

Chapter 10

Issues and Options for the U.S. Congress

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Issues and Options for the U.S. Congress

INTRODUCTION

In addition to being part of the United States, the U.S.-affiliated islands of the Pacific and Caribbean are of importance to the United States for strategic, economic, and diplomatic reasons. Because of their geographic (small size and isolation) and economic characteristics, economic sectors dependent on the islands' natural resources—agriculture, aquaculture, fisheries, and tourism—have the greatest potential to form the basis of their economies. Growing economies are required to support the islands' growing populations and aspirations, and to assist those that are becoming independent to enter the international economy.

The U.S. Congress, as the primary policy-making body for the U.S.-affiliated islands, has considerable latitude to assist with the sustainable development and management of the islands' renewable resources. Numerous Federal agencies already house expertise and programs that are extended to the islands and others that could be tuned to their needs. However, potential exists for Congress to modify the structure of certain committees/subcommittees in such a way that opportunities for Federal assistance are readily apparent and easily available. In addition, the Department of the Interior's Office of Territorial and International Affairs, which has been designated as the major point of contact between the insular governments and the U.S. Congress, could strengthen its role in agency coordination and technical assistance. These underlie the first options for the U.S. Congress.

Further options are categorized by major area of public sector involvement in management and development of renewable resources:

- data collection and information management,
- planning,

- education,
- research,
- extension and training, and
- regulations and incentives,

Little can occur without the necessary information: both problems and opportunities may be overlooked. Not only is the appropriate data necessary, management systems that allow easy access and manipulation for various needs are necessary to put that information to use. Planning of resource and economic development takes that information one step further—social, cultural, and political considerations must be integrated.

Education provides the personnel interested and, perhaps, skilled in the disciplines and technologies needed for sustainable resource management on islands. Research is the source of those technologies and extension and training provide the means to deliver them to the eventual practitioners. Finally, regulatory measures and incentives are needed (or disincentives need to be removed) in order to encourage those practitioners to adopt new technologies and activities,

Within the above categories, opportunities exist for improved and expanded Federal agency support for agriculture, forestry, aquaculture, and nearshore fisheries development appropriate to the tropical insular environment. While the structures of both Federal and local government agencies tend to follow the separate resource-related divisions (agriculture, etc.), tropical insular resources need to be viewed as a single system in order to make resource development and management productive and sustainable. Thus, programs designed to develop and manage island resources would benefit from improved coordination of those agencies dealing with single resource systems.

CONGRESSIONAL OVERSIGHT

This study shows the importance of renewable resource development to increasing self-reliance on U.S.-affiliated islands and the important linkages that exist among renewable resource use, environmental protection, island cultures, population growth, political systems, and economic development. These relationships or linkages underlie integrated renewable resource management on U.S.-affiliated insular areas. In addition, it is clear that the picture that develops from these relationships is not typical of the 50 U.S. States, especially because all of the islands lie within tropical climates.

The U.S. Department of Agriculture (USDA), National Oceanic and Atmospheric Administration (NOAA), and Department of the Interior (USDOI) probably comprise the agencies having the greatest number of Federal programs bearing on integrated renewable resource management and planning within the islands, although some resource-related activities are undertaken within other Federal agencies such as the Departments of State and Energy. However, activities related to the U.S.-affiliated islands are spread among a large number of programs within these institutions, hindering congressional oversight of Federal agency activities specifically designed for or conducted within the islands.

Today, no single subcommittee of the House Committee on Interior and Insular Affairs or of the Senate Committee on Energy and Natural Resources is structured to deal with all of the related aspects of integrated renewable resource management as they relate to the U. S.-affiliated islands. Further, the emerging Freely Associated States have no direct representation in Congress. For Congress to take advantage of the OTA study and to oversee the network of diverse activities and efforts underway in executive branch agencies dealing with island renewable resource issues, mechanisms to facilitate congressional oversight probably are needed.

Option: New Congressional Subcommittee(s)

Congress could establish new subcommittees in the House and Senate committees listed above that would focus on improving self-sufficiency in the U.S.-affiliated islands through an integrated renewable resource approach.¹

Positive responses have been common from U.S.-affiliated island residents to the leadership Congress has shown in requesting this study. Having new subcommittees designed to deal specifically with these island resource issues probably would expedite congressional actions for taking advantage of opportunities to work toward increasing island self-sufficiency. Island officials would have focal points within the two congressional committees where integrated approaches to island resource development could be handled easily and effectively.

