

Ocean Mining Laws of Other Countries

This appendix summarizes the seabed mining laws of 10 countries. Not all of these countries have declared Exclusive Economic Zones (EEZs); thus, their laws may be based on continental shelf or territorial claims. These statutes illustrate the range of choices available for developing marine minerals. The general comparison that follows analyzes the various provisions shared by many of the statutes, but three provisions in particular are of primary interest for assessing the U.S. seabed mining regime:

1. allocating the right to mine,
2. payment for the right to mine, and
3. the division of responsibility between national and state or provincial authorities.

Allocating the right to mine includes selecting the location and size of a mining site and choosing a mine operator. In all of the countries surveyed, the initiative for prospecting or mining lies with the applicant, who must prove technical and financial capacity for carrying out the proposed work. Competing applications for the same area are generally assigned on a first-come basis, but Australia, for one, is considering work-program bidding or cash bidding for cases where some competition is needed. The applicant-initiative system is modified by general requirements for shoreline and environmental protection, area and time limits, and project-specific conditions imposed after an application is reviewed.

Payment for the privilege to mine may include application fees, rents, royalties on the value of recovered minerals, a tax on gross or net income, or a combination of these. The rate of payment may be set by law or negotiated on a case-by-case basis. Some countries provide for periodic adjustment based on economic conditions or the market for the mineral being recovered. In addition to paying for the minerals removed, miners may be required to spend funds each year for exploration or development. Spending above the minimum annual requirement may be credited to future years, while spending less may require paying the difference to the government or forfeiting the right to prospect or mine. The United States appears to be the only country which has a cash competitive bidding process to award leases in offshore areas.

Three of the countries included in this review—Australia, West Germany, and Canada, have a federal system of government. Australia is developing a system of joint authority over the continental shelf beyond the territorial sea; the states or territories have jurisdiction over the territorial sea. In West Germany, the states regulate activities within territorial waters while the national

government has exclusive jurisdiction over the continental shelf beyond the territorial limit. Canada has not yet enacted offshore mining legislation, but the Ministry of Energy, Mines, and Resources is drafting a proposed statute. A division of authority between the national and provincial governments will be part of the new law.

Australia

Laws

- Australia claims a 3-mile territorial seal Under the Coastal Waters (State Powers) Act of 1981, onshore mining legislation in the states of New South Wales, Tasmania, South Australia, Western Australia, and the Northern Territory can be applied offshore. Activities would be regulated according to standard terms, including environmental conditions. Western Australia is currently revising a model State Minerals (Submerged Lands) bill, particularly in regard to registration and transfer of leases. A version to be circulated to the States and Commonwealth may be ready in early 1987. Although some states are concerned that they cannot process company applications, offshore state legislation will most likely not be enacted before 1988.²
- In 1967, Australia passed a continental shelf act, based on Geneva provisions, for petroleum. In 1981, the Submerged Lands Act, which has a "degree of complementarity" with petroleum legislation³, was passed to cover other seabed minerals.⁴ However, the complementary state legislation necessary to implement it has not been passed yet.⁵
- Australia has not declared an EEZ.⁶

Jurisdiction

- Territorial waters: The adjoining state/territory has jurisdiction over minerals development.⁷
- Continental shelf: Offshore activities are administered by a Joint Authority, including a Common-

¹ Law of the Sea Bulletin, December 1983, No. 2, Off Ice of Special Representative of the Secretary-General for the Law of the Sea, United Nations (83-35821), p. 13.

² Letter from David Truman, Assistant Secretary, Minerals Policy Branch, to OTA, Oct. 3, 1986.

³ Letter from the Australian Department of Resources and Energy to OTA through Science and Technology Counselor J. R. Hlubucek, *Australian Embassy*, May 28, 1987.

⁴ Letter from Geoffrey Dabb, Legal Counsel, Australian Embassy to OTA, Oct. 6, 1986.

⁵ Truman, *op. cit.*

⁶ Law of the Sea Bulletin, 1983, *op. cit.*, p. 4.

⁷ Hlubucek, *op. cit.*

wealth Minister for Resources and Energy and a State Mines Minister. "The adjoining State Minister supervises day-to-day administration and serves as an industry contact. The Commonwealth minister is consulted on important issues and has the final authority in cases of disagreement."⁸

Permit Process

- **Exploration:** If a company wishes to explore for minerals (defined to include sand, gravel, clay, limestone, rock, evaporates, shale, oil-shale, and coal, but not petroleum¹⁰) in the ocean, it must apply to the Designated Authority (a State Minister charged with the responsibility by that State's Parliament¹¹) for an exploration permit. If the area of the application is on the seaward side of the outer limit of the territorial sea, the Joint Authority decides whether or not to grant the permit.¹² The application must be accompanied by a work and expenditure plan, and information regarding the technical qualifications of the applicant, and technical advice and financial resources available to the applicant.
- **Exploitation:** Same¹⁴

