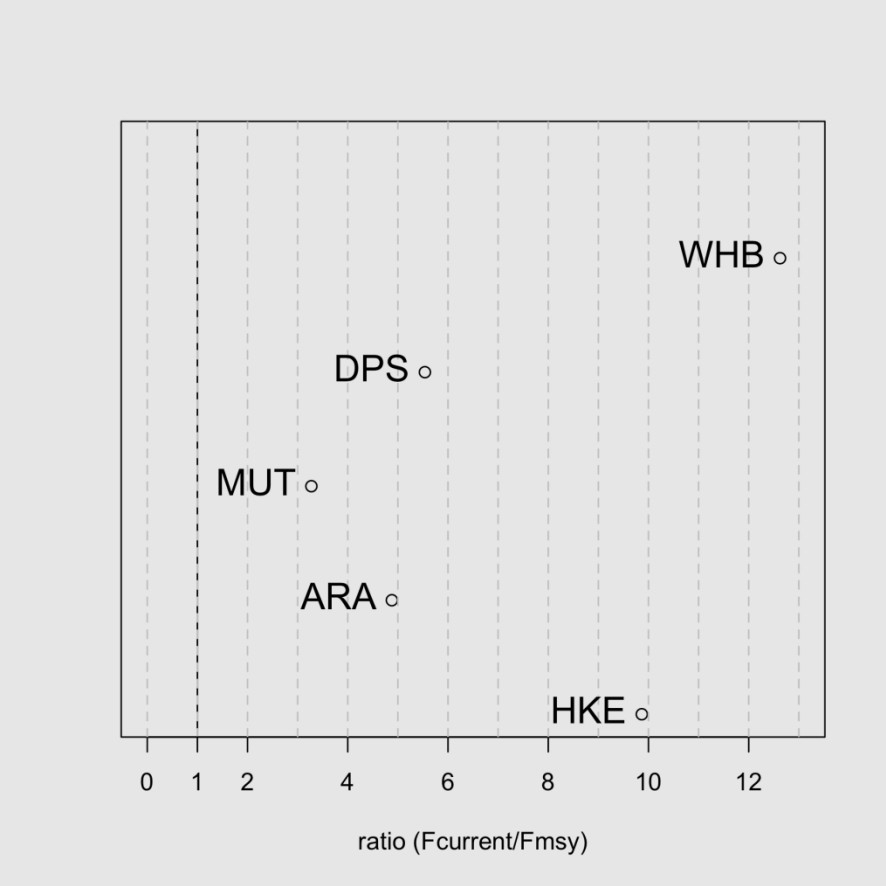
GSA06 – demersals



Main demersal stocks: HKE (Merluccius merluccius); ARA (Aristeus antennatus); MUT (Mullus barbatus); DPS (Parapenaeus longirostris); WHB (Micromesistius poutassou)
Main fleets: OTB (Bottom otter trawl); GNS (Gillnet); LLS (longline)

