

Pathway To Sustainable Development of the World's Large Marine Ecosystems

Dr. Kenneth Sherman

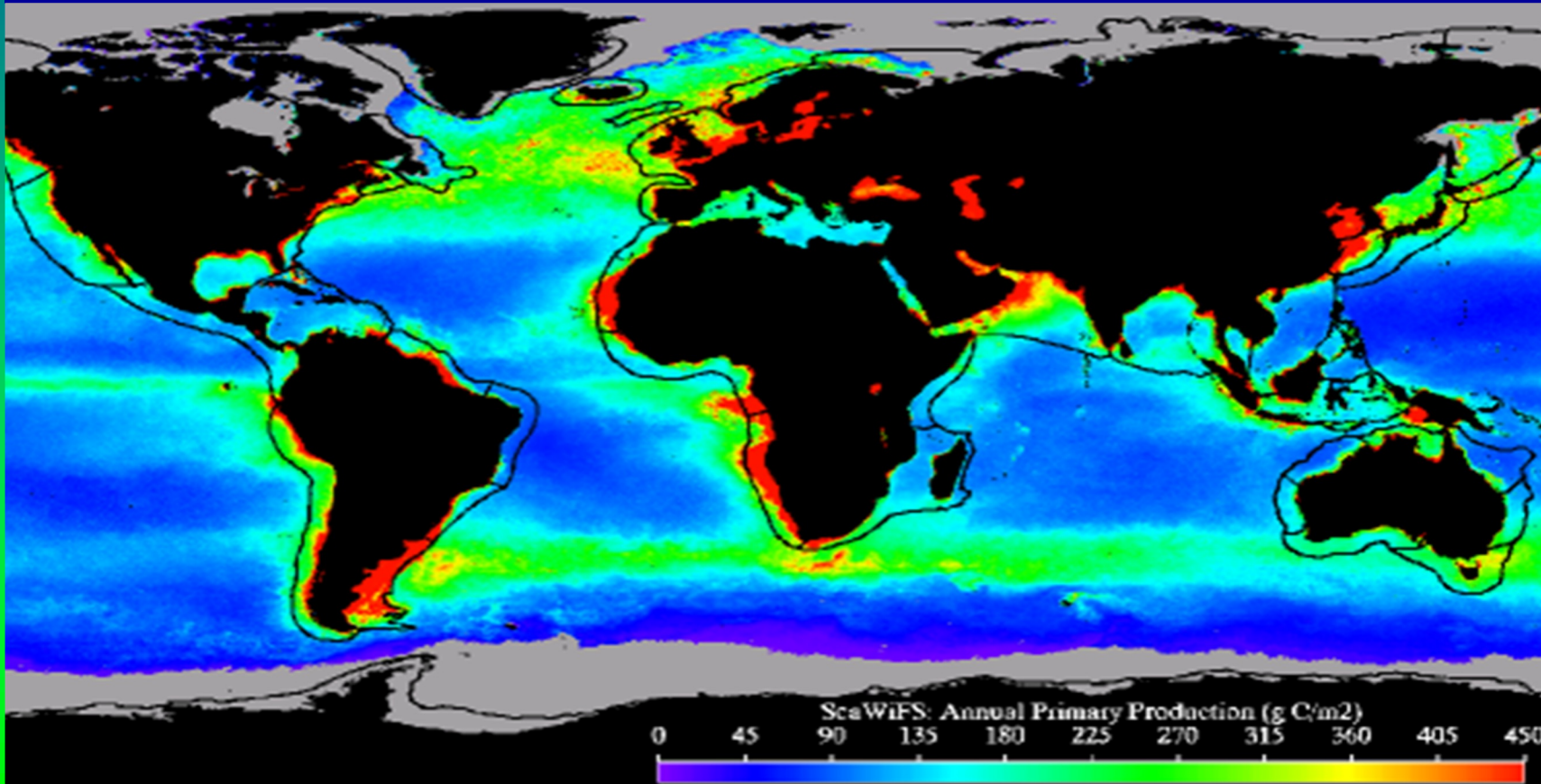
**Coastal Resources Center/Graduate School of Oceanography/University
of Rhode Island**