Terms

- **Exploration:** A fee of \$3,000 (Australian dollars) is charged for an application to explore any number of blocks less than 500 (A block is bounded by adjacent minutes of longitude and latitude). The permit lasts for 2 years, and gives the right to explore and take samples of specified minerals.¹⁵ A permit can be renewed 4 times, for up to 2 years each time, for up to 75 percent of the area in the permit being renewed. An application must be accompanied by a report on past and projected work and expenditures and a fee of \$300.¹⁶
- **Exploitation:** Application for a production license is done in a manner very similar to that for an exploration permit. Once granted, it lasts for 21 years. An annual rent of \$100 per block is charged. Royalty rates are set by the Joint Authority; the value of the exploited mineral may be considered in setting the rate.¹⁷ Within the territorial sea,

royalties are shared with the Commonwealth. 18 An application for a permit renewal must be accompanied by a \$300 fee.¹⁹

There is no competitive allocation mechanism in the unproclaimed Minerals (Submerged Lands) Act as it stands. However, at the recent meeting of Commonwealth and State officials, it was agreed that provisions should be made for competitive allocation. Generally, permits will be allocated on a first-come basis. In cases where some competition is needed, competitive allocation will generally use a work program bidding system, but provision for a cash bidding approach is being considered.

The Minerals (Submerged Lands) Act does not contain a royalty regime. At the officials' meeting, it was agreed that the endorsement of Ministers would be sought for the adjacent state to apply their onshore royalty regime to minerals won from the sea bed within the outer limit of the territorial sea. For minerals won from the sea bed on the seaward side of this limit, the commonwealth intends to apply a profits-based royalty. State royalties vary with the state and the mineral concerned, and in some cases profits-based royalties may be used, in other cases ad-valorem royalties or set tonnage rate royalties may be set. However, this does not preclude the states from opting for a profits-based royalty.

Conditions

Unreasonable interference with navigation, fishing, conservation of resources, and other lawful operations is prohibited.²⁰ Environmental assessment is generally the concern of the adjacent state. However, where mining impinges on commonwealth functions, assessment may be required by the appropriate commonwealth authority (there are arrangements to ensure that the assessments can be carried out jointly in most cases).

Section 105 further delineates regulations which the Governor General may promulgate under this law, concerning matters such as safety and conservation.²¹

Activities

Australia has explored for tin, monazite, phosphorite, rutile, and zircon.²² Private companies have been granted exploration licenses under current state onshore mining acts for aggregate and mineral sands off the coast

⁸1981 Minerals (Submerged Lands) Act, Section 8.

⁹Hlubucek, op. cit.

¹⁰1981 Minerals (Submerged Lands) Act, Section 3.

¹¹Hlubucek, op. cit.

¹²1981 Minerals (Submerged Lands) Act, Section 23.

¹³Ibid., Section 24.

¹⁴Ibid., Sections 31 and 32.

¹⁵Ibid., Sections 26 and 27.

¹⁶Ibid., Sections 28 and 29.

¹⁷Ibid., Sections 31 '35.

¹⁸Hlubucek, op. cit.

¹⁹1981 Minerals (Submerged Lands) Act, Section 36.

²⁰Ibid., Section 75.

²¹Ibid.

²²P. Hale and P. McLaren, "A Preliminary Assessment of Unconsolidated Mineral Resources in the Canadian Offshore," *The Canadian Mining and Metallurgical Bulletin*, September 1984, p.10.

of New South Wales. Production licenses have also been issued for dredging limestone off the Queensland and Western Australian coasts. Permit applications have been received for areas off the Western Australia and Northern Territory coasts for which the minerals have not been specified".

Public sector involvement in exploration and exploitation is not expected.²³

Canada

Laws

- Canada claims a 12-mile territorial sea.
- Continental shelf: Legislation was passed in June, 1969, as the Oil and Gas Production and Conservation Act.
- Canada has not declared an EEZ, but it does have a 200-mile fisheries zone.²⁴
- Currently, regulations for offshore mining could be promulgated under the Public Lands Grants Acts (The Ministry of Energy, Mines, and Resources has jurisdiction south of 60°; the Ministry of Indian and Northern Affairs has jurisdiction north of 60°). However, the Ministry of Energy, Mines, and Resources is in the process of drafting legislation which would be specifically applicable to offshore mining of hard minerals; the objective is to develop an 'adequate basis in law' for ocean mining. The law will address administration and management, disposition of mineral rights, royalties, and environment and fisheries. Plans call for the legislation to be written by the end of 1987; the Cabinet will make the final decision as to whether the new legislation should be introduced in Parliament. The recent Mineral and Metals Policy of Canada officially announced the Government intent to establish a legal and regulatory regime to maximize benefits from offshore mining. It seeks to develop "a simple, uniform, cooperative management system for mining development activities across all areas of the Canadian Continental Shelf."²⁵

Jurisdiction

The Canadians hope to formulate a regulatory scheme that can be applied regardless of who has jurisdiction over mining activities. However, the desired mechanism is one of cooperation with the provinces.

The Canadians take a "single window approach" to regulation, allowing companies to apply to a single gov-

ernment agency for exploration and/or exploitation permits. The rationale for this approach is that a simpler, stream-lined permitting process will encourage industry activity.