In addition, convictions are growing that the U.S.-affiliated islands are likely to become increasingly important in matters of national security in the next decade. Having subcommittees accustomed to dealing with island resources, and their associated cultural, economic, and political aspects, and capable of dealing with issues of overall U.S. security might strengthen existing links between the U.S. Government and the U.S.-affiliated islands.

Reorganizing committee structures would take time from other committee activities and the new subcommittees may require additional staff. Thus, this reorganization might be viewed unfavorably.

¹Moving in this direction the House Interior and Insular Affairs Committee recently established the Subcommittee on Insular and international Affairs, chaired by the USVI delegate Ron deLugo.

Option: Joint Territorial Policy Study Group

Congress could establish a Joint Territorial Policy Study group to produce analyses of island matters to require congressional action related to the U.S. insular areas and could provide initial territorial impact analyses of current legislation affecting the islands.

The Joint Territorial Policy Study Group would be composed of congressional committee staff who have demonstrated a continuing interest and knowledge of the U. S.-affiliated Pacific and Caribbean islands. This group could request assistance from two very active bipartisan congressional caucuses serving the House and Senate: the Congressional Clearinghouse on the Future and the Environmental and Energy Study Conference, both of which address long-term issues and the impacts of possible new legislation.

Option: Review Effectiveness of Federal Island Programs

Congress could direct USDA, NOAA, and USDOJ each to evaluate the effectiveness of its own agency's programs related to integrated renewable resource management

and planning designed for the islands and implemented therein. Congress could have the three executive agencies appear at oversight hearings related to island resource management and planning issues.

Alternate Option: Federal Island Program Reviews by the General Accounting Office (GAO)

Congress could direct GAO to conduct the above reviews that could be used later in congressional oversight hearings related to island issues.

Many individual programs of these agencies receive favorable comment from island resource managers, planners, and government representatives; some do not. Agency reviews could be useful to Congress and the agencies themselves in determining which approaches have worked best in the islands and which ones might be modified to improve their chances of success.

The agencies know the details of their programs and could probably conduct the review with minimal delay. Congress on the other hand may feel that outside eyes may be the most revealing and, therefore, choose GAO to conduct the evaluations.

COORDINATION OF FEDERAL AGENCY ACTIVITIES

The Department of the Interior's Office of Territorial and International Affairs (OTIA), under the Assistant Secretary, is responsible for promoting the economic, social, and political development of the U.S.-affiliated islands. In addition, OTIA is responsible for analysis, development, coordination, and review of the department's policy and programs pertaining to international activities and opportunities for support of U.S. foreign policy through the use of the department's natural resource and environmental expertise.

The extensive mandate of OTIA may hinder regular coordination of Federal agency activities in the U.S.-affiliated islands. No other formal mechanism exists to coordinate the large number of Federal programs and policies ex-

tended to the islands. Oversight hearings might provide an initial means of evaluating OTIA capabilities to coordinate Federal activities and to review new island activities that any of the executive agencies plan to undertake. These hearings may indicate where alternate or supporting coordinating activities are needed.

Option: Designate an Interagency Coordinating Group on Resource and Economic Development in U.S.-Affiliated Islands

Congress could authorize the creation of an interagency coordinating group on U. S.-affiliated islands, designating the Department of the Interior as the lead agency, that would provide policy guidance to Federal departments and agencies on extension and

modification of programs to assist in island resource management and development.

Members of the interagency coordinating group should represent USDO/OTIA; Department of State; and resource-related offices of NOAA (e.g., Offices of Sea Grant and Coastal Resource Management, National Marine Fisheries Service); USDA (e.g., Soil Conservation Service, Agricultural Stabilization and Conservation Service, Forest Service); USDO (e.g., U.S. Geological Survey, Bureau of Reclamation, Park Service, Fish and Wildlife Service); Department of Energy; Environmental Protection Agency; Small Business Administration; and Economic Development Administration.² This group should be closely associated with the Interagency Group on Freely Associated States' Affairs authorized in the Compact of Free Association (Public Law 99-239).

The first responsibilities of the interagency coordinating groups might be to: 1) identify programs for which the islands are currently eligible and their rates of participation, and 2) to solicit information regarding the suitability of Federal programs to the islands. Second, the interagency coordinating group could identify means for integrating programs within and among the agencies into packages that might allow for simultaneous or sequential development of: 1) insular resource management and planning institutional capabilities; and 2) private sector activities in management, production, processing, and marketing of insular products. Third, the coordinating group could suggest funding priorities for the agencies' technical assistance programs to the Territories, Commonwealths, and Freely Associated States (see Public Law 99-239, Sec. 105(1)). Fourth, representatives from these agencies to the interagency coordinating group could serve as insular government contact points to the Federal agencies.

