A short history of the Skipjack Survey and Assessment Programme (SSAP) [Part 2]

Paul Judd[1]

Preamble

This is the second part of an article related to the Pacific Community's (SPC) Skipjack Survey and Assessment Programme (SSAP) [2]*, which ran from September 1977 to September 1981 and led to the establishment of one the most well-known and highly regarded programmes of SPC: the Oceanic Fisheries Programme.*

Obtaining the funding

From the very beginning of his formal search for funding Dr Kearney was, as detailed in Part 1 of this article, required to approach potential donors and ensure that that they had a clear understanding that the project would be totally separate from SPC's core budget. He would, therefore, have to demonstrate that this project was fundamentally different from the other SPC-proposed extra-budgetary projects, for which these potential donors continued to deny support.

In the early months of his fund-raising efforts Dr Kearney travelled to New York for meetings with Bill Ripley of the United Nations Development Programme (UNDP) (10 and 11 November 1975) and Dr John Pinot, Executive Officer of the Rockefeller Foundation together with the Foundation's Program Committee (14 November). The purpose of this latter meeting was to specifically seek a possible extension of the Rockefeller Foundation's initial seed-funding for the Skipjack Project; it was already clearly apparent that six months was not going to be adequate to raise the more than a million dollars a year that was necessary to fund the Skipjack Programme.

Following Dr Kearney's presentation to that meeting with the Rockefeller Foundation, Dr Pinot informed him that there remained a very high risk that he would not be able to raise the money necessary for the initiation of the full project. However, the Foundation remained extremely supportive of the concept and they regarded risk as something that needed to be managed, not avoided. To Dr Kearney's delight they agreed to extra funding, but on the condition that he accept and adhere to some advice.

As best Dr Kearney can remember 40+ years later, Dr Pinot stated:

> Raising money involves more than just having a good idea; you must convince donors personally that it is in their interests to support you and that idea. It is almost impossible to do this over the telephone. If you think it is truly important to talk to an individual in a key position, do not telephone them, *get on a plane and go meet with them in person.* To back up this advice the travel budget of three thousand five hundred dollars that you've asked for is being increased to fifteen thousand dollars. Spend it wisely. We trust you to do so but don't skimp on travel for a project like this. You're trying to raise a lot of money from at least six different governments and other possible sources; you are going to have to go and see a large number of people who are influential, some almost certainly more than once. If you don't spend the entire travel budget you can always give the remainder back to us.

In keeping with this advice, and the associated generous travel budget, Dr Kearney spent eight months of the next year away from home: travelling around the world meeting with key representatives of potential donors, and supporters of the project who might influence donor decisions.

Dr Kearney personally conducted all of the negotiations with the potential donor governments, with no official help from the SPC hierarchy. This unusual situation, coupled with the extremely strong support from the Pacific

[1] Finance and Administration Officer (SPC's Oceanic Fisheries Programme)

[2] The first part of the article is available from: http://www.spc.int/DigitalLibrary/Doc/FAME/InfoBull/FishNews/150/FishNews150_61_Judd.pdf

Island nations for the project, and subsequently its obvious success, contributed significantly to the high degree of donor solidarity that was displayed – once the project was up and running – towards both the project and Dr Kearney himself as Programme Co-ordinator.

As the search for funding gained momentum, the likely donors agreed that in order to meet the requirement of independence from the SPC core budget that it was not just the budget that needed to be independent from the SPC; the expenditure and accounting processes for the project would best be established as an entity that was totally separate from the rest of SPC's accounts. They committed to the principle that the project would be set up with Dr Kearney as the sole signatory and single authority for committing expenditure. As history shows, the donors maintained their commitment to this principle for the whole of the SSAP, and subsequently the Tuna Billfish and Assessment Programme (TBAP). Both remained totally separate from SPC's accounts until the end of 1986.