Permit Process

Exploration: Companies must submit a proposal to the appropriate agency. This agency in turn follows the environmental assessment and review process which allows the contact agency to communicate with the Departments of Environment, Fisheries and Oceans, and Transport for project approval. However, the contact agency has final authority to approve or disapprove the project. This approach reflects the Canadian desire to treat environmental concerns as mandatory concerns and of equal importance with economic development. Thus, potential negative effects on the environment are reviewed at an early stage of project planning.

Conditions

Environmental conditions are considered through the Environmental Assessment and Review Process.

The government sees itself as "facilitator" of entrepreneurial interests. As facilitator, it has two main functions: 1) to eliminate structural barriers, i.e. by creating a regulatory scheme (since the lack of one is seen as a barrier to activity), and 2) to provide fundamental information about ocean mining.

Activities

Currently, mining activity is "on hold." The government will not prevent anyone from exploring, but is not issuing any mining permits. However, the government is suggesting companies submit mining applications, to protect any 'first in line' advantage when applications are processed. In the past, sand and gravel were mined in the Beaufort Sea to construct oil drilling platforms. Permits issued for this activity were subject to requirements equivalent to obtaining land use permits.

France

Laws

- France claims a 12-mile territorial sea.²⁶
- France declared its rights over the continental shelf on December 30, 1968.²⁷

²³Law of the Sea Bulletin, 1983, op. cit., p. 11

²⁴The Territorial Sea and Fishing Zones Act, as amended, 1979.

²⁵The Mineral and Metals Policy of the Government of Canada, Department of Energy, Mines, and Resources, May 1987, p. 8

²⁶Law of the Sea Bulletin, 1983, op. cit., p. 31.

²⁷Continental Shelf Law, Dec. 30, 1968 (no 68-1181)

Ž France declared an EEZ on July 16, 1976. The law states that the provisions of the Continental Shelf law are applicable to the EEZ.

Jurisdiction

- Continental shelf: The central government appears to have complete jurisdiction over the continental shelf. The application of the continental shelf law is to be set by decree of the Conseil d'Etat.²⁸ The Directeur des Mines and the Directeur des Carburants, supervised by the Conseil General des Mines, administer French mining laws. All are located within the Ministère du Développement Industriel et Scientifique.²⁹

Permit Process

- Exploration or exploitation: Permits must be accompanied by a work program, submitted 45 days in advance of the proposed activity. The program is reviewed by a commission, including representatives from the Ministries of Economy and Finances, Telecommunication, and Maritime Policy. The chief of mines may solicit the opinion of these representatives in writing; however, if anyone objects to the proposal, the representatives must convene.³⁰

Terms

- Ž Exploration: Nonexclusive prospecting permits are issued.³¹ [Details regarding duration, rights, size and fees are unknown.]
- Exploitation: There are three types of mining titles: 1) provisional authorization pending the grant of a concession, 2) a mining concession, and 3) exploitation permit. Concessions are free and last in perpetuity. Permits are valid for 5 years, renewable for 2 more 5-year terms; a small indemnity must be paid to the owner of the surface area and the grantee is responsible for any damages resulting from his activities.³² A fixed royalty fee per metric ton is required for all minerals exploited; the value of the particular metal is taken into consideration. A Finance Law fixes the rate, as well as a formula for dividing revenues between central and local authorities³³

²⁸Ibid., Article 38.

²⁹N. Ely, Summary of Mining and Petroleum Laws of the World, Bureau of Mines Information Circular, 1974, U.S. Department of the Interior, Part 5, Europe, IC, 8613.

³⁰Decree of May 6, 1971 (no. 7 1-360), Articles 7 and 8

³¹N. Ely, Op. cit.

³²Ibid.

³³Continental Shelf Law, 1968, op. cit. Articles 21 and 23).

Conditions

Equipment must comply with special safety and maritime regulations.³⁴ The continental shelf law does not appear to specify other conditions.

Activities

France's activities have been limited to sand and gravel exploration and mining.³⁵

Federal Republic of Germany

Laws

- The FRG claims a 3-mile territorial sea.³⁶
- The FRG declared its rights over the Continental Shelf on January 20, 1964 and issued provisional regulations of rights on July 24, 1964.³⁷
- The FRG has not declared an EEZ.³⁸

Jurisdiction

- Territorial waters: Jurisdiction in German laws may be split one of three ways: 1) the federal government has exclusive jurisdiction, 2) the federal government makes the laws and the coastal states enforce them, 3) the federal government sets a framework and the coastal states make the laws. Offshore mining in territorial waters fits into category 2.³⁹
- Continental shelf: The federal government has exclusive jurisdiction.⁴⁰

Permit Process⁴¹

- Exploration and exploitation: Permits are awarded by the Chief Mining Board of Clausthal-Zellerfeld (for the technical and commercial aspects of mining) in conjunction with the German Hydrographic Institute (for the use and utilization of the waters and airspace above the continental shelf).⁴² Permits are awarded on a discretionary, informal basis, sometimes considering factors such as a company's

³⁴N. Ely, op. cit.

³⁵P. Hale and P. McLaren, op. cit.

³⁶Law of the Sea Bulletin, 1983, op. cit., p. 34.

