

POTENTIAL CLIMATE CHANGE EVENTS AND IMPACTS

EXAMPLES OF EVENTS THAT CAN AFFECT PORTS:

- 1 sea level rise
- 2 storm surge
- 3 saltwater intrusion
- 4 strong winds
- 5 heavy rains
- 6 electrical storms
- 7 river flooding
- 8 extreme temperatures
- 9 sedimentation
- 10 drought
- 11 reduced river flows
- 12 coastal erosion

Such events can damage, deteriorate or destroy port infrastructure including, but not limited to, buildings.

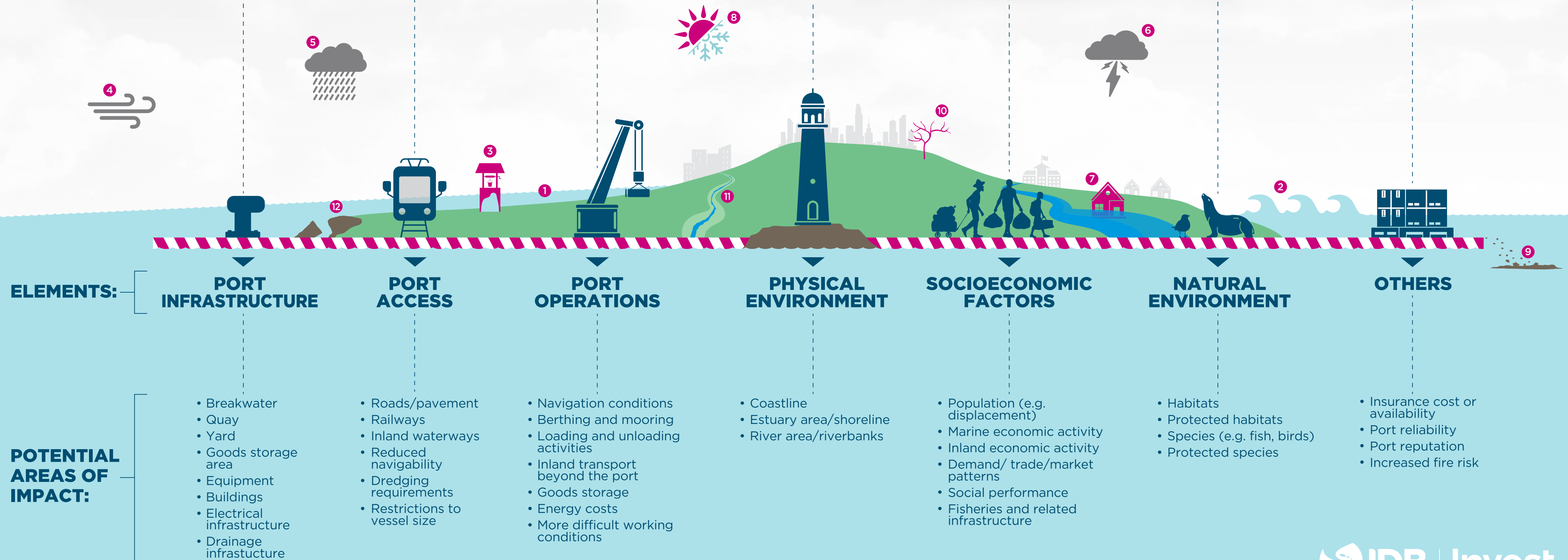
These types of events can also hamper port access or cause accidents or disruptions that could limit port operations or result in higher costs.

The physical environment in the area around the port can also be altered by climate-related events.

Socioeconomic impacts may include displacement of local populations or disruption of livelihoods.

The natural habitat can also be affected, for example by changes in the distribution, growth and reproduction of species

Any and all of these impacts can result in higher costs and further affect other aspects of ports.



ELEMENTS:

- PORT INFRASTRUCTURE
- PORT ACCESS
- PORT OPERATIONS
- PHYSICAL ENVIRONMENT
- SOCIOECONOMIC FACTORS
- NATURAL ENVIRONMENT
- OTHERS

POTENTIAL AREAS OF IMPACT:

- Breakwater
 - Quay
 - Yard
 - Goods storage area
 - Equipment
 - Buildings
 - Electrical infrastructure
 - Drainage infrastructure
- Roads/pavement
 - Railways
 - Inland waterways
 - Reduced navigability
 - Dredging requirements
 - Restrictions to vessel size
- Navigation conditions
 - Berthing and mooring
 - Loading and unloading activities
 - Inland transport beyond the port
 - Goods storage
 - Energy costs
 - More difficult working conditions
- Coastline
 - Estuary area/shoreline
 - River area/riverbanks
- Population (e.g. displacement)
 - Marine economic activity
 - Inland economic activity
 - Demand/ trade/market patterns
 - Social performance
 - Fisheries and related infrastructure
- Habitats
 - Protected habitats
 - Species (e.g. fish, birds)
 - Protected species
- Insurance cost or availability
 - Port reliability
 - Port reputation
 - Increased fire risk