The independence of this management arrangement also made it easier for Japan to contribute as an equal. In addition, there was considerable support among both the potential donors and the Pacific Island nations for maintaining independence for the project, in the event that it would be beneficial to move it to a 'Regional Fisheries Organisation'; the creation of which was beginning to be formally discussed at the time under the umbrella of the Law of The Sea[3] negotiations.

It took almost a year to convince all of the likely donor governments that the scientific design of the project was indeed sound, and that the technical and logistical difficulties of working across a huge area of ocean and in many relatively remote areas for extended periods could be overcome. But once this was achieved Dr Kearney was given many indications that none of the six countries he was targeting – Australia, France, Japan, New Zealand, the United Kingdom and the United States of America, listed in alphabetical order – wanted to be left out if the project actually became a reality. But, in the absence of certainty that the others would commit, none was keen to 'stick their neck out'. Getting the first one to actually sign up was always going to be critical and difficult. According to Dr Kearney, New Zealand was the most enthusiastic of the potential donors. The NZ Director of Fisheries, Duncan Waugh, was particularly unwavering in stressing the urgency of the project; and he had strong support from within the NZ Ministry of Foreign Affairs. At that time the New Zealanders were the most aware of the tremendous, relative potential of tuna fisheries to the region, and the pivotal role fisheries would play in regional cooperation. The openness of New Zealand's enthusiasm was critically influential in maintaining momentum for achieving the necessary commitments. The Japanese were also openly keen to be involved in any major fisheries initiative in the region; they were after all the major fishing nation and furthermore, they knew changes to fishing rights and the associated political influence were coming, as major changes to the Law of the Sea were looming.

France was also very keen to have the project take form, and badly wanted it to do so within the SPC, but for very different reasons.

To quote Dr Kearney:

> The French of course at this stage were extremely supportive for political reasons, including that SPC was based in a French Territory and it was losing support; it quite clearly needed new impetus. Furthermore, as a result of opposition to French nuclear testing at Mururoa Atoll there was growing support from other Island States, even those who supported the SPC concept, to move the headquarters to a non-French country or territory. These tensions were important at the time for while they facilitated obtaining French support for the Programme they made it even more difficult to get other donors enthusiastic to fund a major new initiative based at the SPC in New Caledonia.

Alternative sponsor organisations and/or locations for the Programme were frequently raised, but Dr Kearney remained firm in his commitment to SPC. His defence relied heavily on the scientific benefit to the research of highly migratory tuna species and the provision of a full coverage of the research area afforded by the all-inclusive membership of SPC.

Sometime in late 1976 the seed-funding from International Center for Living Aquatic Resources Management (ICLARM) and the Rockefeller Foundation expired. Dr Kearney was forced to concentrate on finding funding to pay his own salary at SPC in order to be able to continue the quest for full funding for the project. SPC still could not help. He was able to obtain small amounts from various sources for extensions of his contract that were on several occasions as short as one week: clearly the lack of job security was less than comforting. He found raising small amounts of money to keep himself employed so that he could raise large amounts rather

[3] The United Nations Convention on the Law of the Sea (UNCLOS) is the international agreement that resulted from the third United Nations Conference on the Law of the Sea (UNCLOS III), which took place between 1973 and 1982. The Law of the Sea Convention defines the rights and responsibilities of nations with respect to their use of the world's oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources (source: Wikipedia).

irksome, and even harmful to the bigger cause. As he stated 'it is one thing to approach donors to fund a major project that will benefit all Pacific Island states and benefit science generally; it is another to ask them to give you money to put in your own pocket'.

In May 1977 New Zealand confirmed its leadership by being the first donor to actually sign a commitment to funding for the project. Within three weeks the catalytic nature of this action was endorsed when four of the other five donors also signed. The remaining one gave an extremely strong verbal re-affirmation that it would not be left out, but apologised because final approval would still take a few weeks. Work could finally commence on the project. By 1 June 1977 a revised, detailed budget, together with a timetable for implementation of the Programme, had been prepared. Duty statements were being finalised, and indicative quotes had been obtained for a suitable vessel to charter for the tagging cruises.

