



## Climate Change & Invasive Species

- **Climate change** refers to the **increasing changes in the measures of climate** (e.g., wind patterns, precipitation, temperature, extreme weather, lengths of seasons, etc.) **over long periods of time**. Global warming, the increase in Earth's average temperature, is only one aspect of climate change.
- **Invasive species** are plants, animals, or pathogens that **are non-native** (or alien) to the ecosystem under consideration, **and whose introduction causes** or is likely to cause economic, social, or environmental **harm**.
- Invasive species **degrade, change, or displace native habitats** and compete with our native wildlife for food, water, shelter and space.
- The **estimated damage** from invasive species **worldwide totals more than \$1.4 trillion**, which is 5% of the global economy.
- Approximately **42% of threatened or endangered species are at risk primarily due to invasive species**.
- Invasive species are **primarily spread by human activities**, and often unintentionally.
- Growing **global trade and communication** are directly contributing to the mixing of wildlife across biogeographical boundaries.
- Although the numbers vary widely, some of the current research estimates that there are **approximately 50,000 non-native species in the United States today**. However, of that 50,000 species, approximately 4,300 have been considered invasive species.
- As with native species, changing climatic variables can lead to **range shifts and expansion of invasive species**. Severe weather events involving flooding, high winds, and habitat disturbance may damage native systems, opening the door to invasive species. Invasive species may also exacerbate ecosystem transformation driven by other climatic variables such as changing fire regimes and ocean acidification.