

M E M O R A N D U M

In response to the Peruvian Government invitation and in the framework of the Cooperation Agreement between the State Oceanic Administration of the People's Republic of China (SOA) and the Comisión Permanente del Pacífico Sur (CPPS), a delegation headed by the SOA Director General, Mr. Yan Hongmo, visited Perú from the 11th to the 14th of November 1988 in the course of its trip to the four member countries of the CPPS.

During the programmed visit, the SOA delegation held a fruitful exchange of points of view with the Sección Nacional Peruana de la CPPS, headed by Ambassador Jorge Chávez Soto, in the Foreign Affairs Ministry, as well as during the working meetings in the Instituto Tecnológico Pesquero (ITP), the Instituto del Mar (IMARPE), the Dirección General de Hidrografía y Navegación de la Marina de Guerra and with the Vice-Minister of Fishery of Peru.

On this occasion, the Chinese delegation presented a draft letter of intention concerning the program of cooperation between the SOA and the CPPS (annex 1) and the Sección Nacional Peruana presented another document that contained the projects on the multilateral and bilateral levels which are of the major interest to its country (annex 2). The two documents indicated, in principle, objectives, participating institutions and modalities of cooperations on a reciprocal basis.

After the deliberations held, the delegations were basically in agreement with the cooperative themes in marine science and technology commonly proposed in the refered documents which concern "El Niño" phenomenon; marine joint cruises; culture of marine species especially prawns and shrimps, artemia salina and microalgae; pollution research and preservation of coastal ecosystems; and, improvement of prediction of tides in the Pacific Ocean.

Likewise, the parties were in the agreement with procedures in initiation of cooperation between the responsible institutions of both countries mentioned in the two documents attached. Its implementation should start upon mutual consultations at the first stage by the respective relevant authorities and should proceed through direct consultations between the participating institutions regarding the detailed implementation plan and terms governing the cooperative projects, in the subsequent stages.

The cooperation projects shall be carried out in accordance with the Agreement between CPPS and SOA.

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Regarding the projects presented by the Ministry of Fishery on industrialization of marine algae and to develop its culture and by ITP on possibilities of cooperation concerning the process and quality control of nutritious products derivative of the medusa (jellyfish), shark fin, algae, small pelagic species (anchovies) and others, as well as this institute's offer to provide information on the technology for processing and quality control of products, the SOA delegation reported that it would transmit these ideas for cooperation to the relevant institutions in China with a view to enlarging cooperation in the field of nutrition and in others concerned to which the same procedure as indicated in previous paragraphs should be applied.

The President of the Sección Nacional Peruana de la CPPS in the name of the institutions represented in it, expressed its satisfaction on the positive attitudes of the SOA delegation and on the results obtained in this visit, which he believed will be implemented in the near future.

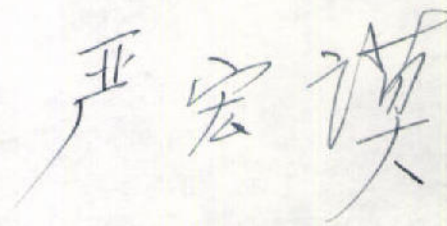
On their part, the Chinese delegation expressed its satisfaction on this Memorandum and thanked the Government of Peru and the host institutions for the invitation and warm reception given during the visit.

Lima, november 12 1988.



JORGE CHAVEZ SOTO
AMBASSADOR
PRESIDENTE DE LA SECCION
NACIONAL PERUANA DE LA CPPS

YAN HONGMO
DIRECTOR GENERAL OF THE
STATE OCEANIC ADMINISTRATION
OF THE PEOPLE'S REPUBLIC OF
CHINA



LETTER OF INTENTION FROM STATE OCEANIC ADMINISTRATION
OF THE PEOPLE'S REPUBLIC OF CHINA ON THE PROGRAMME OF
COOPERATION WITH COMISION PERMANENTE DE PACIFICO SUR
(DRAFT)

In accordance with the Agreement of Cooperation Between the State Oceanic Administration(SOA) and Comision Permanente de Pacifico Sur(CPPS) signed in Beijing, September 1987(hereinafter referred to as the Agreement), SOA has the intention to consult with CPPS with regard to the following proposed cooperative programme and modality of implementation.

I. PROPOSED PROGRAMME AREAS OF COOPERATION

Both sides may cooperate in the following areas:

- A. Protection, Conservation and Utilization of Ocean Resources;
- B. Development and Management of Fisheries;
- C. Marine Environment Protection;
- D. Marine Scientific Survey and Research;
- E. Development and Transfer of Marine Technology;
- F. Training of Scientific and Technological Personnel;
- G. Ocean Minerals Research;
- H. Marine Policy Research and Ocean Use Planning;
- I. Activities in the Pacific Region.

II. PROPOSED COOPERATIVE PROJECTS

Based on the needs, requirements and the capabilities in the development of both sides, following cooperative projects may be formulated for implementation within next 5 or 6 years.