New Zealand's Prime Minister (from 1975 to 1984), Robert Muldoon, being presented with an SPC-SSAP t-shirt by SPC's Secretary-General (from 1979 to 1982), Young Vivian (image: SPC archives).

The commencement of research activities

The Japanese Fisheries Agency proposed the charter of the *Hatsutori Maru* No 1; a commercial vessel of 192 GRT owned by Hokuku Marine Products Co. Ltd that had proven its appropriateness for working in the survey area (it had spent two years in Papua New Guinea, and was working in Fiji at the time). It was a relatively old vessel, but as a purpose-built pole and line boat it was more than adequate for the task. Plus, its choice greatly reduced the tension for Dr Kearney in relation to vessel selection, insurance and management (the dominant item in the Programme's budget), as it came with the expressed endorsement of one of the donor governments, Japan. Dr Kearney went to Fiji in mid-June 1977 to inspect it, and then to Japan for a week to negotiate the charter agreement, on his own, with the owners. The terms and conditions were agreed on during that week in Japan and the final agreement was signed at SPC on 23 August 1977, and then by Hokuku Marine Products Co. Ltd on 1 September 1977.

However, work still remained to outfit the boat to meet the requirements of the project. In August 1977 three people joined the project as staff members: Carol Moulin was assigned as secretary to the project by SPC, with her salary paid from the SPC regular budget; Tony Lewis was appointed for three months, and Robert (Bob) Gillett was the first 'permanent' staff member hired by the project from its own budget. No sooner had Tony Lewis joined the Programme than he departed for Japan (on 30 August) to organise the purchase of the majority of the necessary scientific and research equipment prior to the vessel's departure for Papua New Guinea (PNG), where the first tagging cruise would begin. He also provided critical oversight of the modifications to the vessel that had been negotiated in the charter agreement. These changes included modification of bait tanks and the scientists' cabin (a proxy for a laboratory), including extra room to extend the bunks (which needed to be long enough to accommodate scientists who were tall), and a myriad of other details that were anticipated, and quite a few that were not. This was all part of the vessel's conversion to a research platform, and its preparation for departure on a ten-month continuous period at sea.

Jean-Pierre (J-P) Hallier – who had been working in the New Hebrides (Vanuatu) – was hired in mid-September 1977. The initial tagging cruise for the Skipjack Programme – which included training for staff members; most of whom were new to tuna research, including tagging – took place in PNG waters. This cruise was under the direction of Dr Kearney. Tony Lewis also played a major role in helping to train other staff members and establishing the protocols, techniques and processes, largely transferred from the earlier PNG research project, that were the basis of what were subsequently confirmed to be very robust data capture procedures. Other SPC staff on-board this first cruise included both Bob Gillett and Jean-Pierre Hallier.

The *Hatsutori Maru* commenced fishing on 6 October 1977. In the first week, only 11 skipjack were tagged. It was a most inauspicious beginning, and totally unexpected, given that these were very well-known waters for both Dr Kearney and Tony Lewis, in which they had already tagged thousands of fish. Catch returns from PNG-based commercial tuna boats subsequently confirmed that this was an extremely poor month for skipjack

fishing throughout PNG, but this did little to ease the considerable apprehension at the time of the senior staff members, particularly Dr Kearney: the basic design of the Programme required successful tagging across a huge region comprising the individual waters of more than 20 countries or territories, most of which had had no previous skipjack or baitfish surveys. The limited information that was available strongly suggested that the skipjack and baitfish fishing in PNG would be better than most, if not all (a fundamental reason for PNG's selection as the site for the first cruise). If good quantities of skipjack could not be tagged in PNG then the chances in the more remote areas were not good: the whole Programme could be in serious trouble. However, by the time the boat left PNG waters some three weeks later a total of 918 fish had been tagged, and even more importantly, catch rates were increasing quickly. Optimism was returning.