**N.K Panikkar Lecture for 2023 IOC-UNESCO Assembly
June 23rd, 2023
IOC-UNESCO, Paris**

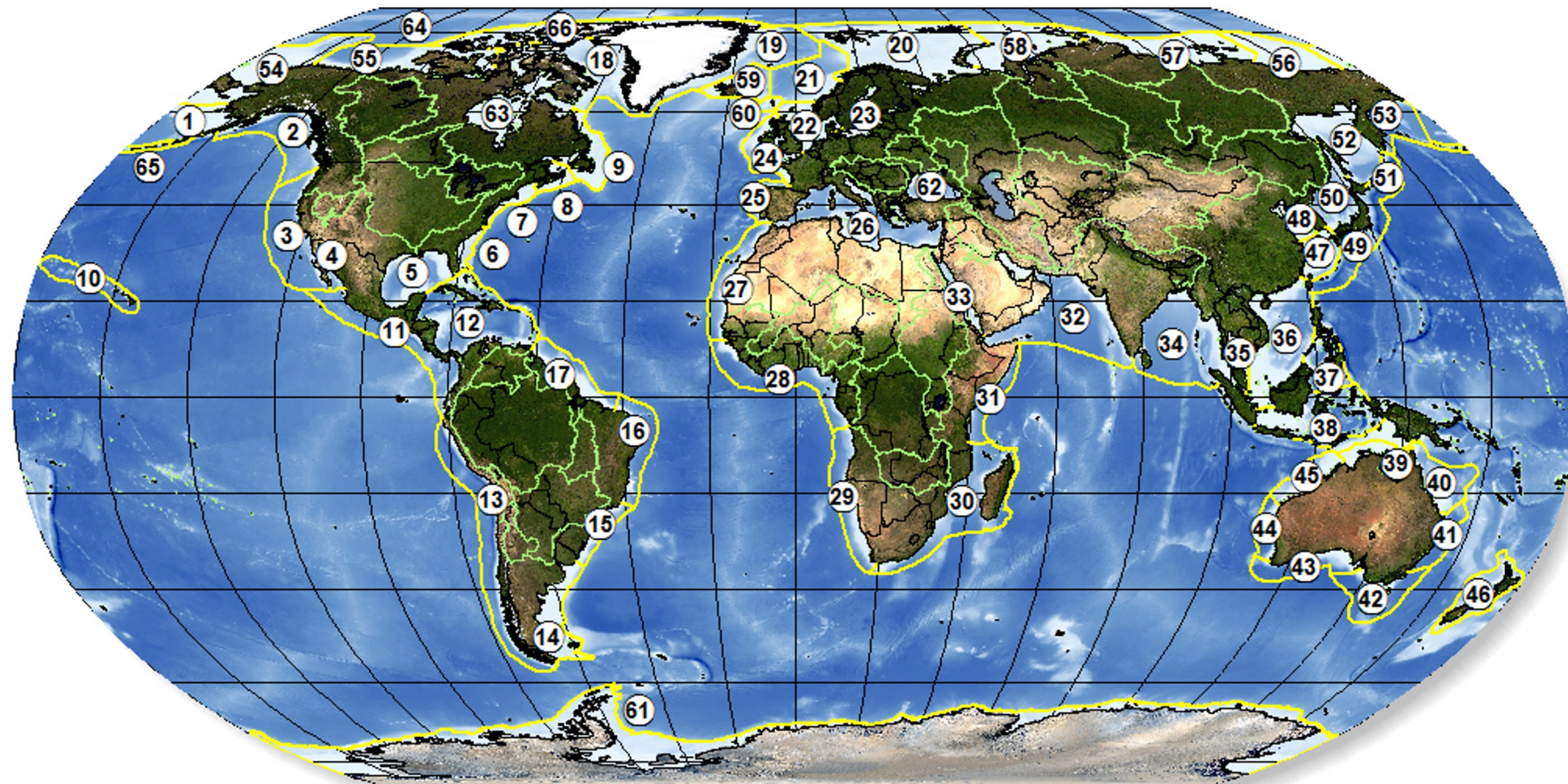
HIGHLY PRODUCTIVE LMEs

80% of the World's Marine Fisheries Catches
are produced in LMEs.

