

Pacific Ocean

Geography

Location: body of water between Antarctica, Asia, Australia, and the Western Hemisphere

Area:

total area: 165.384 million sq km

Coastline: 135,663 km

Climate: the western Pacific is monsoonal - a rainy season occurs during the summer months, when moisture-laden winds blow from the ocean over the land, and a dry season during the winter months, when dry winds blow from the Asian land mass back to the ocean

Terrain: surface currents in the northern Pacific are dominated by a clockwise, warm-water gyre (broad circular system of currents) and

in the southern Pacific by a counterclockwise, cool-water gyre; in the northern Pacific sea ice forms in the Bering Sea and Sea of Okhotsk in winter; in the southern Pacific sea ice from Antarctica reaches its northernmost extent in October; the ocean floor in the eastern Pacific is dominated by the East Pacific Rise, while the western Pacific is dissected by deep trenches, including the world's deepest, the 10,924 meter Marianas Trench

Natural resources: oil and gas fields, polymetallic nodules, sand and gravel aggregates, placer deposits, fish

Environment:

current issues: endangered marine species include the dugong, sea lion, sea otter, seals, turtles, and whales; oil pollution in Philippine Sea and South China Sea

natural hazards: surrounded by a zone of violent volcanic and earthquake activity sometimes referred to as the Pacific Ring of Fire; subject to tropical cyclones (typhoons) in southeast and east Asia from May to December (most frequent from July to October); tropical cyclones (hurricanes) may form south of Mexico and strike Central America and Mexico from June to October (most common in August and September); southern shipping lanes subject to icebergs from Antarctica; occasional El Nino phenomenon occurs off the coast of Peru when the trade winds slacken and the warm Equatorial Countercurrent moves south, killing the plankton that is

the primary food source for anchovies; consequently, the anchovies move to better feeding grounds, causing resident marine birds to starve by the thousands because of their lost food source; ships subject to superstructure icing in extreme north from October to May and in extreme south from May to October; persistent fog in the northern Pacific can be a maritime hazard from June to December

Note: the major choke points are the Bering Strait, Panama Canal, Luzon Strait, and the Singapore Strait; the Equator divides the Pacific Ocean into the North Pacific Ocean and the South Pacific Ocean; dotted with low coral islands and rugged volcanic islands in the southwestern Pacific Ocean

Economy

Overview: The Pacific Ocean is a major contributor to the world economy and particularly to those nations its waters directly touch. It provides low-cost sea transportation between East and West, extensive fishing grounds, offshore oil and gas fields, minerals, and

sand and gravel for the construction industry. Exploitation of offshore oil and gas reserves is playing an ever-increasing role in the energy supplies of Australia, NZ, China, US, and Peru.

Industries: fishing, oil and gas production

Transportation

Ports: Bangkok (Thailand), Hong Kong, Los Angeles (US), Manila (Philippines), Pusan (South Korea), San Francisco (US), Seattle (US), Shanghai (China), Singapore, Sydney (Australia), Vladivostok (Russia), Wellington (NZ), Yokohama (Japan)