During the months that followed, very successful survey and tagging operations took place in the Solomon Islands, Vanuatu (still called the New Hebrides at that time), New Caledonia, Fiji, Tonga, Wallis and Futuna, American Samoa and Western Samoa (now Samoa), Tuvalu, and Kiribati (still the Gilbert Islands at that time). In mid-July 1978 the boat moved west to what was still the 'Trust Territory of the Pacific Islands' – an area that now takes in Federated States of Micronesia (FSM), the Marshall Islands, Northern Marianas and Palau. Then on 15 August 1978 the *Hatsutori Maru* returned to Japan for a complete refit prior to the commencement of the second main charter period, which was less than two months later, in October.

During the first year of tagging operations the SPC staff members who were involved in helping with the tagging operations on board the boat expanded considerably, with Bob Gillett and Jean-Pierre Hallier functioning as alternating cruise leaders. They were assisted at various times by a considerable number of full-time and part-time scientific staff members, including Christopher Thomas, Lionel Haeffner, Richard Kinney, Desmond Whyman, Charlie Ellway, Jim Ianelli and Pierre Kleiber (the first Senior Fisheries Analyst for the project).

During the first ten months of the project a total of 50,291 fish had been tagged – half of the original goal for the whole three years of the Programme. Therefore, despite a slow beginning and less than ideal initial geographic distribution of tag releases the project was off to a very good start indeed.

During the second year of the project (October 1978 to August 1979) the SSAP staff members continued tagging operations in the following areas: the 'Trust Territory of the Pacific Islands', Kiribati, Tokelau, the Cook

The crew of the *Hatsutori Maru* No 1 – Cairns, Australia, May 1979 (image: Bob Gillett archives).

A tagging cruise on the *Hatsutori Maru* could involve days of hard work in perfect weather, as here in the Cook Islands, where the crew fished for live milkfish to be used as baitfish...

... and very rough days out in the open ocean (images: Charlie Ellway and Bob Gillett).

Islands, French Polynesia, New Zealand, eastern Australia, and Papua New Guinea. Additional staff members who assisted with the tagging operations during the second year included Alexander 'Sandy' Argue (hired as a second Senior Analyst), and Lewis (Sam) Bledsoe. While in NZ waters in February 1979 a TV crew from Television One in NZ joined the boat for a few days, to film an episode that was screened on 'Country Calendar'.

During the third year of the project (October 1979 to August 1980) the Programme staff members tagged in the following areas: The Trust Territory of the Pacific Islands

(now FSM, the Marshall Islands and Palau), Kiribati, the Cook Islands, French Polynesia, Pitcairn Islands, American Samoa, Western Samoa (now Samoa), Niue, Tonga, New Zealand, Norfolk Island, New Caledonia, Fiji, Wallis and Futuna, the Solomon Islands, Tuvalu, Kiribati and Nauru. While in the waters of French Polynesia two scientists from the Inter-American Tropical Tuna Commission (IATTC) joined the boat for nearly two months – Dr William (Bill) Bayliff and Terry Foreman. The Director of IATTC, Dr Jim Joseph, also spent six days on board in mid-January – accompanied by Dr Kearney. However, the same SPC scientists who had already proven their worth in years one and two continued to share the workload of the cruises in year three, assisted at various times by Fishery Officers from the many countries in whose waters the boat was fishing.

The last day of actual tagging took place on 20 August 1980, after which the *Hatsutori Maru* No 5 (which had replaced the slightly smaller *Hatsutori Maru* No 1 for the later cruises) headed north to Japan, having very successfully completed its mission. The total number of tuna tagged, which was 160,276, had exceeded the Programme's goals by more than fifty per cent. Every country and territory in the SPC region had been covered in the survey cruises. Even the most optimistic participants in, and observers of, the Programme were extremely pleased.

