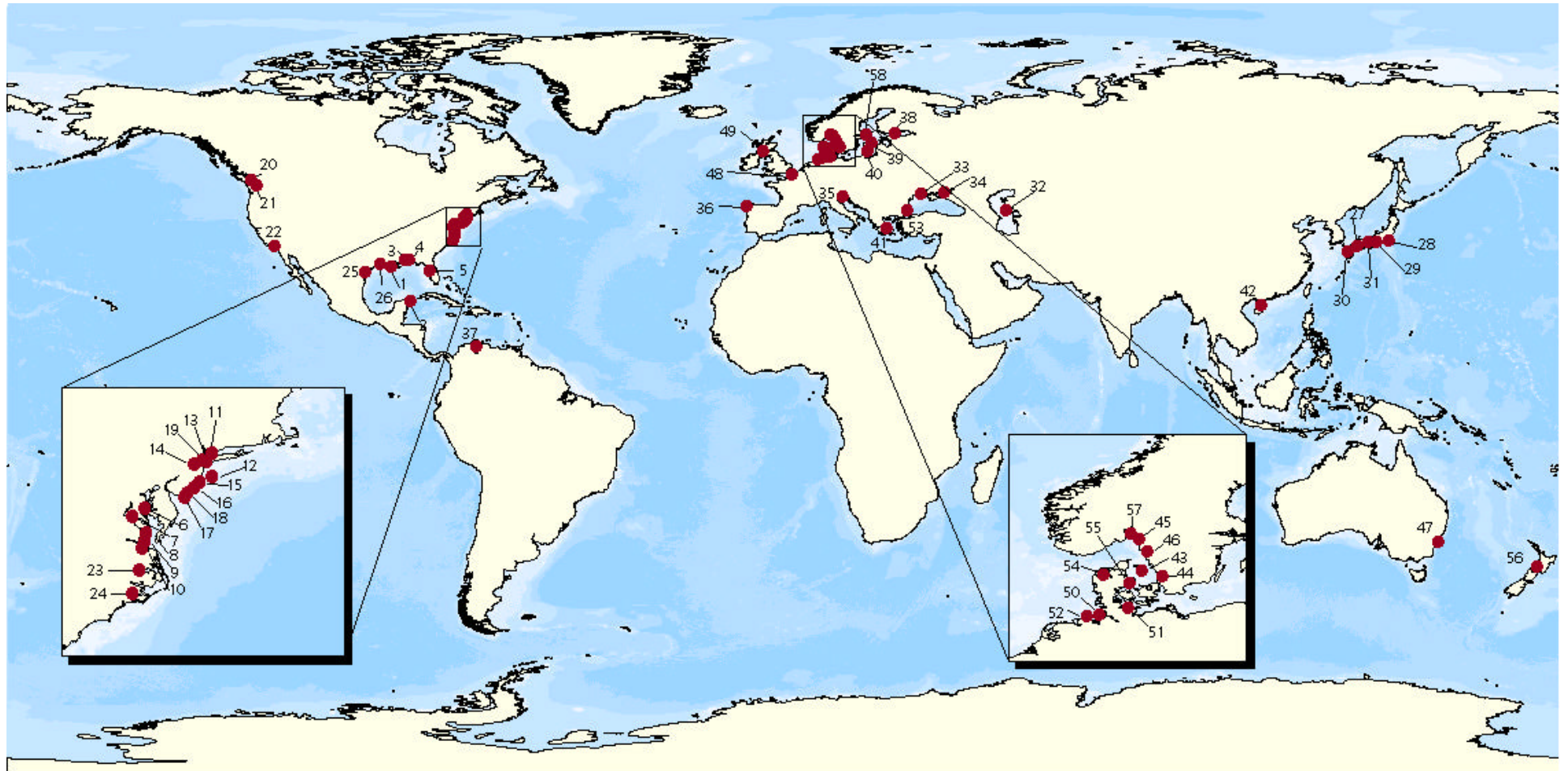


Global Occurrence of Hypoxic Zones



Map Projection: Geographic

Citation: World Resources Institute - PAGE, 2000

Notes:

1. Dead Zone, 2. Nichupti Lagoon, 3. Mobile Bay, 4. Perdido Bay, 5. Hillsborough Bay, 6. Chesapeake Mainstem, 7. Potomac River, 8. Rappahannock River, 9. York River, 10. Pagan River, 11. Long Island Sound, 12. NY/NJ Bight, 13. Flushing Bay, 14. Raritan Bay, 15. Barnegat Inlet, 16. Mullica River Estuary, 17. Townsend-Hereford Inlet, 18. Great Egg Harbor River, 19. New York City, 20. Puget Sound, 21. Saanich Inlet, 22. Los Angeles, 23. Pamlico River, 24. Cape Fear River, 25. Corpus Christi Bay, 26. Freeport, 27. Seto Inland Sea, 28. Tokyo Harbor, 29. Mikawa & Ise Bays, 30. Omura Bay, 31. Osaka Bay, 32. Caspian Sea, 33. Black Sea NW Shelf, 34. Sea of Azov, 35. Gulf of Trieste, 36.

Map Description:

Dissolved oxygen levels in water column below 2 mg/liter is a condition called hypoxia, where a majority of the marine organisms cannot survive. This map presents observations of hypoxic zones around the world. Nutrient pollution, especially from nitrates and phosphates, has increased dramatically this century largely because of increased use of agricultural fertilizers and growing discharge of domestic and industrial sewage. Significant changes in ecosystem condition are often detected when a coastal system exceeds its capacity to absorb additional nutrients. Although historical information on hypoxia is limited, experts believe that the prevalence and extent of hypoxic zones have increased in recent decades.

Source:

1. NOAA (National Oceanic and Atmospheric Administration). 1997, The 1995 National Shellfish Register. Silver Spring, MD: NOAA. 2. Diaz, R.J. and R. Rosenberg. 1995. " Marine Benthic Hypoxia: A Review of its Ecological Effects and the Behavioural Responses of Benthic Macrofauna". Oceanography and Marine Biology: an Annual Review 1995 33: 245-303. 3. Diaz, R.J.. Virginia Institute of Marine Science, School of Marine Science, College of William and Mary, Gloucester Point, VA. 1999. Personal Communication. November 28.

Analytical Overview:

This map was created based on the inventory of known hypoxic areas around the world. It should not be considered a complete description of hypoxia occurrence, but rather a subset of the areas where hypoxia occurs. Such mapping is inevitably biased towards areas with better reporting mechanisms. Consequently, most observations take place in industrialized countries.