³⁷Continental Shelf Declaration, Jan. 20, 1964, and the Act on provisional Determination of Rights Relating to the Continental Shelf, July 24, 1964 (amended Sept. 2, 1974).

³⁸Law of the Sea Bulletin, 1983, Op. cit.

³⁹Mr. Max & n, Transportation Office, FRG Embassy, personal communication to OTA, Aug. 12, 1986.

⁴⁰Continental Shelf Declaration, 1964, op. cit., p. 37.

⁴¹The following details on process, terms, and conditions apply to the continental shelf.

⁴²Act on Provisional Determination of Rights Relating to the Continental Shelf, July 24, 1964; amended Sept. 2, 1974.

reputation for cooperativeness with the government. This approach derives from a historical tradition in which the King had personal authority over all mining operations. Competitive bidding is not used because it is seen as discouraging mining activity.⁴³

Terms

- Exploration: Permits are valid for 3 years, with extensions possible up to 5 years, if the Act referred to in Article 16, paragraph 2 of the Continental Shelf Declaration, has not yet come into force when the original permit expires.
- Exploitation: Royalty payments to the Chief Mining Board of Clausthal-Zellerfeld are required "where the competitive position of enterprises engaged in mining in German territorial waters would otherwise be substantially affected. The amount is to be based on mining dues which would 'customarily be payable at the point in German territorial waters nearest to the place of extraction. Royalty payments are transferred according to the Act of Article 16, paragraph 2. [Details regarding exclusive and sampling rights, size and fees are unknown.]

Conditions

Permits may be issued subject to conditions and restrictions and may be subject to cancellation. The law does not specify what issues those conditions might address, although safety and technical aspects are among those considered.⁴⁴

Activities

Exploration has revealed that German waters have limited amounts of oil and gas and some coal.⁴⁵ The status of an application for the exploration of the continental shelf, filed by a consortium of companies, was uncertain as of 1980.⁴⁶ No exploration is currently taking place, as no finds are expected.⁴⁷

Sand and gravel extraction within the territorial seas is an established industry in the Baltic.⁴⁸

Japan

Laws

- Japan claims a 12-mile territorial sea.⁴⁹
- Japan does not claim a continental shelf or an EEZ.⁵⁰
- Japan has no comprehensive legislation dealing with offshore mining. The Mining Law, Quarry Law, and Gravel Gathering Law apply to offshore mining, depending on the type of mineral to be exploited. The Mining Law regulates activities on the continental shelf. The applicability of the other two laws outside the territorial waters has not been examined in detail.⁵¹

Jurisdiction

The government of Japan exercises jurisdiction over off-shore mining under the above-mentioned laws.⁵²

Permit Process

Under the Mining Law, application for permits for offshore mining are submitted to the Director-General of Ministry of Trade and Industry (MITI) regional bureau.

For quarrying, permits are granted by the Director-General of MITI regional bureau. Entrepreneurs register with the Governor of the prefecture, or with the Director-General of MITI regional bureau if their operations extend over more than one prefecture.

For gravel-gathering, issuance of permits is regulated on the prefectural level. Entrepreneurs register with the Governor of the prefecture, or with the Director-General of MITI regional bureau if their operations extend over more than one prefecture.⁵³

Terms

A fixed fee is assessed for each unit of aggregate mined.⁵⁴ Permits for exploration and exploitation are issued separately under the Mining Law. One permit covers both exploration and exploitation under the Quarry Law and the Gravel Gathering Law.

Duration: Permits for exploration are valid for two years with two possible extensions; no limit in duration for permits for exploitation (Mining Law). Permits are valid up to 20 years with possible extensions (Quarry

⁴³M. Kehden, *op. cit.*

⁴⁴M. Kehden, *op. cit.*

⁴⁵*Ibid.*

⁴⁶Marine Aggregate Project, EIS, Vol.1, February 1980, Consolidated Cold Fields Australia Ltd and ARC Marine Ltd

⁴⁷M. Kehden, *op. cit.*

⁴⁸Marine Aggregate Project, *op. cit.*

⁴⁹Law of the Sea Bulletin, 1983, *op. cit.*, p. 39.

⁵⁰*Ibid.*

⁵¹Letter from Kaname Ikeda, Science Office, Embassy of Japan, to OTA, June 15, 1987.

⁵²*Ibid.*

⁵³Ikeda, *op. cit.*

⁵⁴*Ibid.*

Law). No specific provisions (Gravel and Gathering Law).

Maximum permit area: 35,000 ares (Mining Law);⁵⁵ no specific provisions (Quarry Law, Gravel Gathering Law).

Permits are exclusive (Mining Law, Quarry Law) .5'

Conditions

Factors which are considered in deciding on the issuance of permits are: health and sanitary considerations, unreasonable interference with other industrial uses, and compliance with public welfare.

