Recent studies with coupled models have suggested the potential predictability of the North Atlantic climate system up to a decade ahead. However, it remains difficult to form robust conclusions notably because of the differences in the measure and definition of predictability itself. Here, we address this question, firstly by comparing different approaches commonly used to evaluate predictability skills (diagnostic versus prognostic), and secondly by comparing several metrics. For this purpose, we use the coupled model IPSL-CM5A, which shows areas of high potential predictability skills in the Atlantic-European region that have to be explained. Both approaches (diagnostic and prognostic) identify the convection sites in the North Atlantic and the eastern branch of the North Atlantic subtropical gyre as regions potentially predictable up to two decades. There are also some hints of potential predictability over land in the Western European region up to one decade for both approaches. The predictability of those identified areas are associated to the subpolar gyre variability. Furthermore, the prognostic approach, contrarily to the diagnostic one, identifies the tropical Atlantic region as potentially predictable up to two decades. The diagnostic approach does not seem to be able to bring out regions where potential predictability arises from remote areas.