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Creation of French-Japanese Ocean Development Sub-Committee and its subsequent activities

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Abstract: This article outlines the creation of the French-Japanese Ocean Development Sub-Committee, which was established under the Agreement on Scientific and Technological Cooperation between France and Japan signed in 1974 and its subsequent activities. In July 1974, the French side expressed interest in krill harvesting and utilization, fish pathology, and manganese nodules at the Japan-France Joint Committee on Cooperation in Science and Technology. The first meeting of the French-Japanese Ocean Development Sub-Committee was held in April 1975, during which the Japanese side expressed interest in diving technology, coastal development and marine structures, and marine observation equipment. In October of the same year, at the second meeting of the sub-committee, discussions were held on bluefin tuna farming and marine energy in both France and Japan. In recent years, the conference of the sub-committee has been expanding with reports on continuing, new and completed projects under the main themes of marine research, marine technology and research infrastructure, marine resources, marine biotechnology, deep-sea ecosystems, coastal ecosystems and social ecosystems. The sub-committee plays a significant role in promoting cooperation between France and Japan in the ocean development.

Keywords : *French-Japanese Ocean Development Sub-Committee, Japan-France Joint Committee on Cooperation in Science and Technology, Ifremer, Mext*

1. Congratulatory message to the Japanese-French Oceanographic Society on the occasion of its 60th anniversary.

Thank you very much for the opportunity to speak today at the symposium '60 Years of Japanese-French Cooperation in Oceanography', jointly organised by the Japanese-French Oceanographic Societies (Société franco-japonaise d' Océanographies: SFJOs) of Japan and France, the *Institut français de recherches sur le Japon à la Maison franco-japonaise* and the *Maison franco-japonaise*.

First of all, I would like to congratulate the Japanese-French Oceanographic Society on its 60th anniversary last year 2020, which is the 60th year of the zodiac, when the twelve signs of the Chinese zodiac come full circle. The 60th anniversary is regarded as a kind of rebirth in our

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country, and we have a tradition of wearing red kimono and celebrating our return to "*Akago* (meaning *Aka* is red and *go* is a baby)", namely baby hood. The year 1960, when the Japanese-French Oceanographic Society was founded in Japan and the year 2020, when the Society celebrates its 60th anniversary, fall on Kano-ne in the twelve signs of the Chinese zodiac, and are said to be good years to start something new. I don't know whether those involved in the establishment of the Japanese-French Oceanographic Society were aware of this or not, but it was established in a very good year and has become a long-lasting initiative. Congratulations once again.

2. Self-introduction of the author

I have been in this role as Co-Chair of the Japanese side of the Japanese-French Ocean Development Sub-Committee since July last year. To give a brief background of myself, I have long been involved in forestry and forestry administration and overseas forestry cooperation at the Forestry Agency of the Ministry of Agriculture, Forestry and Fisheries. Prior to this position at the Ministry of Education, Culture, Sports, Science and Technology, I was dispatched to the National Directorate of Forest in the African country of Mozambique as an expert for the Japan International Cooperation Agency (JICA), where I advised on forest management and the reduction of global warming gas emissions by preventing deforestation and forest degradation. Do you know what the official language is in Mozambique? Most African countries are either English or French speaking, but Portuguese is the official language of Mozambique, which is rare amongst African countries. Unfortunately, I do not yet speak French, but I feel familiar with it because it is of the same Latin origin as Portuguese.

3. Creation of the Japanese-French Ocean Development Sub-Committee and its backgrounds

The Japanese-French Ocean Development Sub-Committee, which I co-chair on the Japanese side, is based on the Agreement on Scientific and Technological Cooperation between France and Japan signed on 2 July 1974 (Fig. 1). Under this agreement, a Japanese-French Joint Committee on Cooperation in Science and Technology was established, under which provisions for a sub-committee consisting of experts were made. The first meeting of the Japan-France Joint Committee on Cooperation in Science and Technology was held in the same month as the signing of the agreement on 2 July, during which the French side immediately expressed its specific interest in the ocean sector and agreed to set up a Japanese-French Ocean Development Sub-Committee under the Agreement to promote cooperation.