Factors which are considered in regulating mining activity are: whether a firm is part of an association, exclusivity, fishing rights, location (minimum distance from shore and minimum water depth), conflicting uses, prohibited areas (seaweed 'plantations' and drag net areas), buffer zones (sometimes greater than 500m between zones), mining methods (must be sand pump or clam shell), quantity, duration of license, uses, and market area.⁵⁷

Activities

Activity is limited to sand and gravel, 94 percent of which occurs in Kyushu and offshore the Seto Operations.⁵⁸ There is also some iron sand mining in the Prefecture of Shimane.

Netherlands⁵⁹

Laws

- The Netherlands recently expanded its territorial sea to 12 miles. A law for sand and gravel extraction within this area exists. By 1988 or 1989, this law will be extended to the continental shelf, based on the provisions of the 1958 Geneva Convention.
- The Netherlands Continental Shelf Act applies only to oil and gas.
- The Netherlands has no declared EEZ, because the government does not consider the EEZ to be customary international law yet.

⁵⁵3.5 square kilometers.

⁵⁶Ikeda, op. cit.

⁵⁷T. Usami, K. Tsurusaki, T. Hirota, et al., "Seafloor Sand Mining in Japan," in "Proceedings of Marine Technology '79—Ocean Energy" Marine Technology Society, Washington, DC, pp. 176-189.

⁵⁸Ibid.

⁵⁹This information was obtained through *interviews* with Mr. Wim J. Van Teeffelen, Assistant Attache for Science and Technology, Royal Netherlands Embassy, and Mr. Henk Van Hoom from the Ministry of Transportation and Waterworks, Directorate for the North Sea.

Jurisdiction

- Territorial waters: The central government has jurisdiction since provinces in the Netherlands have little power. The Ministry of Transport and Public Works issues permits for mining within the 12-mile zone.
- Continental shelf: The central government has jurisdiction. The Department of Treasury issues permits.

Permit Process

Exploration and exploitation: If a company wishes to extract sand, it approaches the appropriate government agency with its request. As long as a company does not violate any of the informal conditions and criteria, it is granted a permit. Since few companies are interested and potential mining areas are plentiful, companies do not have to bid competitively for mining permits.

Terms

- Exploration: [Details on duration, exclusivity and sampling rights, size, and fees are unknown.]
- Exploitation: Royalties must be paid. [Details on rates, duration, exclusivity, size, and fees are unknown.]

Conditions

Currently, informal policy criteria guide the agency's decisions to issue permits. In the Netherlands, one learns from childhood about the importance of preserving the coastal and ocean environment. The most important consideration is distance from the coastline of the proposed activity (must be no closer than 20 km to the coast); since the Netherlands is 2/3 below sea level, it is crucial to prevent coastal erosion. Some areas, such as the Waddensea area in the north, are off limits even though a great deal of sand is available, for environmental reasons (wetlands, seals, and nursery grounds for North Sea fish). Conflicts with pipelines, the environment, and fisheries are also considered; these conflicts are rare, however, because activity is limited. A third consideration is the type of technology the company proposes to use. (i. e., thin layer dredging or deep hole dredging; the former is currently preferred)

The Ministry of Transport and Public Works is currently working to formalize these policy criteria, which center around environmental concerns. The Ministry is examining the environmental consequences of mining in different areas. This will guide the choice of future mining sites and types of technologies.

Activities

Only sand and gravel, and mostly the former, is currently being extracted. No other economic minerals are expected to be found in Dutch waters. Few companies are involved and not much expanded activity in the future is anticipated unless land mining becomes very restricted.

Sand is extracted either from areas where it is naturally abundant or from shallow channels in the North Sea which need to be dredged anyway to allow large ships through (e. g., on the approach to Amsterdam). Activity takes place fairly close to shore because of transport requirements.

Norway

Laws

- Territorial sea and continental shelf: Norway passed, on June 21, 1963, Act No. 12, relating to Scientific Research and Exploration for and Exploitation of Subsea Natural Resources other than Petroleum Resources. On June 12, 1970, a Royal Decree was issued, setting provisional Rules for the Exploration for Certain Submarine Natural Resources other than Petroleum.
- Norway declared an Exclusive Economic Zone on December 17, 1976.⁶⁰

Jurisdiction

Under the Act of June 21, 1963, the King has the authority to issue exploration and exploitation permits and make regulations, in regard to both territorial seas and the continental shelf.⁶¹

Permit Process

Unknown

Terms

- Exploration: The Ministry of Industry may grant two year licenses for exploration of certain submarine natural resources. An application must include a description of the method of proposed exploration. The license does not give exclusive rights or guarantee exploitation rights.⁶²

⁶⁰Act of Dec 17, 1976, *Economic Zone of Norway*.

