

Galaxies are some of the largest structures in the Universe, but there is still much about them that we do not know, including the role of environment in their evolution. To study them we employ a wide range of observational techniques, one of which is through a study of the neutral hydrogen (HI). As it is more than twice as extended as the stellar component of galaxies, and thus much more easily disturbed, it makes an excellent indicator of the environmental processes the galaxies undergo. This work takes advantage of the Widefield Arecibo Virgo Environment Survey (WAVES) neutral hydrogen survey of the Virgo Cluster, conducted by the Arecibo radio telescope prior to its collapse. By analyzing the WAVES region in radio and optical data and comparing it to an adjacent part of the Virgo Cluster, named VC1, I describe the possible evolutionary processes taking place. I conclude that the WAVES region is relatively more relaxed than VC1 and I further find compelling evidence of evolution through gas loss of the dwarf irregular galaxies into dwarf ellipticals, while also putting a constraint on the maximum HI mass of early-type galaxies in the studied region.