The mixed layer formed in the sea surface layer plays an important role of processes in physical and biogeochemical changes. Especially in summer shallow mixed layer, its ocean heat content (OHC) change physically influence the meteorology/climate (e.g., summer monsoon) and the formation of next winter mixed layer. Also, bio-activity increase during summer season is observed beneath the seasonal thermocline, even in the subtropical region with a lack of nutrients. However, the formation process of the summer shallow mixed layer is not enough understood yet. Therefore, the author analyzed a global dataset of the 2° × 2° gridded mixed-layer depth (MILA GPV) in 10-day intervals based on well-quality-controlled Argo data from 2001. Since the MILA GPV is constructed based on the profiles of the global Argo floats, the quality of dataset is spatially and temporally uniform and sufficiently-high. Using monthly mean climatology based on the MILA GPV and a net surface heat flux dataset (Qnet; JOFURO-2), a climatological relation between changes of OHC and Qnet was investigated in the North Pacific where the summer monsoon is dominant. It was found that OHC is approximately increasing with a change of Qnet, indicating that the increase of OHC is dominated by the vertical one dimensional process around the area. Also, the amount of OHC increase was different with areas; maximum was around Kuroshio Extension region. The author will show the importance of summer shallow mixed layer, with efficiency of the MILA GPV based on Argo float data.