Such an interagency coordinating group probably would need one or more full-time staff from each office, and a budget allowing travel to each of the island areas. These additions seem prob-

²This list is not intended to be exhaustive, but only representative of the types of agencies, bureaus, and offices that might be involved.

lematic during the current period of budget reductions.

Alternate Option: Designate U.S. Man and the Biosphere program (U.S. MAB) as Lead Coordinating Agency for Federal Resource-Related Activities on Islands

Congress could identify the U.S. MAB in the Department of State as a lead coordinating agency for Federal resource-related activities in the U.S.-affiliated islands, appropriate funds specifically for the U.S. MAB program and encourage increased coordination between U.S. MAB Islands Directorate, the Department of the Interior's Office of Territorial and International Affairs, and other appropriate Federal agencies.

Federal agencies already supporting U.S. MAB include the Department of State, U.S. Forest Service, National Park Service, National Ocean and Atmospheric Administration, and the National Air and Space Administration. U.S. MAB also collaborates on a bilateral and multilateral basis with other MAB national programs as well as the United Nations Educational, Scientific, and Cultural Organization's International MAB program, the U.N. Environment Programme, and the U. N. Conference on Trade and Development. However, funding for U.S. MAB has been low, and the U.S. MAB Pacific Islands Directorate has been inactive.

In 1985, the U.S. National Committee for MAB identified small island ecosystems as a priority for U.S. MAB support, emphasizing "ecology and rational use of island ecosystems." U.S. MAB has funded such research projects as oil spill contingency planning for small Caribbean islands, a workshop on Management of Marine protected Areas in the Caribbean and one on Planning for World Small Islands Environmental Management and Development. U.S. MAB also has organized a global meeting known as "Interoceanic Workshop on Sustainable Development and Environmental Management of Small Islands" (3). Issues such as environmental and socioeconomic changes associated with tourism and industrial development also are being examined. A major U.S. MAB Caribbean Island Ecosystems ef-

fort has been to encourage the designation of a Decade for Small Islands (1990-99) to organize a lo-year concentrated program of studies related to development of small islands (1).

Increased support for the U.S. MAB islands program could allow them to expand their research, coordination, and training functions in the U.S.-affiliated islands, especially in the Pacific, and might improve coordination of federally supported resource-related island activities. Increased coordination between U.S.

MAB and USDOJ/OTIA might assist U.S. MAB-supported research and training projects designed for Caribbean and Pacific Basin countries to be applicable to U.S.-affiliated islands.

To undertake such a leadership role, the U.S. MAB program would need to be upgraded and strengthened substantially. In addition, identifying the U.S. MAB as the primary coordinating group could be seen to be in conflict with the mandate for OTIA.

EXTENSION OF TECHNICAL ASSISTANCE TO THE ISLANDS

OTIA's Technical Assistance program has responsibility for extension of technical assistance grants to insular governments and individuals to support the development of local institutional capability and private sector enterprises. This program has been referred to as "the most effective utilization of United States dollars in the Pacific Basin" (2). The staff is competent in its island-related work, but is small and its budget is declining.

Option: Strengthen OTIA Technical Assistance

Congress could direct the OTIA Technical Assistance program to prepare reports on development of local institutional capability to foster private sector development in renewable resource enterprises (production, processing, and marketing) in each island area, and to establish priorities for its technical assistance program that reflect insular needs. In addition, Congress could appropriate additional funds as needed to allow expanded technical assistance to insular resource management institutions and entrepreneurs.

Preparation of the "Capability Reports" should be carried out in close coordination with the insular governments and should be readily available to insular governments and entrepreneurs. Regular updating of these reports could allow continued modification of technical assistance programs to match insular needs.

These reports could be used to redirect Federal agency programs as well as to provide guidelines for technical assistance. Further, technical assistance programs developed from these reports could be used to link production, processing, and marketing enterprises on the islands.

Data needed for preparation of the Capability Reports may be difficult to collect or unavailable, requiring that this effort be postponed until improved statistical collection programs are implemented. Further, preparation of such reports does not guarantee that future grant proposals submitted to OTIA will reflect identified insular needs or that coordinated resource development follows.