The long-awaited arrival of the computer in March 1979, under the supervision of Sam Bledsoe (in front on the right) (image: Sandy Argue).

SPC's first computer

Once tagging had begun the necessity to computerise the data being collected was quickly confirmed. During his time in PNG with the Department of Agriculture, Stock and Fisheries (DSAF) Dr Kearney has been provided with excellent service by the government computer centre. He assumed, therefore, that it would be perfectly feasible to use the New Caledonian government computer for the needs of the Skipjack Programme.

The IBM 370/125 Computer in question belonged to the local government's SMAI (Service des Méthodes Administratives et de l'Informatique – the Service for Administrative Methods and Computerisation), which, at the time, was situated behind the radio and TV station (RFO) at Mt Coffyn. While this computer was available, at a cost, it was known that the Skipjack Programme would need its own specialist programmes and programmer to facilitate the necessary analyses. Dr Kearney sought advice on who would be appropriate for this task from the same agencies he had successfully consulted in the formative days of the PNG tuna research programme, CSIRO and the IATTC. Dr Jim Joseph, the Director and Dr Bill Bayliff, a senior scientist with the IATTC, both of whom were strong advocates for the Programme, proposed an IT expert from San Diego, Al Collins.

As detailed in the 1977 annual report for the Programme:

> A consultant, Mr G.A. Collins, was employed from 23 November 1977 to 5 January 1978 to assist with the determination of processing procedures appropriate for the data collected and the computer facilities available, and to write or modify the necessary programme to a format acceptable on the IBM 370/125 Computer in Noumea. By kind favour of the Inter-American Tropical Tuna Commission a library of population dynamics and statistical programmes suitable for tuna, and general fisheries research purposes (see Appendix 3) was made available to the South Pacific Commission. These programmes were all converted, where necessary, and incorporated into the Skipjack Programme's library of programmes for immediate use in Noumea.

When Dr Pierre Kleiber was hired in late May 1978 as the Senior Fisheries Scientist the cooperative arrangement with the local computer centre was working, and a database was slowly being generated. However, Pierre very quickly determined that this arrangement was too cumbersome; if the Skipjack Programme was to become the centre of scientific excellence in tuna research that was necessary to meet its accepted objectives, it must have its own computer. He managed to convince Bob Kearney

Veronica Van Kouwen, Research Assistant, entering data, May 1979 (image: SPC).

of this. Al Collins was one of two consultants hired to examine options. There were not many at that time, but they included a Hewlett Packard HP-1000 mainframe computer.

Not only did the donor governments need to be convinced of the need for considerable unbudgeted expenditure, but the actual buying of a computer proved extremely difficult. Computer companies were reluctant to allow their products to be used in a place where they could not guarantee servicing, and New Caledonia was considered at that time to be 'remote'. Several possible suppliers in the USA and Australia simply refused to sell. It required Drs Kearney and Kleiber to travel to Melbourne to personally convince Hewlett Packard (Australia) to sell them one. As part of the contract of sale they had to agree to air-condition the dust-free room in which it would be located, and to install an appropriately buffered and isolated power supply.

To quote Dr Kearney:

> Fortunately, the donors were completely behind me; we had convinced them of the quality of our science and the need to keep it at the highest international standard. But the computer would require considerable 'mothering', and it did cost a hundred thousand dollars, which was a huge amount of money in those days… I signed a cheque for sixty thousand dollars for a forty-megabyte hard drive – megabyte!

That first hard drive was bigger than a washing machine, and almost as noisy!