One of the reasons why the Japan-France Joint Committee on Cooperation in Science and Technology agreed to promote cooperation in ocean development soon after the signing of the agreement was, as already mentioned in the presentation by Hubert-Jean Ceccaldi, Honorary President of the Japanese-French Oceanographic Society of France and Teruhisa Komatsu, President of the Japanese-French Oceanographic Society of Japan, that in 1958 the Bathyscaphe FNRS Ⅲ was sent to Japan, which led to the proposal and establishment of the Japanese-French Oceanographic Society in the following year, 1960 (Komatsu and Ceccaldi, 2023). This was undoubtedly one of the reasons for the proposal and establishment of the Japanese-French Oceanographic Society in 1960. The launch of the Intergovernmental Oceanographic Commission under UNESCO in the same year is another indication of the growing interest in

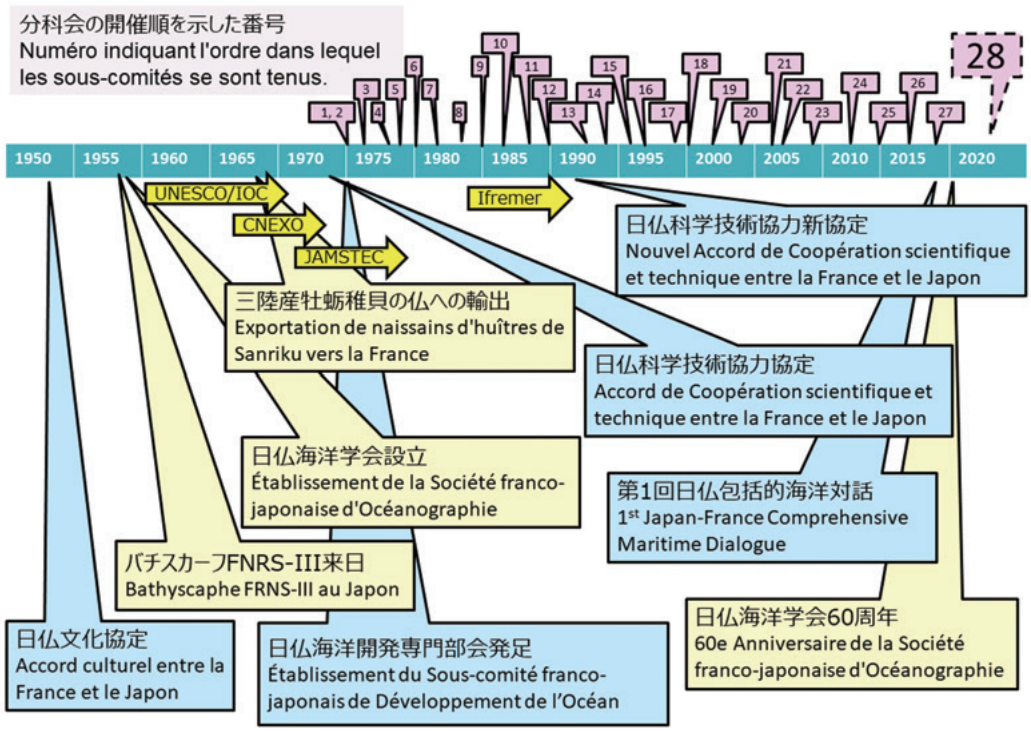

Fig. 1 Diagram showing the history of scientific and technological exchanges on oceanography and fisheries science between Japan and France. At the top of the diagram, the numbers (on a light red background) indicate the order in which the sub-committees were held, with a band of dates below them. Below that, at the base of the horizontal arrows (yellow background), the founding years of UNESCO-Intergovernmental Oceanographic Commission, CNEXO, Ifremer and JAMSTEC are indicated. At the bottom of the diagram, events related to the Japanese-French Oceanographic Society (light yellow background) and events between the French and Japanese governments (blue background) are shown.

oceanography worldwide (Fig. 1).

There was a scientific comic book I read when I was a child called The Secrets of the Sea (Fig. 2). It was published in 1974 under the supervision of Professor Noriyuki Nasu of the University of Tokyo, and in it there were descriptions of the Bathyscaphe FNRS Ⅲ, the Bathyscaphe Archimedes, the Japanese Kuroshio, as well as the Precontinent Project and the Japanese SEATOPIA Project, an experiment in undersea living, which were very exciting to me. When I took up this position in July last year, more than 40 years after my contact with the Japanese-French Ocean Development Sub-Committee, I was again struck by a quiet excitement as the word 'Bathyscaphe' brought back memories I had forgotten.

