The monsoon is the lifeline for 1.9 billion people in South Asia. Hence, it is crucial to understand its variability in a changing climate. There has been an increasing number of studies showing that the high latitude SST in the North Atlantic (associated with the Atlantic Meridional Overturning Circulation - AMOC) influences the South Asian monsoon. It is, however, not well understood how this physical link is established. In this project, I will examine the physical mechanism that links the North Atlantic SST to South Asian monsoon. I will perform experiments in the Max Planck Institute - Earth System Model (MPI-ESM). These experiments include idealized settings as well as long transient simulations of the glacial period. The transient simulations will be carried out in the comprehensive state-of-the-art fully coupled MPI-ESM. In the previous transient simulations of the past climate, ice sheets and meltwater were prescribed from reconstructions. Therefore, locations and the amount of meltwater are not consistent with the climate from the model. The fully coupled MPI-ESM allows for consistent modeling of the climate, which is more suitable for addressing the objectives.