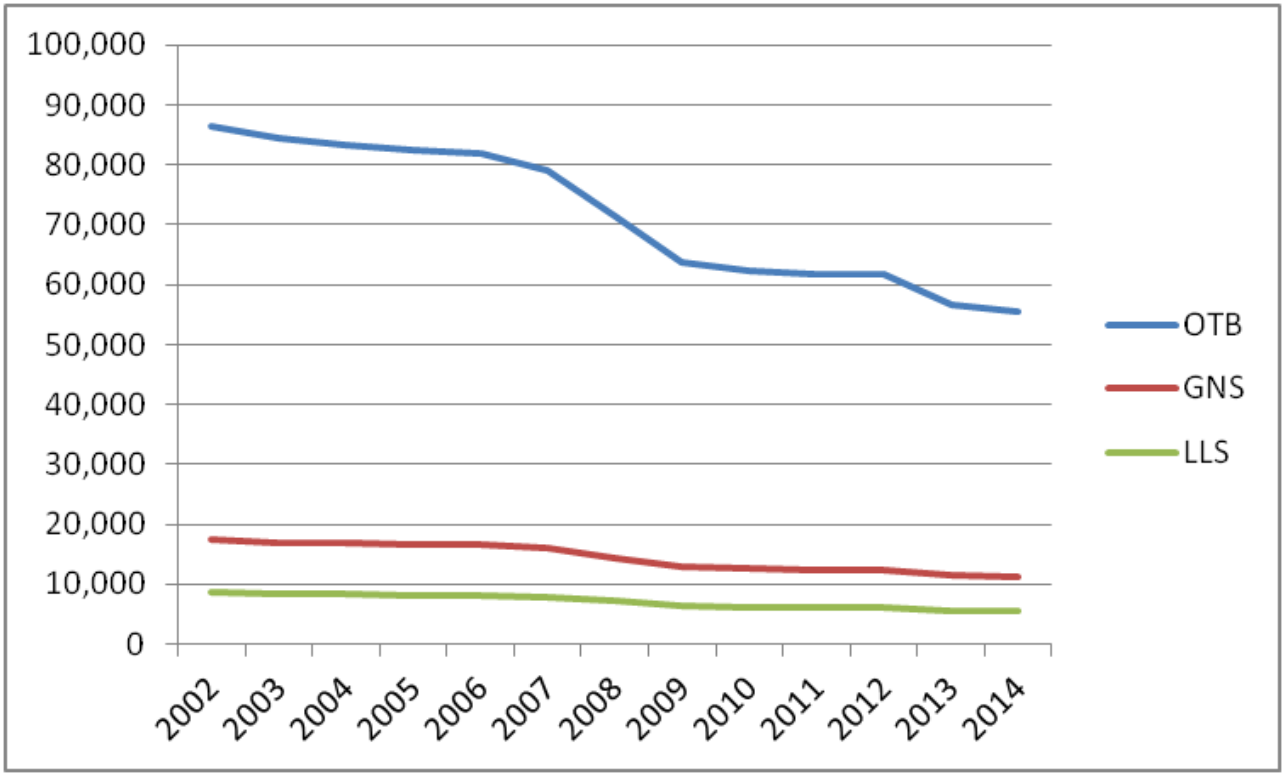
Data source: STECF SGMED EWG 14-12; EWG 15-11; DCF 2015

State of exploitation (ratio Fcurr/Fmsy)



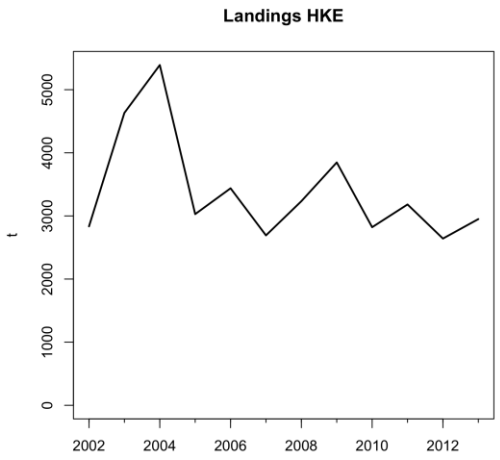
GS06 - demersal

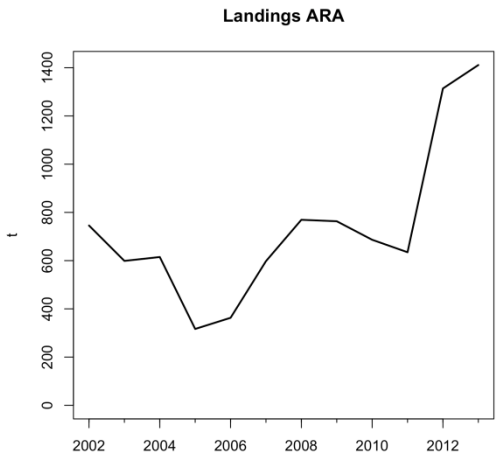
Fishing effort (Nb trips by fleet)