Furthermore, as presented by Professor Yasuyuki Koike of the Japanese-French Oceanographic Society, there was already a cooperative relationship in the marine sector, with oyster spats from Sanriku being exported in 1969 in response to the mass mortality of oysters in France (Koike and Komatsu, 2023).

Fig. 2 The cover of a scientific comic book, The Secret of the Sea, which the author read as a child and which was published in 1974 under the supervision of Professor Noriyuki Nasu of the University of Tokyo. The book contained descriptions of the manned submersible for deep-sea scientific research, FNRS Ⅲ, Archimèdes, and Japan's Kuroshio, as well as the undersea living experiments, the Precontinent Project and the Japanese SEATOPIA Project.

Conversely, when oyster farming in Sanriku was severely damaged by the Great East Japan Earthquake of 2011, members of the Japanese-French Oceanographic Societies extended a helping hand more than 50 years later. We understand that the Japanese-French Oceanographic Societies have been instrumental in providing support. This support has greatly aided the recovery of production in Sanriku oyster farming, both materially and morally.

In addition, it should be noted that in both countries, the momentum to promote the development of marine technology was at an all-time high, with the establishment of the Centre *National pour l'Exploitation des Océans* (CNEXO) in France in January 1967, the predecessor to Ifremer, and Japan Marine Science and Technology Center (JAMSTEC) in Japan in October 1971.

JAMSTEC, established in 1971, celebrated its 50th anniversary last 1 October and a commemorative stamp was issued (Fig. 3). The Shinkai 2000, depicted in a cute illustration, is a manned submersible for deep-sea scientific research using the bathyscaphe principle and was completed in 1981; in 2017 it was recognised as Japan's Mechanical Engineering Heritage No. 87.

4. Subsequent activities of the sub-committee after its creation

4.1 1970s

In July 1974, the French side expressed interest in (1) krill harvesting and utilisation, (2) fish pathology and (3) manganese nodules at the Japan-France Joint Committee on Cooperation in Science and Technology, and at the first French-Japanese Ocean Development Sub-Committee in April 1975 (Fig. 1) the Japanese side expressed interest in three issues: (1) diving technology, (2) coastal development and marine structures and (3) marine observation equipment. This is when the French-Japanese Ocean Development Sub-Committee began.

Only six months later, in October of the same year, at the second meeting of the French-Japanese Ocean Development Sub-Committee, in addition to the exchange of information on the six agreed areas, discussions were also held on bluefin tuna farming and marine energy in both France and Japan (Fig. 1). However, in order to

avoid a double track with the Energy Sub-Committee, it was decided that marine energy would not be dealt with directly by the French-Japanese Ocean Development Sub-Committee. From this session, a proposal was made to use the Bathyscaphe Archimède jointly for research in the seas around Japan, but the Japanese side was relatively cautious. (Presumably there were problems with cost sharing etc.)

Eight months later, at the third meeting of the French-Japanese Ocean Development Sub-Committee in June 1976 (Fig. 1), concrete discussions began to take place not only on information but also on the exchange of personnel, including offers of boarding research vessels. On the other hand, the limits of what could be done between governments also became apparent, as it was discussed that there were restrictions on the exchange of information on commercially protected intellectual property rights on a private basis with regard to the mutual dispatch of researchers on diving technology.

After three intensive meetings in the first year since its start, the next fourth meeting of the French-Japanese Ocean Development Sub-Committee was held in March 1978 (Fig. 1), one year and nine months later, at the Technical Centre for Marine Development in Brittany. Co-operation on diving technology was confirmed and mutual exchange of information was actively pursued. On the other hand, the French side expressed a decline in interest in krill, in which France had initially shown interest.