A. EL Nino Research

— Objective: 1, to understand the triggering mechanisms of EL Nino and possibility of its prediction; 2, to study the impact of EL Nino events on the global climate changes; 3, to conduct Numerical Experiments in the study of EL Nino events.

—Participating Institutions;

Chinese side: National Marine Environmental Forecasting Center,
etc.

CPPS side:

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— Modality: 1. Exchange relevant hydrometeorological data and information, particularly with regard to next EL Nino events; 2. exchange scientists to participate in scientific cruises on board research vessels of the other side. In this aspect, the Chinese side wishes to invite 4 scientists from CPPS member states on board Chinese research vessel conducting air sea interaction study in the Equatorial Pacific for 40 days in 1989. 3. Exchange scientists to participate in the EL Nino research work for joint study and data processing.

B. Exploring the Possibility of Joint Cruises in Marine Science in South-Eastern Pacific or Southern Ocean

—Objective: 1. to improve the understanding of the role of ocean in climatic changes; 2. to improve the understanding of coastal, nearshore and offshore ecosystems in order to provide scientific basis for sea use planning and ocean management; 3. to exchange experience in ocean science survey and monitoring

—Participating Institutions:

Chinese side: Institutes of Oceanography, local branches of SOA, etc.

CPPS side:

—Modality: 1. to exchange scientists to participate in the field expedition of process-orientated study of the ocean. Both sides should explore the possibility of providing shiptime for this purpose. 2. to organize an experts consultation by meetings or correspondence to formulate a project proposal and a preliminary implementation plan; to finalize the implementation plan and set up a joint steering group and some other mechanisms to organize the execution, inter alia, field activities, data processing and explanation, and scientific symposium or workshop to summarize the results and experience obtained.

C. The Study of Breeding and High Production Technique in Large Scale of White Shrimps (*Penaeus Vannamii*)

Objective: 1. to exchange experience in techniques of shrimps production, including those concerning shrimp disease prevention and culture of artificial feeds; 2. to study the possibility of cross-breeding of white shrimp and Chinese shrimp species.

—Participating Institutions:

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Chinese side: The First Institute of Oceanography, SOA, etc.

CPPS side: Institutions in Columbia and Ecuador

—Modality: 1. to exchange two scientists from each side to participate in the work of the other for 3 months; 2. to define any further work needed, based on the results obtained.

D. High Production Technique of Artemia Salina Culture in Large scale in Coastal Salterns

—Objective: 1. to study the selection and reproduction of species and environmental parameters affecting these processes; 2. to exchange experience in the management of culture; 3. to further develop the high production technique.

—Participating Institutions:

Chinese side: The Third Institute of Oceanography, SOA, etc.

CPPS side: Institutions in Peru

—Modality: same as in ITEM C

E. Techniques on Microalgae Culture

—Objectives: Exchange experience on the development of technique on microalgae culture for mariculture purpose.

—Participating Institutions:

Chinese side: The First Institute of Oceanography, SOA, etc.

CPPS side: Arturo Prat University in Chile

—Modality: The Chilean side invited 2 Chinese scientists to collaborate for one to two years. The project is being initiated for implementation.

F. Workshop on Coastal Ecosystem, Resources Development And Protection

—Objectives: to exchange research results and experience on the following themes: 1. Coastal hydrodynamics and geomorphological evolution; 2. river input to the ocean and its impact on the coastal environment; 3. Pollution research, monitoring and combat in the coastal areas; 4. Preservation of coastal ecosystem (mangroves, coral reefs, etc.); 5. The development strategy in the coastal areas; 6. Scientific management and legislation in the coastal areas.

Participating Institutions:

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Chinese side: Coastal Zone Management Office of SOA; Institute of Ocean Development Strategy, etc.

CPPS side:

—Modality: to be decided

G. Small-Scale Exhibition and Seminar on Marine Technology as applied to Ocean Research

—Objective: to encourage academic exchange of the techniques for oceanographic measurements and observation, including data buoy and subsurface mooring system, water quality analysis, oceanic telemetering and aerial remote sensing, sea ice measuring etc., to promote interaction between scientific communities and industrial communities in ocean field, and to facilitate transfer of marine technology.

—Participating Institutions:

Chinese side: Institute of Ocean Technology, SOA, some marine technology enterprises, etc.

CPPS side:

—Modality: to be decided

H. Marine Data Processing and Exchange

—Objective: to share data resources of each data center or data agent and exchange experience and technology in data processing.

Participating Institutions:

Chinese side: National Oceanographic Data Center of China, etc.

CPPS side:

—Modality: to be decided

I. Tides and Tidal Current Prediction

—Objective: to improve prediction of tides and tidal current for the Pacific Ocean.

—Participating Institutions:

Chinese side: National Oceanographic Data Center.

CPPS side:

—Modality: Exchange of relevant information and tides and tidal current tables; The National Oceanographic Data Center is able to

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conduct training programme in techniques on tidal and sea level measurement and associated data processing.

