Organization	Class	Subclass	Discipline	Variable
GOOS, GCOS	Essential Ocean Variable	Ocean	Physics	Sea State
				Ocean Surface Stress
				Sea Ice
				Sea Surface Height
				Sea Surface Temperature
				Subsurface Temperature
				Surface Currents
				Subsurface Currents
				Sea Surface Salinity
				Subsurface Salinity
				Ocean Surface Heat Flux
			Biogeochemistry	Oxygen
				Nutrients
				Inorganic Carbon
				Transient Tracers
				Particulate Matter
				Nitrous Oxide
				Stable Carbon Isotopes
				Dissolved Organic Carbon
			Biology and Ecosystems	Phytoplankton Biomass and Diversity
				Zooplankton Biomass and Diversity
				Fish Abundance and Distribution
				Marine Turtles, Birds, Mammals Abundance and Distribution
				Hard Coral Cover and Composition
				Seagrass Cover and Composition
				Macroalgal Canopy Cover and Composition
				Mangrove Cover and Composition
				Microbe Biomass and Diversity (*emerging)
				Invertebrate Abundance and Distribution (*emerging)

Organization	Class	Discipline	Variable
IOOS	IOOS Core Variables	Physics	Bathymetry
			Bottom Character
			Currents
			Heat Flux
			Ice Distribution
			Salinity
			Sea Level
			Surface News
			Stream Flow
			Temperature
			Wind Speed and Direction
		Biogeochemistry	Acidity
			Colored Dissolved Organic Matter
			Contaminants
			Dissolved Nutrients
			Dissolved Oxygen
			Ocean Color
			Optical Priorities
			Pathogens
			Partial Pressure of CO2
			Total Suspended Matter
		Biology and Ecosystems	Biological Vital Rates
			Coral Species and Abundance
			Fish Species and Abundance
			Invertebrate Species and Abundance
			Marine Mammal Species and Abundance
			Microbial Species, Abundance, and Activity
			Nekton Diet
			Phytoplankton Species and Abundance

			Multidisciplinary	Ocean Color							Sea Birds Species and Abundance
				Ocean Sound							Sea Turtles Species and Abundance
GCOS	Essential Climate Variable	Atmosphere	Surface	Precipitation							Submerged Aquatic Vegetation Species and Abundance
				Pressure							Sound
				Radiation Budget							Zooplankton Species and Abundance
				Surface Temperature							
				Surface Water Vapor							
				Surface Wind Speed and Direction							
			Upper-Air	Upper-Air Temperature							
				Upper-Air Water Vapor							
				Upper-Air Wind Speed and Direction							
				Earth Radiation Budget							
				Lightning							
			Atmospheric Composition	Aerosols							
				Carbon Dioxide, Methane, and Other Greenhouse Gases							
				Clouds							
				Ozone							
				Precursors for Aerosols and Ozone							
		Land	Hydrosphere	Groundwater							
				Lakes (lake level and area)							
				River Discharge							
			Cryosphere	Glaciers							
				Ice Sheets and Ice Shelves							
				Permafrost							
				Snow							
			Biosphere	Above-Ground Biomass							
				Albedo							
				Evaporation From Land							
				Fire							
				Fraction of Absorbed Photosynthetically Active Radiation							
				Land Cover							
				Land Surface Temperature							
				Leaf Area Index							
				Soil Carbon							

				Soil Moisture							
			Anthroposphere	Anthropogenic Greenhouse Gas Fluxes							
				Anthropogenic Water Use							
GEO BON	Essential Biodiversity Variable	Biodiversity	Genetic Composition	Intraspecific Genetic Diversity							
				Genetic Differentiation							
				Effective Population Size							
				Inbreeding							
			Species Populations	Species Distribution							
				Species Abundance							
			Species Traits	Morphology							
				Physiology							
				Phenology							
				Movement							
			Community Composition	Community Abundance							
				Taxonomic/Phylogenetic Diversity							
				Trait Diversity							
				Interaction Diversity							
			Ecosystem Functioning	Primary Productivity							
				Ecosystem Phenology							
				Ecosystem Disturbances							
			Ecosystem Structure	Live Cover Fraction							
				Ecosystem Distribution							
				Ecosystem Vertical Profile							
WMO?	Essential Variables for Weather			TBD							