The fifth meeting was held a year and a half later, in November 1979 (Fig. 1). In order to reduce dependence on oil and to focus on the development of alternative energy sources, marine energy was also dealt with in this French-Japanese Ocean Development Sub-Committee. At this meeting, it was agreed to consider feasibility conditions for joint research in the Japan Trench using the deep-sea submersible SM97, leading to the KAIKO project, which was to

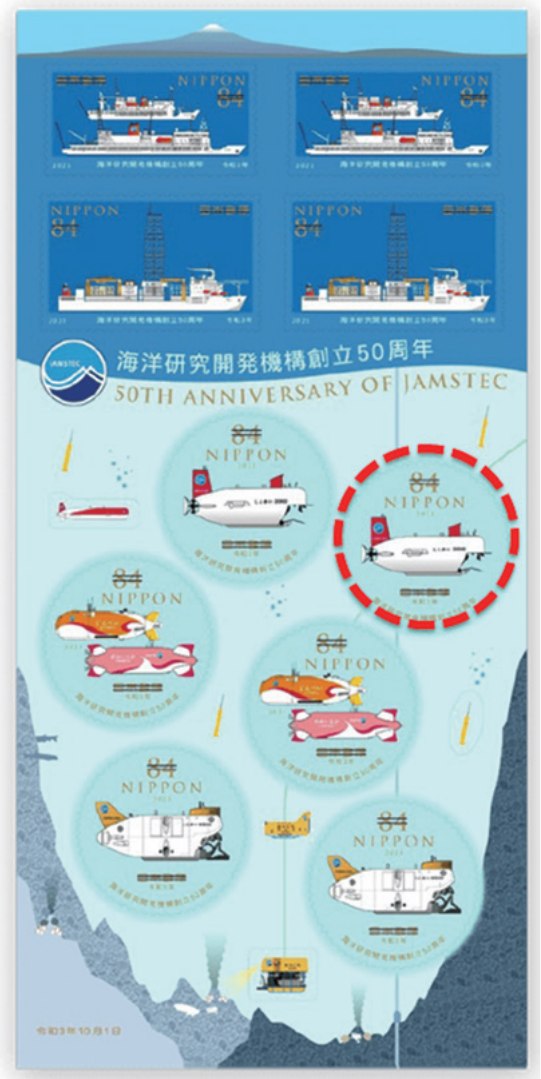

Fig. 3 Commemorative stamp for the 50th anniversary of the establishment of JAMSTEC, which was founded in 1971. The Shinkai 2000, depicted in a cute illustration, is a manned submersible for deep-sea scientific research using the bathyscaphe principle, completed in 1981 and registered as Japan's Mechanical Engineering Heritage No. 87 in 2017.

continue for a long time, changing phases.

The sixth meeting followed a year later, in November 1980 (Fig. 1). Steady co-operation was confirmed in each theme, and the initiation of data exchange between the Japan Coast Guard Hydrographic Department's Marine Data Centre (JODC) in Japan and the French BNDO (National Marine Data Office) was raised.

4.2 1980s

A year and a half later, in June-July 1982, the 7th meeting was held (Fig. 1). By then, significant progress had been made in cooperation in the field of deep-sea diving, including the completion of JAMSTEC's submersible Shinkai 2000 and the participation of French researchers in the diving simulation experiment Sea Dragon IV. The report of the Study Working Group on the Japan Trench Joint Survey was submitted, and it was decided to seek direction from the Japan-France Joint Committee on Cooperation in Science and Technology. A manganese nodule workshop was also held immediately before the 7th meeting and was successfully completed. It was agreed that future cooperation should be pursued in the areas of manganese nodules and deep-sea hydrothermal polymetallic sulphides, and the exchange of information on both the geology of the Southwest Pacific and deep-sea seabed mineral resources. It was proposed by the French side and agreed by the Japan side that the subject, which has been treated as 'manganese nodules' since the first meeting, be treated as 'deep-sea geology and mineral resources' in a developmental manner from the 8th meeting.

At that time, the Japanese side reported that the krill samples provided by France had a good taste and colour and were suitable for food, and it can be seen that Japan continued to be interested in krill as food, although the French side expressed a decline in interest.

