When we talk about space weather, we can often conjure images of large coronal mass ejections (CMEs) or dramatic solar flares that drive spectacular effects in the Earth’s near-space environment. Apart from it, high speed solar wind streams are also very important as driving activity in the Earth’s magnetosphere co-rotating interaction region and are responsible for geomagnetic activities, though they are not usually associated with storms which are normally CME driven. The prediction of space weather events requires better understanding of solar wind-magnetosphere interaction. As ULF waves owe their existence to solar wind turbulence, ULF wave index could characterize solar wind-magnetosphere interaction in a better way. ULF wave index may also accurately characterize relativistic electron dynamics in the magnetosphere as these waves are closely associated with the circulation, diffusion and energization of relativistic electrons in the magnetosphere. We have analyzed cases relevant to super storms days and examined the ability of ULF wave index proximity as a space weather parameter in the light of various known space weather parameters.