⁶¹Act No. 12, June 21, 1963, *Scientific Research and Exploration for and Exploitation of Subsea Natural Resources other than Petroleum Resources*

⁶²Royal Decree, June 12, 1970, *provisional Rules concerning Exploration for Certain Submarine Natural Resources other than Petroleum in the Norwegian Continental Shelf*, etc

Conditions

Exploration: Activities must avoid disturbing shipping, fishing, aviation, marine fauna or flora, submarine cables, etc.⁶³

Thailand

Laws

- Thailand has a 12-mile territorial sea.⁶⁴
- Thailand has declared a continental shelf.⁶⁵
- Thailand has not declared an EEZ.⁶⁶
- Offshore mining is governed by the Minerals Act B.E. 2510, 1967, as amended by the Minerals Act No. 2, 1973 and the Minerals Act No. 3, 1979. This act also covers onshore mining.⁶⁷

Jurisdiction

The government has exclusive ownership of all minerals "upon, in or under the surface of public domain and privately owned land. The Minerals Act is administered by the Department of Mineral Resources within the Ministry of Industry."⁶⁸

Permit Process

Unknown for both exploration and exploitation

Terms

- Exploration: There are three types of permits:
 1. The local District Mineral Resources Officer, on behalf of the central government, can issue a one-year nonrenewable prospecting license for a prescribed fee. The mineral of interest and the area to be prospected must be specified.
 2. Exclusive Prospecting Licenses are granted by the Minister of Industry, although applications are filed with the District Officer. The license is usually valid for 1 year, but for no more than 2. It is exclusive and non-transferable. The maximum permit area is 500,000 rai (1 rai is about 2/5 acre).

⁶³Ibid.

⁶⁴Law of the Sea Bulletin, 1983, op. cit. , p. 82.

⁶⁵Ibid.

⁶⁶Ibid., p. 63.

⁶⁷C.-U. Ruangsuvan (Department of Mineral Resources, Ministry of Industry, Thailand), "The Development of Offshore Mineral Resources in Thailand," in *International Symposium on the New Law of the Sea in Southeast Asia*, D. Johnston (ed.) (Dalhousie Ocean Studies Programme: 1983), pp. 83-87.

⁶⁸Ibid.

3. A Special Prospecting License is granted if the project requires substantial investment and special technology. The maximum permit area is 10,000 rai, but there is no limit on the number of permits for which one may apply. Permits are valid for 3 years, and may be renewed for no more than 2 years. A certain amount of activity is required.⁶⁹
- Exploitation: Mining leases and concessions are issued by the Minister of Energy. An application must be made in a prescribed form and certain fees are required. The maximum mining area is 50,000 rai.⁷⁰ A prospector is entitled to a concession upon making a mineral discovery and showing financial ability. Royalty rates are fixed by the government and may vary by mineral and area. An annual rent may also be required. Concessions are for a 75-year term.

Conditions

Environmental considerations are minor. The country does not have comprehensive environmental legislation.⁷¹

Activities

Tin is the main mineral being extracted from the Gulf of Thailand and the Andaman Sea; activity has taken place since 1907. In 1976, onshore production was 20,000 tons while offshore was about 8,300. By 1980, onshore had only risen to 22,200 tons while offshore had jumped to 23,700.⁷²

United Kingdom

Laws

- A bill to extend the territorial sea from 3 to 12 miles has recently been passed.⁷³
- The United Kingdom claimed its continental shelf in 1964.⁷⁴
- The United Kingdom has not declared an EEZ.

Jurisdiction

- Territorial waters: Proprietary rights to the bed of the Territorial Sea form a part of the Crown Es-

tate. Under the Crown Estate Act of 1961 the Crown Estate Commissioners are charged with the management of the Estate which includes the rights to license mineral extraction on the Territorial Seabed but excluding oil, gas, and coal.

- Continental shelf: Rights to mining of minerals other than oil, gas, and coal on the continental shelf are granted to the Crown by the Continental Shelf Act, 1964. The Commissioners have the power to grant prospecting and dredging licenses.⁷⁵

Permit Process

- Exploration: Since experience has shown that prospecting usually does not conflict unacceptably with other ocean uses, no formal government consultation process is required to obtain a permit. However, the Crown Estate Commissioners do inform the Ministry of Agriculture, Fisheries and Food (MAFF) before issuing a license and the MAFF, after consultation with regional officials, will notify the company of potential objections. Bulk sampling requires separate authorization by the Commissioners. The MAFF may propose changes (e. g., in time, place or extraction method) in order to protect fisheries.⁷⁶
- Exploitation: Applications to the Commissioners are first sent to Hydraulics Research Limited to advise whether there is likely to be any adverse effect on the adjacent coastline. Only if their advice is favorable does the application proceed, and it is then forwarded to the Minerals Division of the Department of the Environment (DOE).⁷⁷ The DOE oversees the "Government View" procedure which includes consultation with other Government departments and agencies dealing with coast protection, fisheries, navigation, oil and gas, and defense interests. If any department has a substantive objection, it may discuss it informally with the company or with the Crown Estate Commissioners before reporting it to the Department of the Environment.⁷⁸ The Department ultimately makes a recommendation to the Commissioners.

Terms

- Exploration: Licenses are issued for either 2 or 4 years and are not transferable. They permit use of

⁶⁹Ibid.

⁷⁰Ibid.

⁷¹D. Johnston, Ocean Studies Programme, Dalhousie University, Halifax, Canada, personal communication to OTA, Aug. 15, 1986.

⁷²C. U. Ruangsavan, *op. cit.*

⁷³Letter from the Foreign and Commonwealth Office of the United Kingdom, London, England to OTA through R. L. Embleton, British Embassy, May 15, 1987.

