

- 16 CHALLENGE 1**  
**SUSTAINED & INTEGRATED OCEAN OBSERVATION**  
**Challenge Coordinators** Joaquín Tintoré and Antonio Turiel
- 34 CHALLENGE 2**  
**OCEAN VARIABILITY AND CLIMATE**  
**Challenge Coordinators** Joaquim Ballabrera and Carmen G. Castro
- 52 CHALLENGE 3**  
**ACHIEVING A RESILIENT LIVING OCEAN**  
**Challenge Coordinators** Núria Marbà and Marta Coll
- 80 CHALLENGE 4**  
**OCEAN HEALTH**  
**Challenge Coordinators** Jordi Dachs and I. Emma Huertas
- 96 CHALLENGE 5**  
**A SAFER OCEAN: TOWARDS MARINE HAZARD  
IMPACT MITIGATION**  
**Challenge Coordinators** Valentí Sallarès and Ángel F. González
- 118 CHALLENGE 6**  
**POLAR OCEANS**  
**Challenge Coordinators** Antonio Tovar-Sánchez and Carolina Gabarró
- 138 CHALLENGE 7**  
**A SUSTAINABLE COAST IN AN OCEAN OF CHANGE**  
**Challenge Coordinators** Javier Ruiz and Alejandro Orfila
- 162 CHALLENGE 8**  
**OCEANS OF BIG DATA AND ARTIFICIAL INTELLIGENCE**  
**Challenge Coordinators** Ramiro Logares and Josep Alós
- 180 CHALLENGE 9**  
**TOWARDS AN OCEAN-ENGAGED SOCIETY**  
**Challenge Coordinators** José Pintado Valverde and Ana Crespo Solana