The computer eventually arrived in March 1979 and was installed at SPC. It generated a lot of interest in Noumea. The first person hired to run the computer was Sam Bledsoe, who came from the University of Washington in Seattle. During the six months that Sam worked for the Programme the computer had one major breakdown; Sam was able to diagnose the cause as a failure in the main circuit board. Sam was sent off to Sydney to bring back the necessary replacement board. This was only possible because of a wonderful demonstration of donor solidarity for the Programme: Sam's US passport had expired the week before and he had not yet obtained a replacement. With support from the highest levels of both the French and the Australian authorities Sam was able to fly to Sydney that day, pick up a board that had been couriered up from Melbourne, and hand-carry it back the very next day – all without a valid passport!

Having a computer at SPC made a huge difference to the treatment of the tagging and related tuna catch data that were being accumulated.

Dr Kearney said:

> Pierre Kleiber and Sandy Argue did a fantastic job with the data capture and manipulation, and determination of its real value, its limitations and how best to use it. You know, we had some big conceptual challenges. The biggest reservation I had had with the project right from the start related to a fundamental principle of fisheries resource dynamics and assessment. If we were going to get a good estimate of the population of skipjack in all of the Western Pacific, we really had to have the tags sufficiently uniformly and evenly distributed across the whole area of what we thought was the distribution of the skipjack population we were trying to assess. And I knew that getting uniform distribution was going to be the bugbear.
>
> When we went out to places like parts of French Polynesia, or Pitcairn and other small islands where there was no bait, or not enough bait, even if there was plenty of skipjack it was going to be extremely difficult to tag enough skipjack to meet our requirements for sufficiently uniform distribution of tag releases. Pierre's wonderful programming and analyses enabled all of us to see graphically the progress we were making in addressing this problem. One of his outputs was to overlay the map of the SPC region with circles drawn in each area we tagged: the diameter of the circles was proportional to the number of releases. It made it immediately obvious where the problems remained.

The Programme's annual report for 1979 stated the following:

> The installation of the Programme's computer in April 1979 not only facilitated data processing but also, because of its printing and graphics capabilities, made it possible to generate results in a format more suitable for publication and distribution. Much of 1979 was spent entering the data accumulated during 1977, 1978 and 1979, but towards the end of the year, in-depth analysis of the results had commenced.

The annual report for 1980 stated that:

> During 1980 there were very few modifications to fishing or sampling procedures, but major changes were made in data collection and processing procedures. New techniques for storing, sorting and accessing tagging, sightings, biological and baitfish data were implemented… A major achievement in the Programme's methods of computer analysis involved development of software for graphical display of Programme results in formats suitable for inclusion in reports and for direct distribution to the Fisheries Officers throughout the region… Programme staff also devised intricate security systems for preventing the accidental, or deliberate, corruption of data files held on the Programme's computer. This system included the automatic daily creation of magnetic tape copies of the contents of all computer files to prevent the loss of valuable Programme data due to any accidental causes. A system of storage of these copies at a location outside the Commission [NB: the Australian Consulate-General] prevents the loss of data in the event of a fire or other serious damage to the computer system.

The efficiency of the computer systems put in place by the SSAP staff was summed up by Dr John Sibert. He was recruited to the programme as a Senior Scientist in August 1982, from the Pacific Biological Station of the Department of Fisheries and Oceans (DFO) – one of the premier fishery research laboratories in Canada.

To quote Dr Sibert:

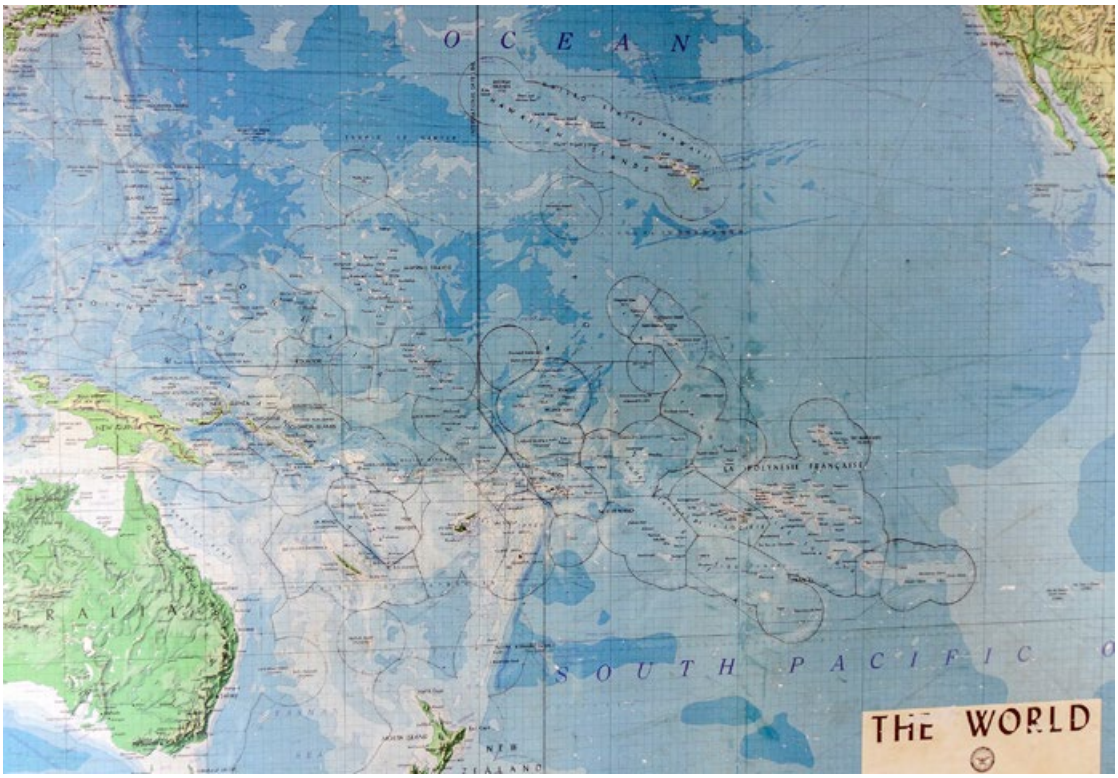
> We (at DFO) had just gotten ourselves a brand new VAX computer, model something or other. We'd finally gotten rid of all our punch cards and… I was now giving up this development to go down to Noumea! I expected some sort of diesel computer; maybe it would be powered by coconut oil? I had no idea… And what I found was actually the way that Pierre and everybody else had set up that HP1000 it was easier to use than the VAX, and no slower. I was astonished. I immediately set to work on stuff that I wouldn't have dreamed of doing any other place.

The Programme's outputs and some of its outcomes

Over the two years following the research cruises, as tag returns continued to be accumulated and analysed, the Programme's performance against its original goals was assessed. The three primary objectives of the Skipjack Programme had been established to: (a) provide a better understanding of the migrations and stock structure of tuna as a basis for determining the interactions between current and potential new fisheries; (b) provide survey information on the distribution and abundance of skipjack and baitfish in each country and territory; and (c) provide improved knowledge of key population parameters (growth, mortality, genetic structure, reproduction, etc.) as a basis for assessment of the magnitude and status of total stocks, including those in the waters of individual coastal states, and the impacts of fishing in them.

The concluding summary of the Skipjack Programme (July 1983) was able to confirm that all of these rather grand objectives for the Programme had been met. Furthermore, collectively the results enabled an assessment of the total skipjack stocks of the whole SPC region and greatly facilitated an estimation of resources beyond these boundaries; objectives that were considered aspirational at the time the Programme commenced. From an administrative perspective it is significant that all research schedules, including the production of preliminary and final reports for each of the countries and territories of the SPC, were met and total expenditure, including for the originally unbudgeted computer, was safely within the budget approved at the commencement of the Programme. The subsequent creation and funding of the Tuna and Billfish Assessment Programme, coupled with the ongoing success of SPC's Oceanic Fisheries Programme, provide testimony to the quality of the scientific and administrative foundations established by the Skipjack Programme.