The 8th meeting was held in February/March 1984 (Fig. 1), and was preceded by a visit to Japan in November 1983 by delegations from the French Institute of Fisheries Sciences (*Institut scientifique et technique des pêches maritimes:* ISTPM) and the French National Centre for Ocean Development (*Centre National pour l'Exploitation des Océans:* CNEXO), including proposals of interest presented at that time. The Japan Trench joint research programme introduced by the Japan-France Joint Committee on Cooperation in Science and Technology is now being promoted under the alphabetical name 'KAIKO Project'. Despite the remarkable start of the joint project, it was agreed that red tides, which were showing signs of recurrence in the French coastal regions, would be taken up as a theme, and that krill, which the French had already lost interest in, would be dropped from the theme. On the other hand, it was agreed on the possibility of initiating cooperation in the technical committee on shellfish, particularly oyster aquaculture. It was reported that CNEXO had sent three egineers to JAMSTEC for three months to participate in research on the Shinkai 2000 and Natsushima, confirming the significant progress made in cooperation on deep-sea diving. This 1984 was also the year that CNEXO, the organisation that chaired the French side of the French-Japanese Ocean Development Sub-Committee, was reorganised into Ifremer.

The 9th meeting was held a year and a half later, in September 1985 (Fig. 1). The symposium was preceded by a two-day symposium on French-Japanese Ocean Development, which was a great opportunity for researchers to interact with each other. At this meeting, it was agreed that oceanographic instruments, which had been the theme of the first meeting, would no longer be the subject of the French-Japanese Ocean Development Sub-Committee.

The French-Japanese Ocean Development Sub-Committee has since then been holding stable meetings in alternating cycles of 18 months to two years in Japan and France. The main areas of cooperation have been the KAIKO project for joint research in the Japan Trench, which has been continuously addressed in different phases, such as KAIKO-TOKAI, KAIKO-SFJ and KAIKO-NANTRO, the joint research programme on lift systems (STARMER programme) and marine biotechnology, along with other traditional topics.

4.3 From 1990s to now

On 5 June 1991, a new French-Japanese Agreement on Scientific and Technological Cooperation was signed, which is the basis for the establishment of this sub-committee (Fig. 1). The Science and Technology Agency, which initially co-chaired the Japanese side, was reorganised into the Ministry of Education, Culture, Sports, Science and Technology in 2001 during a major reorganisation of Japanese ministries, and in 2004 the Japan Marine Science and Technology Centre became the Japan Agency for Marine-Earth Science and Technology. While undergoing such major changes, the French-Japanese Ocean Development Sub-Committee had met a total of 27 times by May 2018 (Fig. 1).

In recent years, the conference of the sub-committee has been expanding with reports on continuing, new and completed projects under the main themes of marine research, marine technology and research infrastructure, marine resources, marine biotechnology, deep-sea ecosystems, coastal ecosystems and social ecosystems. It would be difficult to report in detail on the evolution of these projects in an oral report. This is testimony to the strong will of both countries to cooperate in development, which we hope to be able to document later when the results of this symposium are compiled in the journal of the Japanese-French Oceanographic Society *La mer*.

This is an unprecedented interval of more than three years. However, the UN Decade of Ocean Science for Sustainable Development (2021–2030) will be launched this year in 2021, raising expectations and interest in ocean science worldwide. In May this year, Iceland and Japan co-hosted the 3rd Arctic Science Ministers' Meeting (ASM3) in Tokyo, where Japan reported that it had started construction of a new Arctic research vessel with icebreaking capabilities this year, and expressed its intention to use it as an international platform. Russia and France, the next chairs of the Arctic Council, offered to co-host the 4th Arctic Science Ministers' Meeting, and the handover from the ASM3 co-chairs to the ASM4 co-chairs took place at the Arctic Council General Assembly held in Reykjavik last week. The passing of the baton from Japan to France as non-Arctic co-chair may also be due to the marine science ties between the two countries.

5. For future cooperation between France and Japan for Ocean Devlopment

Thus, the French-Japanese Ocean Development Sub-Committee, which started 15 years after the establishment of the French-Japanese Oceanographic Society in 1960, is progressing well, and new seeds of cooperation are beginning to emerge. Although it is difficult for researchers to come and go between the two countries at this time of the world, we take this milestone as a positive opportunity to look back on the past and take the next big step forward to promote long-lasting cooperation between French and Japanese marine science, and as Japanese co-chair of the French-Japanese Ocean Development Sub-Committee, I would like to

help in any way I can. I would like to be of assistance in this regard.

I would like to conclude my presentation by wishing you a successful series of symposia and wishing you all good health and happiness.

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