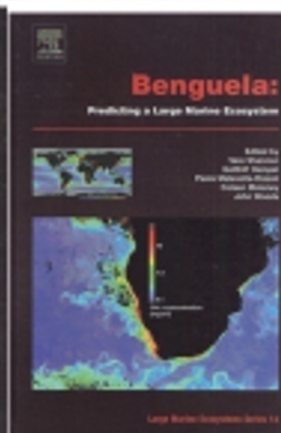
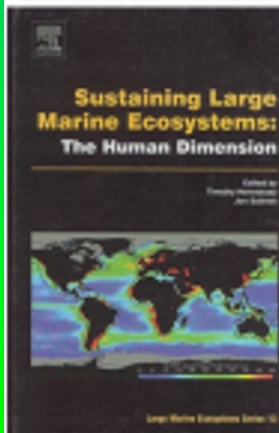
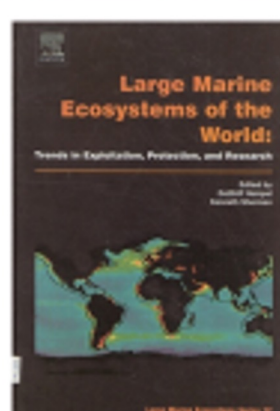
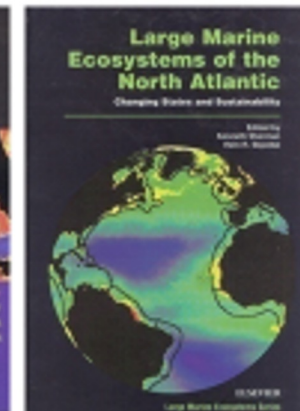
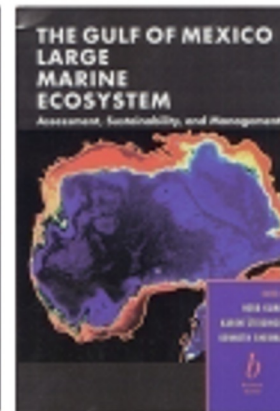
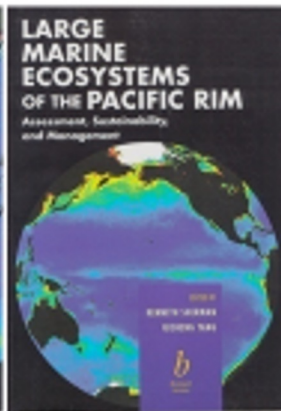
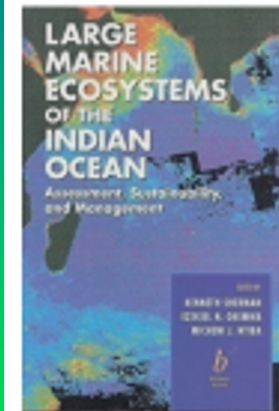
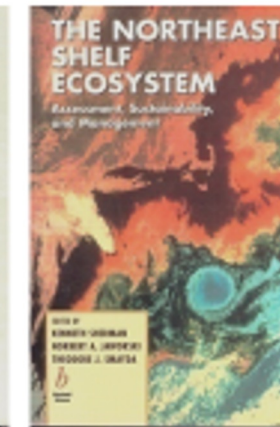
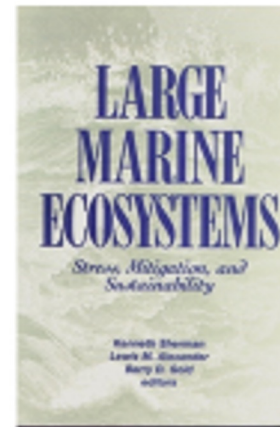
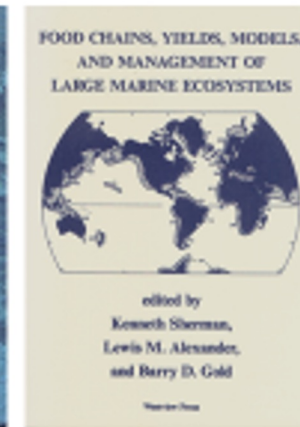
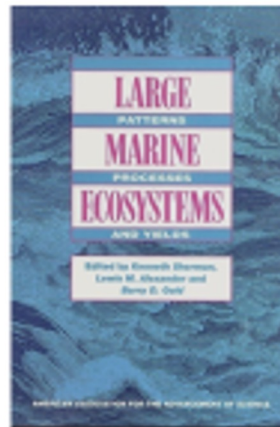
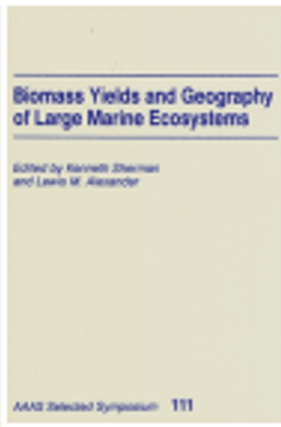
LMEs contribute \$27.7 trillion annually in ecosystem
services to the global economy



