The ocean influences weather and climate

D.1. Changes to weather and climate, which result from changes to the ocean/atmosphere system, have physical, chemical, biological, economic, and social consequences.

(9B, 6B CA)

D.2. Climate change may affect the frequency and intensity of hurricanes and cyclones.

D.3. Increased CO2, due to changes in the atmospheric system, can lead to an increase in ocean acidification.

(3C, 5G CA)

D.4. Climate change may alter the frequency and intensity of El Niño and La Niña events.

(3C, 5G CA)

D.5. Climate change affects species distribution, productivity and diversity.

(NSES 9-12 p. 186)

D.6. As the climate warms, the rate at which glaciers and ice caps melt increases.

(7C CA)

D.7. Ocean acidification may alter biological activity, including inhibiting an organism's ability to form shells, bones, or exoskeleton, & may also dissolve them.

D.8. El Niño and La Niña can cause dramatic changes in global weather patterns.

(3C, 5G CA)

D.9. Changes in distribution, productivity, & diversity can result in range redistributions of commercially valuable species.

(7C CA)

D.10. As glaciers and ice caps melt, sea level rises. This can inundate coastal regions, destroying habitats & submerging land forms.

D.11. As ice melts, less heat is reflected back into the atmosphere, further warming the land and causing more ice to melt.

D.12. An increase in ice melt may cause a decrease in regional salinity. This can change ocean circulation.

(3G CA)


(3C CA)

D.14. El Niño and La Niña can affect terrestrial processes, i.e. fire frequency, drought, flooding, etc.

(3C CA)

D.15. El Niño and La Niña may have worldwide economic impacts, e.g. collapse of fisheries, decreased agricultural production, etc.

(9A CA)