FEDERAL/INSULAR INFORMATION SHARING

U.S.-affiliated islands have difficulty in identifying what Federal data/information and programs exist that are relevant to island needs in integrated renewable resource planning and management. Much information does exist but

it is scattered through the various Federal agencies and sometimes is not associated directly with island needs. An examination of agency data/information and programs, an assessment of their relevance to island needs, and making

this information known to island governments would be an important step in improving island natural resource planning, management, and development.

Option: Interagency Task Force on Federal Information

Congress could direct the Department of the Interior to lead an interagency task force charged with assessing the data/information and programs that exist in each relevant Federal agency related to integrated renewable resource management and planning that is likely to be of benefit to island governments.

The task force would make a summary of this information available in published form to Congress in one year to serve as the substance for a congressional hearing on the topic. Island representation would be included in the task force activities. Each agency could establish an “island desk” that could act as a contact point for island liaisons during and after the task force activities.

Identification of such data/information and programs in existence could eliminate the possibility of unwanted duplication and could make Federal information (such as the Pacific Island collection housed in the Smithsonian Institution—currently an unorganized, largely inaccessible library) more readily available. In addition, it could help expedite island activities that rely on such data/information and assure the island governments that Federal programs that could be applied appropriately to the islands are not overlooked. Nevertheless, a task force of this sort can consume a significant amount of time at each participating Federal agency as well as initiate additional associated costs.

Option: Establish Regional Information Clearinghouse(s)

Congress could establish or support one or more existing regional island centers to act as a clearinghouse for relevant island information produced at national and international levels.

Such information could include: Federal Government announcements on new programs pertaining to the islands; island government announcements; similar international program information; market information on agriculture, mariculture and aquiculture; and information on island experts, their specialties, backgrounds and availability. Such a clearinghouse(s) would gather such information, assess, and disseminate it to island governments. In addition, the clearinghouse(s) could maintain directories of Federal, regional, and international programs related to island resource development and provide assistance with grant proposal preparation. Congress might choose to strengthen and broaden the scope of one or more of the following centers to handle this role: Pacific Basin Development Council, East-West Center, Micronesia Area Research Center’s Information System, Island Resources Foundation or Eastern Caribbean Center.

Communications among U.S.-affiliated islands and with the continental United States are slow but particularly so in the Pacific. A clearinghouse(s) for island information is very likely to improve this situation and may in fact improve communications between the Pacific and the Caribbean islands. However, establishing a new center(s) or strengthening others will require additional funding at a time when such funding is scarce. Further, startup costs for establishing a new center(s) will be higher than strengthening an existing institution(s).

INSULAR DATA COLLECTION, INFORMATION MANAGEMENT, AND PLANNING

Insular governments, like governments anywhere, need a natural resource database on which to base their land-use plans and decisions

for future actions. Clearly, adequate data for these purposes seems wanting on most U. S.-affiliated islands. In addition, no consistent

source of economic and social data exists from which informed judgments on future island development and conservation can be made. It is important to have not only adequate and appropriate data but also the technology for effective data management and analysis and the skilled staff to carry out these tasks. The day-to-day needs of local governments necessitates that the data are easily accessible and that they can be manipulated in useful combinations quickly and accurately.

Many of these data will pertain to the island locality whereas other data may have a Federal, regional, or international flavor. All of these data types are useful to island planning and terrestrial and marine natural resource management, monitoring of environmental changes, and development of strategies for sustainable development. With the modern, reasonably inexpensive, computer systems available today, data storage, analysis, synthesis, and dissemination no longer seem insurmountable problems. Still, many of these problems exist in the U.S.-affiliated island governments.

Option: Analyze the Adequacy of Island Information Management Systems

Congress could direct the Department of the Interior to take the lead role in an inter-agency task force including island representation to determine the adequacies and inadequacies in natural resource, economic, and social databases for the various U. S.-affiliated islands as well as the means to handle the data.

The task force should prepare a report for Congress on the status of these databases as well as an assessment of the island needs to manage this information resource effectively. The assessment should include an analysis of the adequacy of local government computer facilities and the personnel to maintain, manage, analyze, and interpret such data. Consideration should be given to ongoing training for government users of these data, training quality, and needs. This report should be produced in an expeditious manner and should serve as the basis for congressional hearings wherein Congress can determine appropriate further actions.