Large Marine Ecosystems of the World and Linked Watersheds



- | | | | | |
|-------------------------------------|--|-----------------------------------|-----------------------------------|--|
| 1. East Bering Sea | 15. South Brazil Shelf | 28. Guinea Current | 42. Southeast Australian Shelf | 55. Beaufort Sea |
| 2. Gulf of Alaska | 16. East Brazil Shelf | 29. Benguela Current | 43. Southwest Australian Shelf | 56. East Siberian Sea |
| 3. California Current | 17. North Brazil Shelf | 30. Agulhas Current | 44. West-Central Australian Shelf | 57. Laptev Sea |
| 4. Gulf of California | 18. Canadian Eastern Arctic - West Greenland | 31. Somali Coastal Current | 45. Northwest Australian Shelf | 58. Kara Sea |
| 5. Gulf of Mexico | 19. Greenland Sea | 32. Arabian Sea | 46. New Zealand Shelf | 59. Iceland Shelf and Sea |
| 6. Southeast U.S. Continental Shelf | 20. Barents Sea | 33. Red Sea | 47. East China Sea | 60. Faroe Plateau |
| 7. Northeast U.S. Continental Shelf | 21. Norwegian Sea | 34. Bay of Bengal | 48. Yellow Sea | 61. Antarctic |
| 8. Scotian Shelf | 22. North Sea | 35. Gulf of Thailand | 49. Kuroshio Current | 62. Black Sea |
| 9. Newfoundland-Labrador Shelf | 23. Baltic Sea | 36. South China Sea | 50. Sea of Japan/East Sea | 63. Hudson Bay Complex |
| 10. Insular Pacific-Hawaiian | 24. Celtic-Biscay Shelf | 37. Sulu-Celebes Sea | 51. Oyashio Current | 64. Central Arctic Ocean |
| 11. Pacific Central-American | 25. Iberian Coastal | 38. Indonesian Sea | 52. Sea of Okhotsk | 65. Aleutian Islands |
| 12. Caribbean Sea | 26. Mediterranean | 39. North Australian Shelf | 53. West Bering Sea | 66. Canadian High Arctic-North Greenland |
| 13. Humboldt Current | 27. Canary Current | 40. Northeast Australian Shelf | 54. Northern Bering-Chukchi Seas | |
| 14. Patagonian Shelf | | 41. East-Central Australian Shelf | | |