⁷⁴Law of the Sea Bulletin, 1983, *op. cit.*

⁷⁵D. Pasho, 'The United Kingdom Offshore Aggregate Industry: A Review of Management Practices and Issues, Ministry of Energy, Mines and Resources Canada, January, 1986, p. 17.

⁷⁶Code of Practice for the Extraction of Marine Aggregates, December 1981, p. 10.

⁷⁷D. Pasho, p. 19.

⁷⁸Code of Practice, p. 11.

seismic and core-sampling techniques and limited bulk sampling by dredger (up to 1,000 tonnes over the period of the licence). The license fee charged by the Crown Estate is on a sliding scale depending on the size of area. Exploration licences are nonexclusive and are normally renewable.⁷⁹

- **Exploitation:** Licenses are granted on a continuing basis but may be terminated at 6 months' notice. They are expressed to be nonexclusive but as far as possible each area is granted to a single operator. A maximum annual removal limit is stipulated. Royalties are payable on the actual quantity removed from the seabed but a dead rent of 20 percent of the maximum permissible tonnage multiplied by the current royalty rate is charged whether or not any material is removed. Royalty rates are reviewed periodically but are indexed in the Retail Price Index in the intervening years. The current royalties represent about 5 percent of the selling price of the material at the wharf of landing.⁸⁰

Conditions

- **Exploration:** Drilling and sampling near cables is restricted. 'Unjustifiable interference' with navigation, fishing or conservation of living resources is prohibited. The company must provide the Commissioners with reports on operations and a full report on prospecting results including geophysical profiles.
- **Exploitation:** An applicant must have held a prospecting license for the area. According to the 1977 Code of Practice, an applicant must have the necessary vessels, facilities, etc. to undertake work. The license specifies the maximum annual quantity to be dredged, and safety provisions. Licenses may be terminated by either party at 6-months' notice.

The Government View procedure is intended to resolve ocean use conflicts. Special attention is given to potential conflicts between fishing and mining in the Code of Practice. The government recognizes that both industries 'are legitimately exploiting the sea's resources. Therefore, it does not give special priority to any particular activity; for instance, the MAFF does not object to a mining license solely because it involves a fishery area.'⁸¹

Activities

Sand and gravel dredging is a fairly well established activity, dating back to the mid-1920s.⁸² The attached table gives details on production at different mining sites. In 1985, marine sources provided about 14 percent of Britain's sand and gravel needs.

New Zealand

Laws

- New Zealand claims a 12-mile territorial sea.⁸³
- New Zealand declared its continental shelf in 1964.⁸⁴
- New Zealand declared an EEZ on September 6, 1977 with Act No. 28. Enactment of implementing legislation is pending international confirmation of the Law of the Sea Treaty.⁸⁵
- Legislation is currently being reviewed on a low-key basis by the Minister of Energy's office; a report to the ministers is pending.⁸⁶

Jurisdiction

Continental shelf: The Minister of Energy has exclusive authority to issue prospecting and mining licenses for minerals in the seabed or subsoil of the continental shelf.⁸⁷

Permit Process

Exploration and exploitation: Interested companies apply to the Minister of Energy and so long as they meet all the requirements, will be awarded a license. The company must show that it meets all the requirements by submitting a project assessment with its application (e. g., environmental assessment). The concerned agencies will become involved in the review process, but the company only deals directly with the Minister of Energy.⁸⁸

Terms

Exploration and exploitation: To date, only one prospecting license has been issued, so few precedents have been set. However, the granting process is likely to closely parallel that for oil and gas. Prospecting and

⁷⁹Foreign and Commonwealth Office, *op. cit.*

⁸⁰*Ibid.*

⁸¹*Ibid.*, p. 11

⁸²D. Pasho, p. 10.

⁸³Law of the Sea Bulletin, 1983, *op. cit.*, p. 62

⁸⁴*Ibid.*

⁸⁵Mr Pat Helm, New Zealand Embassy, and officials in Wellington, New Zealand, letter to OTA, Aug 1, 1986