Such an analysis could provide an islandwide basis for a coordinated, effective action on improving island data needs and data management, thus, filling a long overdue gap. The process would raise the awareness of the islands' needs, problems, and opportunities and may provide improved linkages between the Federal agencies and island governments. Conversely, this may be viewed as just "another study" and further wasted time. Such an assessment may take one year or so to complete, whereas some people may feel that direct action to collect the needed data on the islands should begin now,

Option: Training Programs for Data Managers and Users

Congress could direct the Department of the Interior in cooperation with the Department of Agriculture to arrange for periodic training programs on manual and computerized data management techniques and analysis for the islands.

The training programs could be held at the land-grant institutions on U.S.-affiliated islands in the Caribbean and Pacific and on Hawaii for appropriate data managers and users from the island governments. USDOJ and/or USDA could provide technical assistance grants to eligible island governments for the integration of currently held databases.

Where no local data collection expertise is available, U.S. agencies also could allocate funds for a local person to work side-by-side with Federal data collectors to provide some on-the-job training and improved understanding of eventual interpretations of data,

Such courses could expand the usefulness of island databases as well as the number of data users in government service. Carrying out such training at island land-grant institutions in turn may help strengthen the institutions' training and education programs. Such training could begin even as extant computerized data management systems were being evaluated for improvement, although for training to be effective, the computer hardware and software systems used in training and on-island should match. In order for a government employee,

however, to take advantage of such training he/she will be required to be away from his/her job and probably off-island for certain periods. During the initial training periods, data management in the island government, therefore, may be slowed down.

An on-the-job association would increase the understanding of technical data collection techniques, increasing the potential for future updating of data. In addition, eventual usefulness of data in decisionmaking may be improved. Conversely, this may slow data collection efforts and increase the costs of data provision to the islands.

Agriculture and Forestry

To accelerate agriculture development, there is a need to understand the socioeconomic situation of small farmers and to diversify islands' agricultural bases to avert the "boom-and-bust syndrome."

Option: Reactivate USDA Minor Economic Crops Computer Database

Congress could direct USDA to reactivate, update, and maintain their computer file on minor economic crops.

A summary of the contents of the database could be made available to island governments so they can use the information in agricultural activities. Further, island governments should contribute suggestions on how to improve the database for their use by identifying crops not yet included, as well as important measurable properties and characteristics of plants and environmental aspects needed to assure crop success.

USDA previously maintained a computer database on minor economic crops, many of which would grow in tropical climates, but no longer keeps this computer database active. Data included in it cover important and diverse topics: the climate and soil conditions necessary for growing various crops, yield information, the climatic range over which a plant would grow, nutrition data, medicinal use, pesticidal properties, food crops that grow well when inter-

cropped with others, and agroforestry. This database contains important agricultural information relevant to ecosystems of the U.S.-affiliated tropical islands. No other similar database is known to exist.

The information included in USDA's minor economic crops database has taken many years to accumulate and check and, therefore, is a valuable resource. The database also provides a mechanism of linking island agricultural data from the Caribbean with that of the Pacific, thus, providing both with additional important information. Should USDA reactivate this database, it would incur additional operational costs. Because maintaining this database historically was of small cost to USDA, it seems unlikely that the cost of reactivating it would be prohibitive.

Option: Have USDA Develop Small-Scale Island Farmer Profiles

Congress could direct USDA Extension to gather the necessary data to prepare "small-scale island farmer profiles" for U.S.-affiliated islands in the Caribbean and the Pacific to be used in the process of identifying agricultural technologies that will be economically beneficial to the farmer and will sustain the productivity of the natural resource base.

In order to determine which food/fiber/fish technologies have the greatest possibility for ready and profitable adaptation, a need exists for additional specific information on:

- how smallholder subsistence and semi-commercial farmers actually distribute their labor and capital resources in their farming effort,
- which activities are part-time v. full-time, and
- how much output is consumed, etc.

Farm economic information is needed on, for example: the farmer's sources of income and labor effort; patterns of planting, cultivating, fertilization, harvesting, and storage; nonfarm resources used; and home consumption v. market sales, in order to assess the farmer's adaptability to change, and the system's openness

to modification, Access to such information may help farmers and others avoid mistakes made in past technology selection. Technologies were promoted in certain instances which were not accepted by the farmer because the technology did not readily and profitably fit the existing agricultural system,

Introduction of inappropriate agricultural technologies can be economically detrimental to the farmer and ecologically detrimental to the farmer's land. Minimizing such failures obviously is cost-effective over the long term, Yet, to minimize these costs requires the expenditure of funds for developing the needed database to develop the small-scale island farmer profiles. While such profiles are being developed, agricultural technologists on the island may have a tendency to slow down the rate of new technological implementation, Then too, there is the question of the future role of the Extension Service at a time when it is under possible severe budget cuts. It seems likely that the Extension Service's new role may be largely in assisting the small and part-time farm operator. This may be an opportune time to have them expand their work with the U.S.-affiliated island governments.