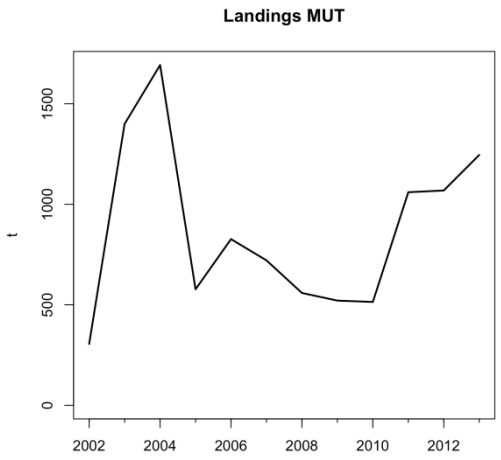


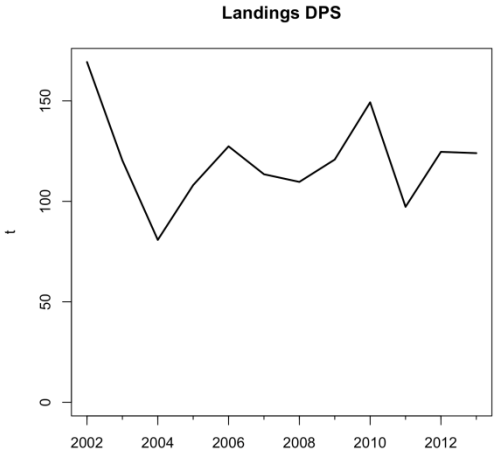
OTB: bottom trawl; GNS: Gillnet; LLS: longline

