Jianhai Xiang

Marine Science & Technology in China: A Roadmap to 2050

Contents

Ab	stract 1
Inti	roduction 5
1	Major Demands of National Development on Marine Science & Technology
	1.1 Needs from Sustained Economic Development in Marine Science and Technology9
	1.2 Social Development Demand on Marine Science and Technology 16
	1.3 Needs in Marine Science and Technology from National Maritime Rights and Interests
	Needs in the Marine Science and Technology from Development of Science and Technology
2	The International Forefront and Trends of Development in Marine Science & Technology
	The National Marine Development Strategies of World's Major Countries
	2.2 Major International Marine Scientific Research Plans
	2.3 The International Trends of Development in Marine Science and Technology46
3	Status and Opportunities of Chinese Marine Science & Technology Development

		in China	52
	3.2	Major National Sea-related Scientific Research Projects	75
		Opportunities and Challenges in the Development of Chinese Marine Science and Technology	87
4	Maj Are	or Scientific Problems and Technologies in Key Research as ····································	00
		Major Scientific Problems and Technologies in Marine Environment Areas	00
	4.2	Major Scientific Problems and Technologies in Marine Ecology 10	06
	4.3	Key Science and Technology Issues in Marine Biological Areas 1	12
		Key Scientific Problems and Techniques of the Marine Oil and Gas and Mineral Resources 12	23
		Key Scientific and Technical Problems in Sustainable Development of Coastal Areas	30
		D 1 1 1100 0 100 M 1 D	22
	4.6	Development and Utilization of Other Marine Resources 1	აა
5	The	Roadmap of Development in Chinese Marine Science echnology to 2050	
5	The & Te	Roadmap of Development in Chinese Marine Science echnology to 2050	
5	The & Te 5.1	Roadmap of Development in Chinese Marine Science echnology to 2050	39
5	The & Te 5.1	Roadmap of Development in Chinese Marine Science echnology to 2050	39
5	The & Te 5.1 5.2 5.3	Roadmap of Development in Chinese Marine Science echnology to 2050	39 39 42
5	The & Te 5.1 5.2 5.3 5.4	Roadmap of Development in Chinese Marine Science echnology to 2050	39 39 42
5	The & Te 5.1 5.2 5.3 5.4 5.5	Roadmap of Development in Chinese Marine Science echnology to 2050	39 39 42 45
5	The & Te 5.1 5.2 5.3 5.4 5.5 5.6	Roadmap of Development in Chinese Marine Science echnology to 2050	39 42 45 50

6	Protection Measures and Countermeasures	169
Ref	ferences ······	174
Epi	logue	177

Contents