⁸⁶*Ibid.*

⁸⁷New Zealand Continental Shelf Act, 1964, No 28, Section 5

⁸⁸*Ibid.*

Table D-1.—Ocean Mining Laws of Other Countries

Country	Permit process	Terms			Royalties	Conditions	Minerals
		Duration	Rights	Size	Fees		
Australia:							
Exploration	Apply to designated authority Granted by joint authority	2 years	Exclusive and non-exclusive of specified minerals	Up to 500 blocks	\$3,000 (Australian)	No "unreasonable interference" with: • navigation • fishing • conservation • other legitimate activities	Tin, molybdenum, platinum, ruthenium, sand, gravel
Exploitation	Same as above	21 years	—	—	\$100/block	Same as above	Sand, gravel
Canada:							
Exploration	Submit proposal to appropriate agency	No limit	—	—	—	Environmental assessment and review process	Gold, sand
Exploitation	Same as above	—	—	—	—	Same as above	None currently
France:							
Exploration	Work plan submitted by mining company	—	Reservations in seabed mining zone	—	—	Safety Maritime rules	Sand, gravel
Exploitation	Same as above	Mining companies must submit plans for 5 years Renewable for 5 years	Same as above	—	Mining companies must submit plans for 5 years Renewable for 5 years	Same as above	Same as above
Germany:							
Exploration	Granted by discretion of Chief Mining Board and Hydrographic Institute	3 years, extension up to 5 years	—	—	—	• Safety • Technical considerations	Sand, gravel
Exploitation	Same as above	Same as above	—	—	Based on nearest territorial water dues	Same as above	Same as above
Japan:							
Exploration	Granted by Governor of Prefecture in Mining Control Law	a) Mining Law: 2 years b) Mining Law: 5 years c) Mining Law: 10 years d) Mining Law: 20 years	Exclusive	a) Mining Law: 3.5 km b) Mining Law: 3.5 km c) Mining Law: 3.5 km d) Mining Law: 3.5 km	—	• Distance from shore • Navigation • Environment • Fishing • Pollution • Technology used • Type of use • Duration • Law	Sand, gravel, iron sands
Exploitation	Same as above	a) Mining Law: 2 years b) Mining Law: 5 years c) Mining Law: 10 years d) Mining Law: 20 years	Exclusive	a) Mining Law: 3.5 km b) Mining Law: 3.5 km c) Mining Law: 3.5 km d) Mining Law: 3.5 km	—	—	Same as above
Netherlands:							
Exploration	Application evaluated by appropriate agency against informal criteria and conditions	—	—	—	—	• At least 20 km from coast • Use conflict: pipelines, environment, fisheries	Sand, gravel

Table D-1.—Ocean Mining Laws of Other Countries—Continued

Country	Permit process	Terms				Fees	Royalties	Conditions	Minerals
		Duration	Rights	Size	Size				
Exploitation	Same as above	—	—	—	—	—	Required	Same as above • Mining technology: thin layer dredging preferred	Same as above
New Zealand:									
Exploitation	Applications evaluated by Minister of Energy	—	Nonexclusive	—	—	—	—	• Safety • Must not interfere with: —marine environment —fishermen —navigation —research —defense —cables, pipelines	Phosphorite
Exploitation	Same as above	—	—	—	—	—	Required: paid to the Crown	Same as above	Same as above
Norway:									
Exploitation	—	2 years	Nonexclusive	—	—	—	—	Must not interfere with: • shipping • fishing • aviation • marine life • cables • etc.	—
Thailand:									
Exploitation	—	—	—	—	—	—	—	—	—
Exploitation	—	Prospecting: 1 year, renewable Exclusive: 1 to 2 years Special: 3 years, renewable for 2 more	Nontransferable	Prospecting: must specify Exclusive: 500,000 rai Special: 10,000 rai	Required	Required	Diligence requirement	Environmental considerations minor	Tin
United Kingdom:									
Exploitation	—	—	50,000 rai	Required	Required	—	—	Same as above	Same as above
Exploitation	No formal review requirement	2 years	Not transferable Sampling up to 1,000 tonnes	Two 600 km ²	Required	Required	—	Must not interfere with: • navigation • fishing • cables • living resources	Sand, gravel
Exploitation	Application evaluated in turn by Hydraulics Research Station, Department of Environment in consultation with appropriate agencies. Final approval by Commissioners	year, renewable	Not transferable Exclusive	—	Dead rent on approved tonnage	Based on quantity, market price, etc.	Must have held prospecting license • Competence • Maximum quantity • Safety	Same as above	Same as above

mining licenses are granted separately, so legally, the right to prospect is not tied to the right to mine. Logically, however, a company which has invested in prospecting is likely to obtain a mining license. Furthermore, since the government is often a partner in prospecting operations, exploitation rights follow naturally. Licenses do not grant exclusive rights; however, not enough activity has taken place to make this a controversial issue.⁸⁹ [Details regarding duration, size, and fees are unknown.]

Royalties must be paid to the Crown by the operator. Rates are specified in the license. No mining license has been issued, so no basis for assessing royalties has been established.⁹⁰

Conditions

Any mining activities must disturb the marine environment and life as little as "reasonably possible," must not interfere with the rights of commercial fishermen, must comply with safety provisions of the 1971 Mining Act and 1979 Coal Mines Act.

⁸⁹Ibid.
⁹⁰Ibid

Activities must not violate any of the restrictive regulations set forth by the Governor-General, concerning navigation, fishing, conservation of living resources, national defense, oceanographic research, submarine cables, or pipelines. "Unjustifiable interference" with any of these activities is defined at the Governor-General's discretion.⁹¹ However, in practice, the details of regulations are specified in Parliamentary committees, in consultation with representatives from appropriate government branches (i. e., the Ministry of the Environment).⁹²

The Inspector of Mines, in consultation with the Ministry of Transport, Marine Division, and Ministry of Agriculture and Fisheries arbitrates conflicts between miners and commercial fishermen.⁹³

Activities

One license has been issued for the prospecting of phosphorite nodules.⁹⁴

⁹¹ New Zealand Continental Shelf Act, Section 8.

⁹²P Helm, op. cit.

⁹³Ibid.

⁹⁴Ibid.