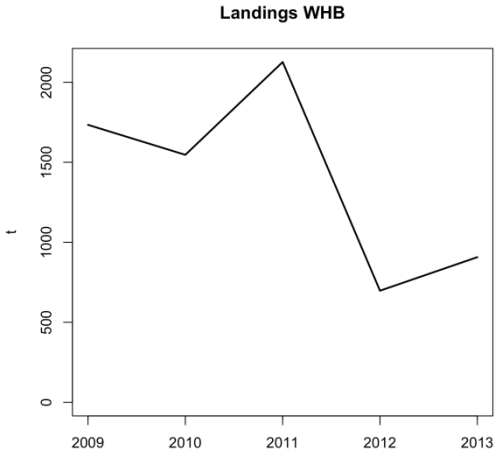
Historical series of landings



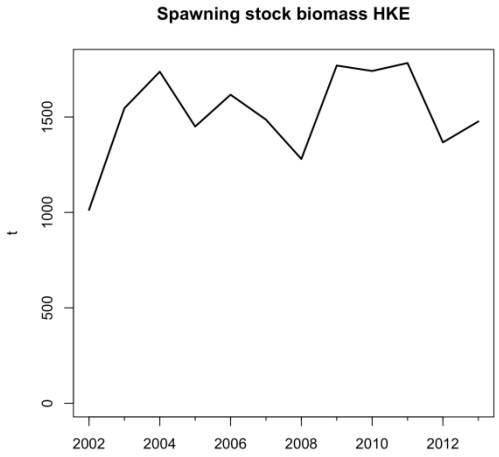


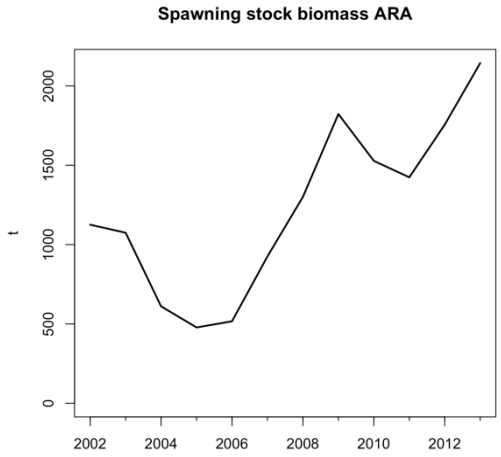


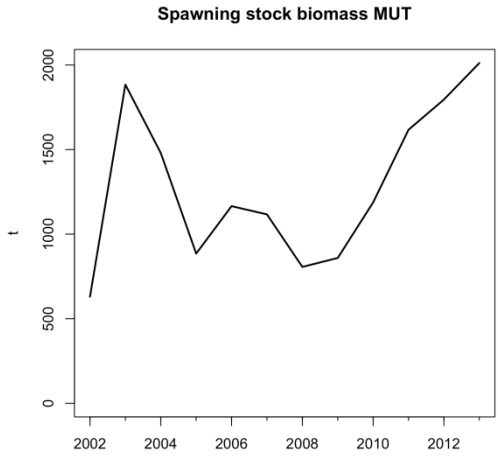


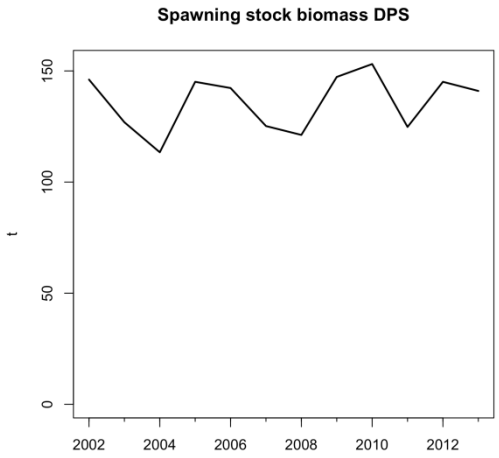


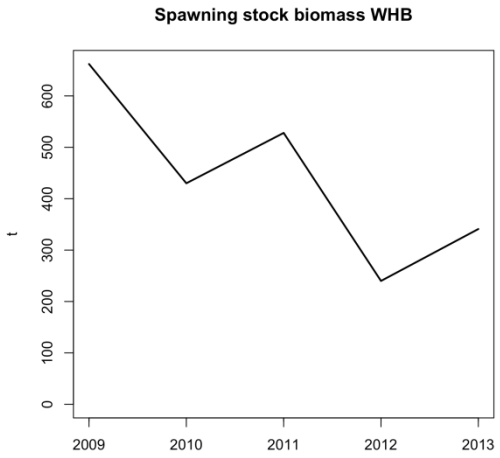
Historical series of SSB



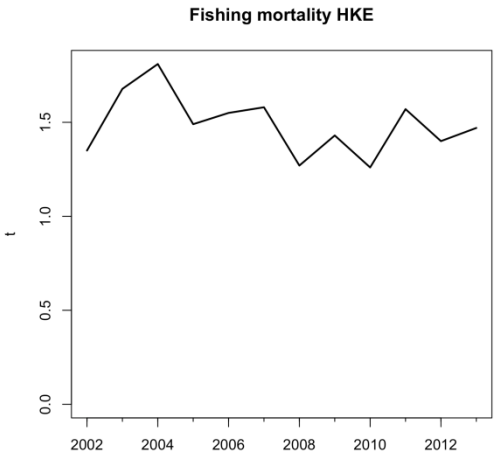


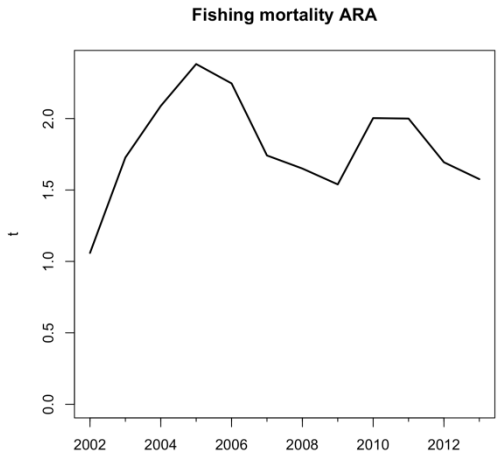


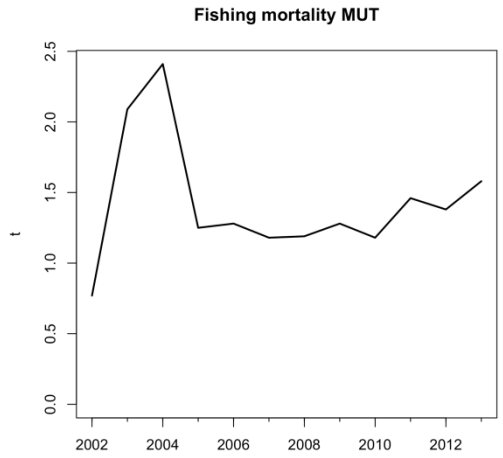


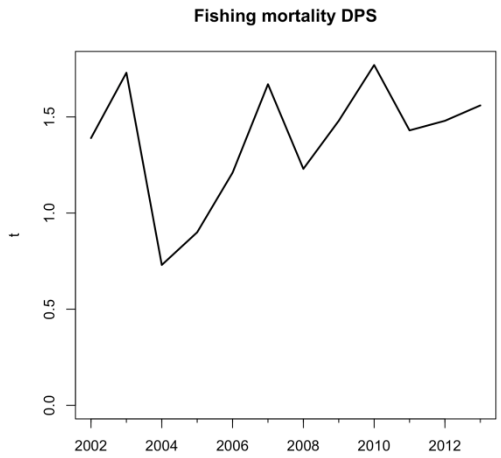


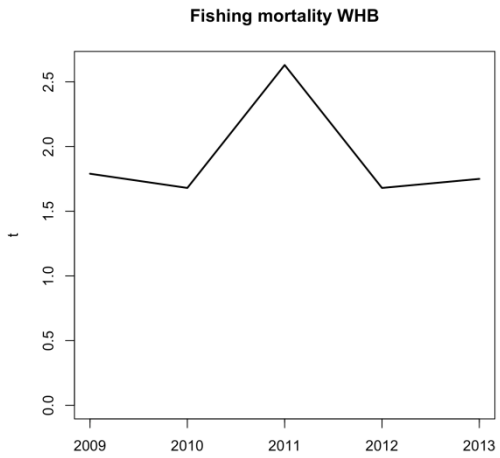
Fishing mortality







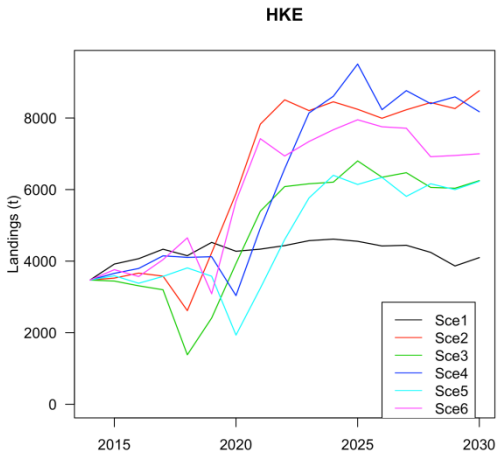


