The European Space Agency has a number of satellites currently in orbit, under development or under study. These can provide an important contribution to the global endeavour of understanding Earth’s System in light of global change. As a continuation of ERS and Envisat’s observational capability, the Sentinels are currently under development in the context of the GMES programme. In addition, within the context of ESA’s Living Planet Programme, the Earth Explorer mission series started with GOCE, SMOS, CryoSat in orbit and has Swarm, ADM and EarthCare under development. A call for ideas for new Core missions was issued in March 2005 with the aim to select the 7th Earth Explorer mission to be launched in the next decade. As a result three candidate mission concepts are now being further investigated in the feasibility and consolidation phase (Phase A), after which the 7th Earth Explorer will be selected. The candidate missions under consideration are: BIOMASS, CoReH2O and PREMIER. In 2009 a Call for Opportunity mission concepts was released resulting in the recent selection of two missions, FLEX and CarbonSat, to proceed in Phase A.

This presentation will give an overview of ESA’s Earth Observation activities, with emphasis new Earth Explorer missions.