Seminal LME Volumes Published

LMEs and UN Movement towards Sustainable Ocean Development

LME Volumes

450 Authors

American Association for the Advancement of Science,
4 vols. 1986-1993

Blackwell Science, 4 vols. 1996-1999

Elsevier Science, 5 vols. 2002-2006

390 Marine Journal Articles. 1996-2016

United Nations

UNCED 1992

WSSD 2002 EBM support

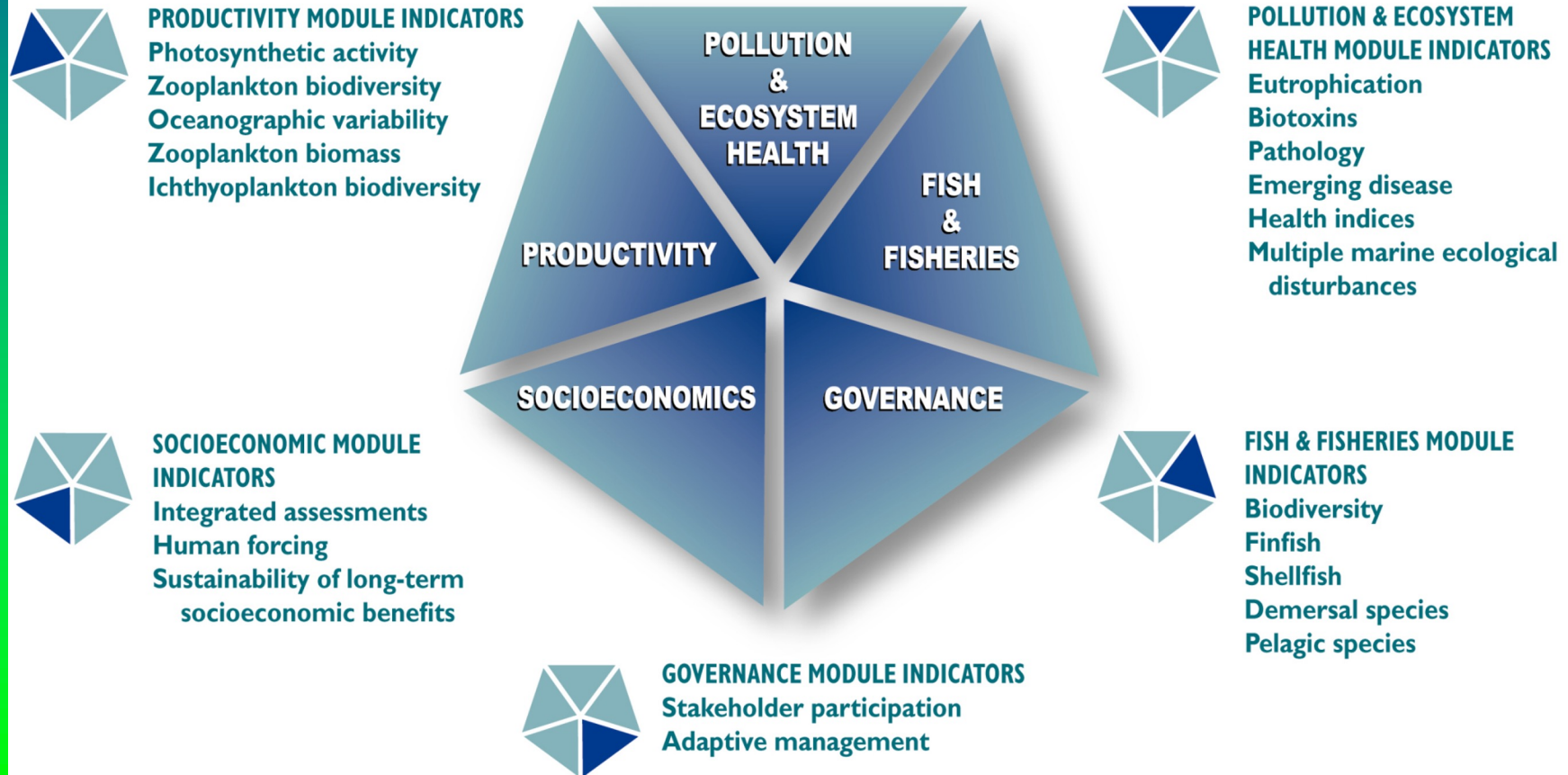
2012 Rio +20 EBM support

2015 SDG 14 EBM support

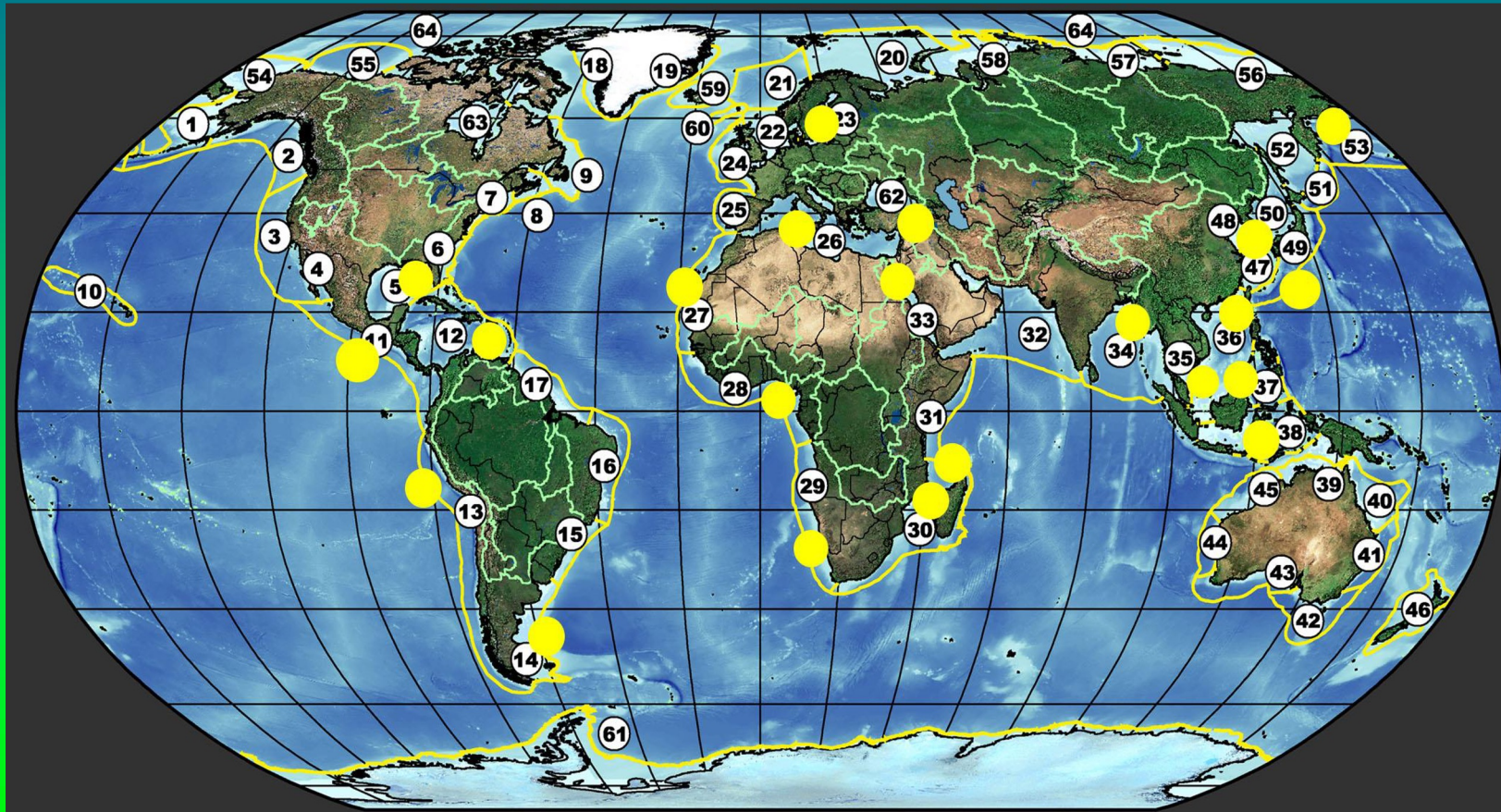


5 MODULES WITH INDICATORS

Modular Assessments for Sustainable Development



110 Participating Countries
22 LMEs with GEF Supported EBM
Projects since 1994



GEF LME International Waters Projects Operational Strategy

**Transboundary
Diagnostic Analyses
TDAs**

**Strategic Action
Program
SAPs**



**Supports
LME
Approach
to EBM**

Engaging with partners

- **5 UN Agencies**
 - UNDP
 - UNEP
 - UNIDO
 - FAO
 - IOC UNESCO
- **2 NGOs**
 - IUCN
 - WWF
- **2 Global Financial Institutions**
 - Global Environment Facility
 - World Bank
- **4 OECD Countries-U.S, Norway, Sweden, Germany**