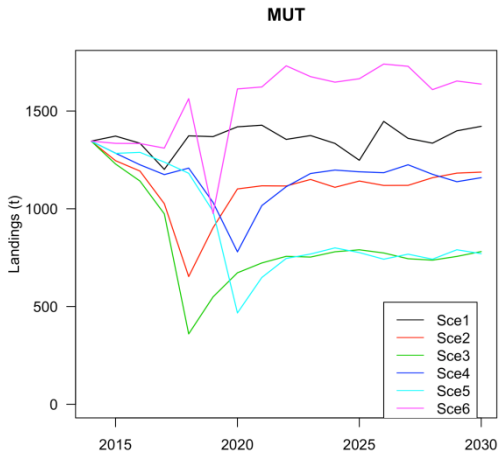


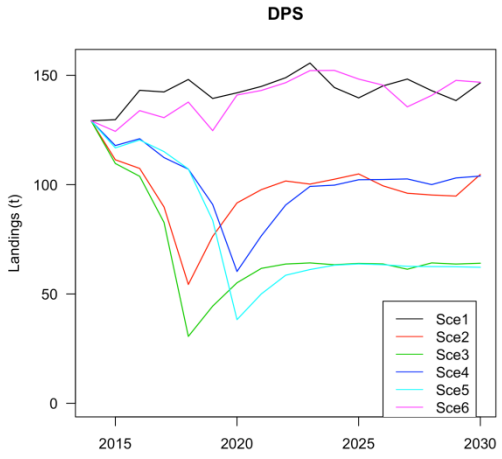
Simulation scenarios

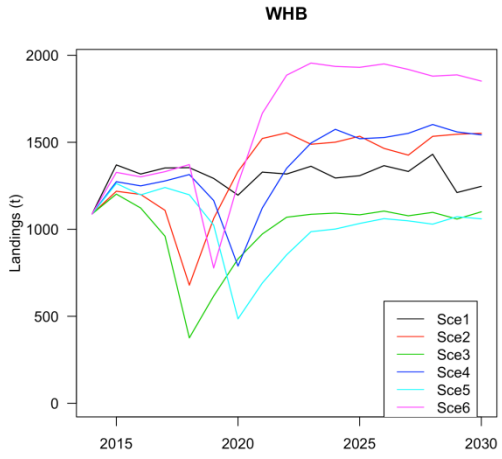
Case Study	**demersals in GSA 6**
Scenario 1	Status quo to 2020
Scenario 2	Linear reduction towards upper Fmsy of the most heavily exploited species in 2018 applied on both activity and capacity, up to 2017 included, then on the activity only. Application to capacity can be differentiated by fleet.
Scenario 3	Linear reduction towards a weighted average Fmsy for a mix of species (using value of landings as weighting factor) in 2018 applied on both activity and capacity, up to 2017 included. Application to capacity can be differentiated by fleet.
Scenario 4	Adaptive reduction towards upper Fmsy of the most heavily exploited species in 2020 applied only to activity from 2018 to 2020. Application to capacity can be differentiated by fleet.
Scenario 5	Adaptive reduction towards a weighted average Fmsy for a mix of species (using value of landings for weighting) in 2020 applied only on activity from 2018 to 2020. Application to capacity can be differentiated by fleet
Scenario 6	Improving selectivity accounting for the survivability issue (in case of gear selectivity).

