Tonankai earthquakes are magnitude 8 class earthquakes known to occur every 100-150 years in the Nankai Trough, south of Japan. The last occurrence was in 1944 and we are concerned about the next occurrence. In order to monitor and watch detailed seismic process in the vicinity of its epicenter, a sea-floor observatory network called DONET was developed and it started observation from 2010. The DONET is consisted of 20 seafloor observatories linked with submarine cable, covering from aseismic seafloor near the trough axis, through the area where episodic slow slip events occur, as well on the Tonankai earthquake rupture zone. Each DONET seafloor observatory was designed to observe ground motion, seafloor pressure, and seafloor water temperature in wide frequency range and wide dynamic range to cover various types of events expected in the area of the DONET network, such as large earthquakes, micro-earthquakes, episodic slow slip events, and seafloor turbidity currents. Some of expected events are very small in amplitude therefore we established very low noise observation environment by completely burying each seismometer in the seabed. Further low noise and stable observatory may be built using a seafloor borehole penetrating below the sediment on which seafloor observatories stand. During IODP Exp 332 in December 2010, we have successfully installed the first planned seafloor borehole observatories. Strainmeter, tiltmeter and seismic sensors were cemented near the bottom of 980 m seafloor borehole to ensure stable environment required for these geodetic measurement, where distance to the Tonankai seismogenic fault is approximately 6 km.