III. PRINCIPLES GOVERNING THE EXECUTION OF COOPERATIVE PROJECTS

In accordance with general principles and practice in intergovernmental bilateral cooperation, following principles may be applied in the implementation of the Agreement:

1. The expenses of cooperative projects shall be shared by participating institution of both sides;
2. In the exchange of personnel, the sending side bears the international travel expenses and the receiving side bears the local expenses;
3. The results obtained from the cooperative projects, including data and information, shall be shared and jointly published by the participating institutions of both sides;
4. In samples obtained from the cooperative projects, the divisible ones shall be shared equally by institutions of both sides and the non-divisible ones shall be stored in the country of their origin for common use of participating institutions of both sides

IV. REGULAR MEETING SCHEME

In accordance with relevant provisions of the Agreement, the joint meeting may be held once every two years with participation of Designated Representatives of both sides, to be hosted on rotational basis by each participating country, in order to review and up-date cooperation programmes and projects and exchange experience and results of cooperative programmes.

PERUVIAN PROPOSAL

	Title of the Projects	OBJECTIVE	Institutions	METHOD	OFFER	REQUEST
1	Research over the "Niño"	Study the climate changes and their effects on the hydrobiological benefice communities so as to amake a practical appli-cation of the profits and damage reduction.	(ENFEN/PERU) - IMARPE - DHNM - IGP - ONERN - SENAMHI - INP	a) Exchange of oceanogra- phic meteorological, biological and socioeco- nomical information. b) Participation in cruise c) Scientists exchange for data processing	Embarkment of one scientist during 30 days Apprenticeship during 30 days to one chinese scientist.	Embarkment of peru- vian scientist during 30 days. Apprenticeship during 30 days for a peruvian scientist.
2	Participation in joint exploring activities (marine environment and resources).	Study methodology orient- ed towards polving the interrelations between resources, ito evaluation in relation to the marine environment variability so that it be possible to identify practical appli- cations for the best mana- ging and exploitation of the resources.	- IMARPE - DHNM - IGP - SENAMHI - INP	a) Scientist exchange in studies of the ocean, oriented towards the fishing resources. b) Consultations among specialists on given aspects	Apprenticeship 2 chinpese\$ scientists (Oceanographer and biologist) during 30 days each one Exchanges of informa- tion and results (to define)	Apprenticeship 2 peruvian scientists (Oceanographer and biologist) during 30 days each one Exchanges of informa- tion and products (to define)
3	Aquaculture	Technical bases to the development of the aqua- culture, specially on white shrimp, artemia salina and microalgae (productions techniques of shrimps and balanced food	- MIFE - IMARPE - EMP.PRIVADA - UNIV. (Agraria, Tumbes y Trujillo)	- Scientists exchange	Apprenticeship during 60 days for one chinese researcher.	Apprenticeship during 60 days for a peruvian researcher.




4	<p>Coastal Ecosystem Protection</p> <p>Objetives: Study the marine pollution and protect the marine environment.</p>	<p>Develop techniques for monitoring of pollution levels and evaluate the pollution impact on the marine environment. (specially in the coast)</p> <p>Develop techniques to protect the marine environment and to fight against the coastal water pollution.</p>	<ul style="list-style-type: none"> - IMARPE - DHNM - DICAPI - UNFV - UNMSM - ONERN - M.SALUD 	<p>Exchange of scientists and Techniques for control and fight against the coastal pollution.</p> <p>Organizations of workshops to exchange the results of pollution studies.</p>	<p>Request Training of a on peruvian scientist on chemical analysis Techniques specially about hydrocarbons and metal residuals for a 30 days period.</p> <p>Apprenticeship for a chinese to participate on projects of pollution in Perú during 30 days.</p>	
5	<p>Fishing Product Transformation</p> <p>5A Investigation, Technological development for processing, control of fishing products quality: medusa (Jellyfish) shark fin, algae, small pelagic species (anchovy), fresh residuals.</p>	<p>Investigation and development of marine species not developed at the national and international marker.</p> <p>Increase the nutritional level of the populations using hydrobiological species of low comercial value.</p> <p>Elaborate finished products givin more aggregate value to the raw material.</p>	ITP	<p>Advise on processing and quality control for products based on algae,shark fin and medusa (jellyfish)</p> <p>Training at investigation centers and institutes</p> <p>Donations</p>		<p>One expert for 12 months.</p> <p>36 months.</p> <p>Equipment and material for the projects development chemical reagent products</p>

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5B	<p>Investigation, Technological development for processing and quality control of the fish hamburger, canned food in tin and aluminium containers</p> <p>TIDAL Forecast</p>	<p>Advise on the investigation, development and quality control of fish hamburger and pelagic products.</p> <p>Advise on the development of masive species canned food so that new presentations for the national and international market can be found.</p> <p>Improve the tidal forcast techniques for the Pacific Ocean</p>	<p>ITP</p> <p>Hydrography and Navigation Office</p>	<p>Exchange of information</p> <p>Advising</p> <p>Training</p> <p>Make comparative studies of tidal forecast employing different techniques for a given region of the Pacific Ocean.</p>	<p>Scholarships</p> <p>Apprenticeship.</p> <p>Exchange of techniques employed on the tidal forecast and its results.</p>	
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