Forecast Landings

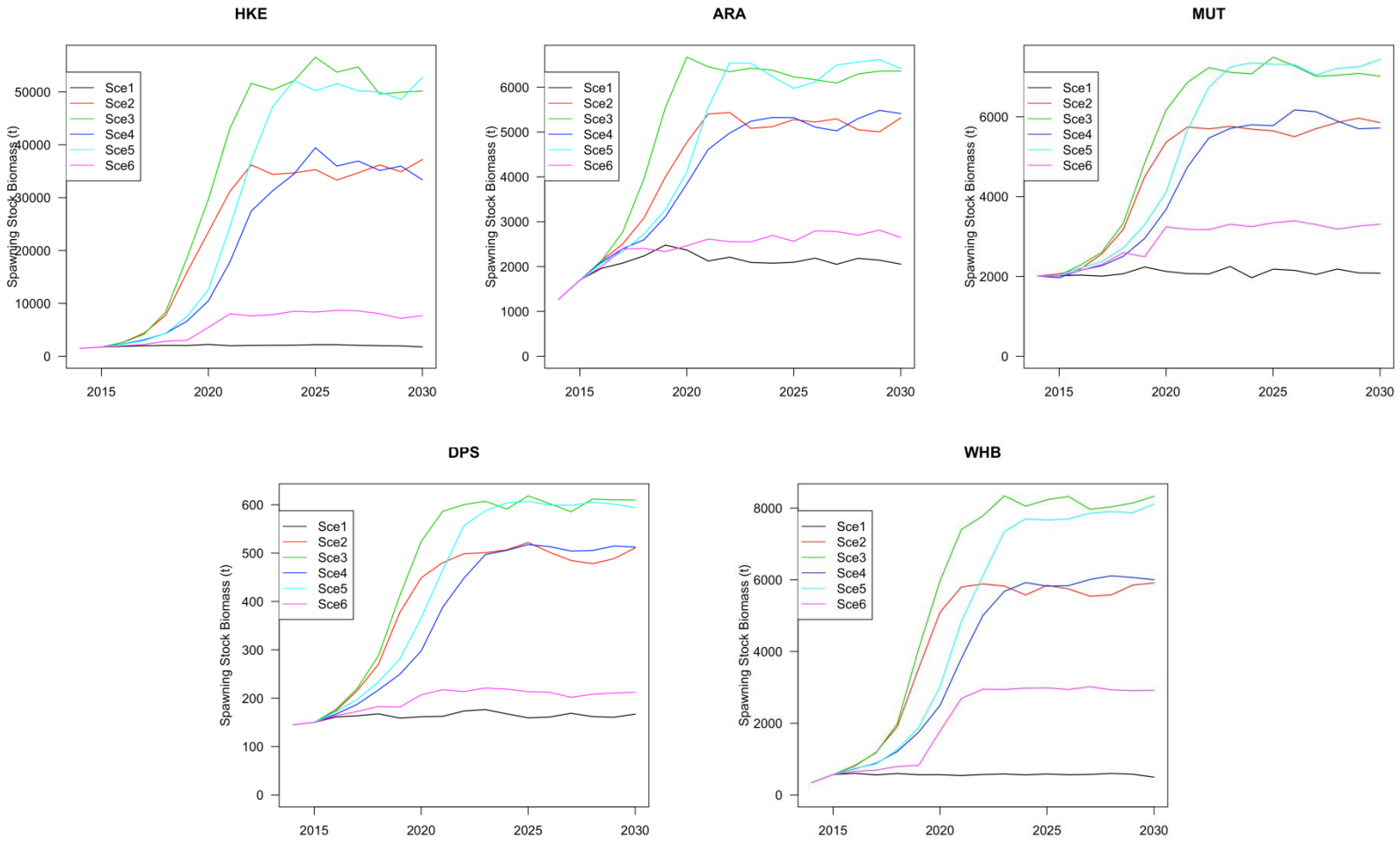




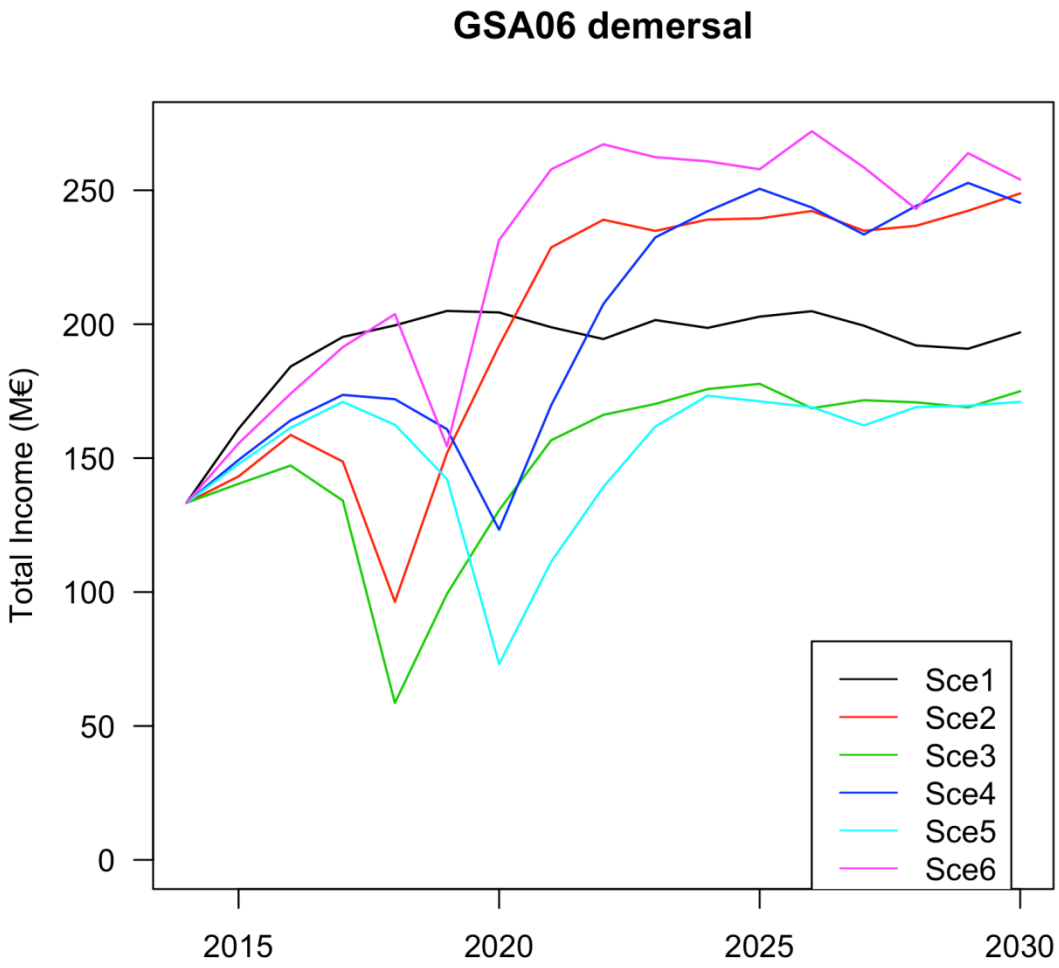




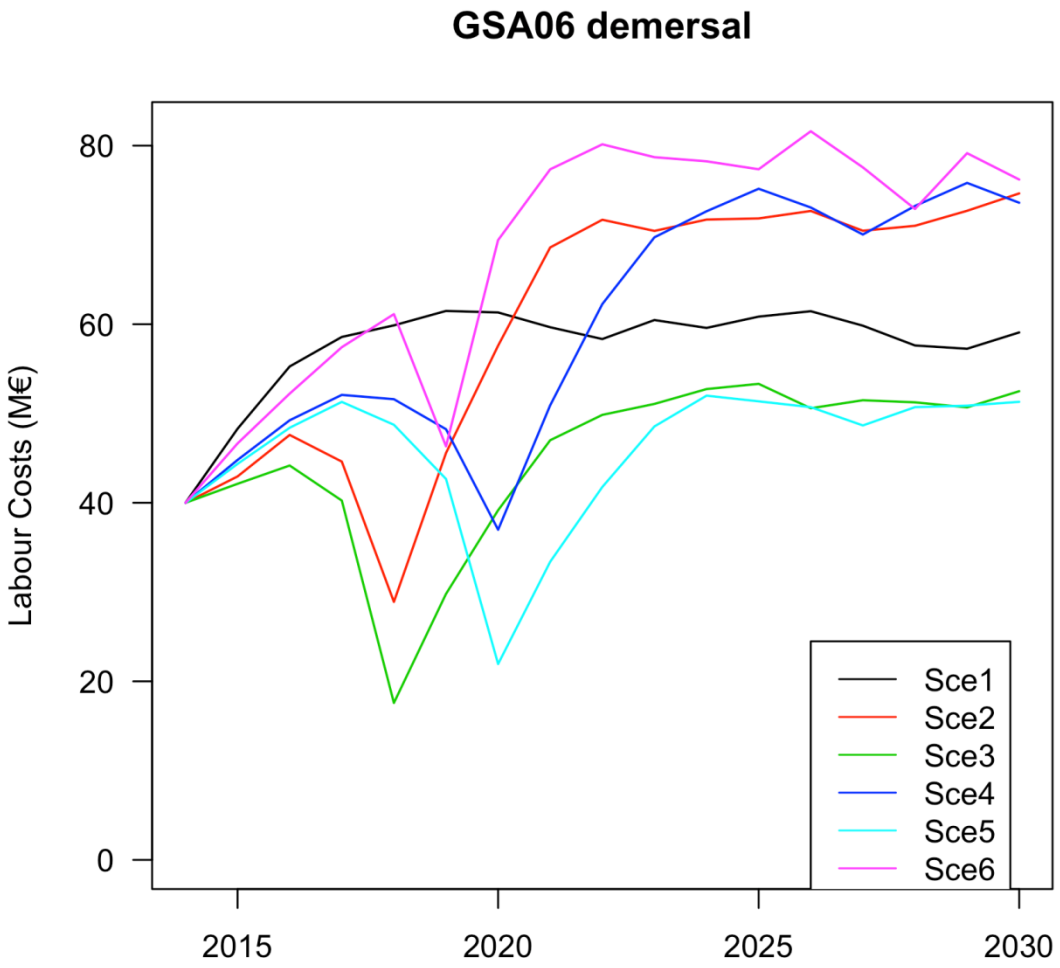
Forecast SSB



Forecast Income



Forecast Labour costs (salaries)



Summary of results (2021)

Scenarios 2021	Labour costs	Revenues	Employment	HKE.catch	ARA.catch	MUT.catch	DPS.catch	WHB.catch	HKE.SSB	ARA.SSB	MUT.SSB	DPS.SSB	WHB.SSB
Scenario 1	74	199	4481	4335	1391	1428	145	1329	1997	2124	2070	162	540
Scenario 2	77	229	3581	7828	1260	1117	98	1522	31137	5401	5742	480	5801
Scenario 3	56	157	3581	5395	888	723	62	973	43044	6454	6860	586	7405
Scenario 4	59	170	3581	4920	1121	1016	77	1123	17796	4614	4741	388	3813
Scenario 5	39	111	3581	3243	732	649	50	691	24443	5552	5669	465	4840
Scenario 6	90	258	3581	7422	1563	1623	143	1667	8014	2615	3182	217	2691

- The results of the projections show that, given the high ratio of current fishing mortality on F_{msy}, the biomass of all stocks would strongly benefit from the required large reductions in fishing effort (80 to 90%, depending on the scenario);

- In the case of the more overexploited species (HKE and WHB), reducing fishing effort towards F_{msy} would imply an increase in landings shortly after 2018 or 2020. However, in some scenarios the large reduction in fishing effort required would imply that certain stocks would be fished below their F_{msy} and underutilized;

- In economic terms, all scenarios show a possibility of increasing revenues from the demersal fishery in GSA06 in the long term, after an important decrease during the effort reduction period;

- Given the large decrease in fishing effort to be applied, the amount of costs (fuel cost and other variable costs) would decrease substantially, resulting in apparently very high profits in the medium and long term.