

Role of Nitrogen o Protein and DNA Synthesis: Nitrogen is a key component of amino acids, proteins, and nucleic acids (DNA and RNA), which are essential for the growth and reproduction of marine organisms.o Eutrophication: Excess nitrogen and phosphorus from human activities (e.g., agriculture, wastewater discharge) can lead to algal blooms, oxygen depletion, and marine ecosystem disruptions.Ecological Impact o Nutrient Limitation: In many oceanic regions, nitrogen or phosphorus availability limits primary production, affecting entire food webs.2.3.