When the search for funding for the Skipjack Programme commenced in 1975 extremely little was known of the tuna resources in the SPC region, countries had not declared their Exclusive Economic Zones (EEZs), and no regional arrangements were in place for the research and management of offshore and shared resources. There is no doubt that the Programme catalysed developments to much effect in all of these areas, to the considerable benefit of the member countries and territories of the SPC.



The first ever attempt to map out the future EEZs of SPC member countries and territories was done by hand, with a compass, by Bob Gillett in the late-1970s'. This map is still in the OFP offices today.

It also initiated fundamental changes as to how major projects were funded at SPC. In 1975, SPC's Secretary General and Executive publicly expressed their deep concern over the funding for the Commission, and therefore for its future. Pressure from emerging regional institutions was diminishing the perception of the relevance of the Commission. By 1980, extra-budgetary funding was accepted to have a vital role in the Commission's future, and total funding had greatly increased: the Commission was emerging again as the primary driver of regional cooperation. There can be little doubt that the Skipjack Survey and Assessment Programme was a primary catalyst for these developments.

In conclusion

An extremely relevant, independent summary of the initial impact of the Programme was provided by the Rockefeller Foundation, when in late 1980, in reviewing the use of the seed money that they had provided in 1975, it made the following evaluation:

> This grant can serve as the epitome of how a seed grant should work. It provided one year's support in 1975 which enabled the South Pacific Commission, in collaboration with ICLARM, to hire Dr Robert Kearney, to design and initiate an assessment program for improved management of skipjack tuna, one of the South Pacific's largest food resources.

By 1979, the Skipjack Survey and Assessment Programme had grown under Robert Kearney as Coordinator, to have an annual budget of over $1,100,000 with six developed countries providing a majority of the support. It is expected to continue operations at approximately this same level.

The project has generated considerable information concerning skipjack tuna and its population distribution – nine reports published in 1979 alone. This has been of direct value in expanding exploitation and improving management of the resource. It has also saved the expenditure of funds and effort that would have been expended in trying to extend the fishery in portions of the South Pacific where the concentrations of fish are not sufficient.

The Program is allowing the island countries of the South Pacific to move towards maximum economic yield from skipjack tuna, while simultaneously ensuring that the resource is not depleted. In short, a small RF grant provided the start-up funding for a highly successful and much larger research program which in turn is making a significant contribution to the more effective management of an important component of the South Pacific's food resources.

> It might be noted that had this grant been evaluated shortly following its termination in May 1976, few if any of the above comments concerning its success could have been made. Seed grants need time to grow. [Rockefeller Foundation, September 29, 1980]

Acknowledgements

The author wishes to acknowledge the input and participation of the following people, for without their assistance this article could not have been written:

- Dr Bob Kearney – Emeritus Professor of Fisheries, Institute for Applied Ecology, University of Canberra;
- the other former OFP Programme Directors: Dr John Sibert and Dr Antony Lewis;
- the current OFP Programme Director: Dr William John Hampton;
- the staff from SPC's registry and library sections who assisted me in locating documentation, much of it from over 40 years ago: Veronique Fayard, Nathalie Desprez, Mary-Clare Ame, Stephanie Watt;
- the SPC staff responsible for designing and putting together the 'FAME Digital Library' (www.spc.int/fame/en/publications/digital-library): Franck Magron and Aymeric Desurmont; and many other past and current members of the OFP team, too numerous to mention individually within the limited confines of this short article.

The *Hatsutori Maru* No 1 with the SPC flag flying as it leaves Brisbane on 25 April 1979, heading north (image: Charlie Ellway).

Original text: English

Pacific Community, Fisheries Information Section, BP D5, 98848 Noumea Cedex, New Caledonia
Telephone: +687 262000; Fax: +687 263818; spc@spc.int; http://www.spc.int