Aquaculture and Nearshore Fisheries

In the U.S. Caribbean, local departments of marine resources collect aquatic and fisheries data, and share it regionally through the Gulf and Caribbean Fisheries Association and the Caribbean Coastal Marine Productivity Program. The U.S.-affiliated Pacific islands, however, have no such data collection and aggregation structure.

In 1974, a private nonprofit corporation—the Pacific Fisheries Development Foundation (PFDf)—was established to carry out the directives of the Central, western and South Pacific Fisheries Development Act (authorized in 1972), The Western Pacific Fishery Management Council was created by the Magnuson Fishery Conservation and Management Act of 1976, to manage the fisheries within the 200-mile zone around U.S.-affiliated Pacific islands. In 1983, the Na-

tional Marine Fisheries Service acknowledged that the island fisheries differ significantly from mainland fisheries and established a special set of priorities for Saltonstall-Kennedy funding of projects in the Pacific Basin.

The PFDf, the Pacific Basin Development Council, and the Western Pacific Fishery Management Council subsequently established a set of priorities for fisheries development in the Pacific, based around:

- stabilizing island fisheries,
- emphasizing and improving quality in island seafood production,
- expanding domestic harvesting of under-utilized species and stocks, and
- developing fisheries resources in harmony with non-American Pacific island neighbors.

The emphasis is on coordination of nearshore and offshore fisheries development, considering both conservation and development objectives, and development of an ordered, incremental program of assistance.

Option: Fisheries Statistics Collection

Congress could provide funding to the Pacific Fisheries Development Foundation for Freely Associated States island fisheries statistics collection programs.

Collection of statistics should focus on determination of stock levels and estimates of maximum sustainable yield for economically important fisheries, as well as identification of current catch levels. Funding could be appropriated under either the Saltonstall-Kennedy grant program or appropriations to the Central, Western, and South Pacific Fisheries Development Act, This information should be integrated with the WESTPACFIN database on fisheries maintained for Hawaii, American Samoa, Guam, and the Commonwealth of the Northern Marianas by the Southwest Fisheries Center.

Collection of baseline data often is costly. Because most insular nearshore fisheries are artisanal, and markets are informal, collection of catch statistics may be difficult, Data collection might be facilitated by development of small fish-markets to centralize sales and sta-

tistics collection. Similarly, identification of particularly favored fisheries areas near islands (such as near fishery aggregation devices) could aid collection of subsistence fishery statistics. Development of such a program also will require development of a local institutional capability to collect, organize, and manipulate data requiring skilled individuals who may not be available on some islands.

Option: Develop Sea Resource Atlases

Congress could direct the U.S. Army Corps of Engineers and the Sea Grant Marine Advisory Service to develop sea resource atlases for each of the U.S.-affiliated islands.

Sea resource atlases (similar to land capability assessments) could identify marine areas with particular fisheries or tourism value, areas of current or probable future resource degradation, and areas suitable for certain forms of marine development, such as marinas, marine parks, or mariculture enterprises.

Funding could be derived from Section 22 of the Water Resources Development Act, although changes in legislative language maybe required to allow this. Atlas preparation should be closely coordinated with or performed jointly with insular Coastal Zone Management programs. For most effective use of atlases in marine resource development, the Sea Grant Marine Advisory Service could conduct training programs for marine resource managers following completion of the effort on each island or island area.

Development of atlases may represent a reorganization of information already available to some U.S.-affiliated islands, requiring little effort or funding and potentially little additional benefit. In other cases, particularly for remote outer-islands, little baseline information or maps may be available, requiring substantial and potentially costly data collection programs.

Option: Artisanal Fisheries Profiles

Congress could direct the Sea Grant Marine Advisory Service to develop Artisanal Fisheries Profiles.

These profiles, similar to the smallholder farmer profiles described above, would char-

acterize artisanal (subsistence and semi-commercial) fisheries in the islands. They could be used, in conjunction with sea resource atlases, fisheries statistics, and estimates of maximum sustainable yield, to determine technologies potentially suitable for introduction to the islands.

Unless this effort is coordinated with extension of the Sea Grant Advisory Service to U. S.-affiliated Pacific islands beyond the current representative on Guam, this will require increased funding to the University of Hawaii Sea Grant Program to cover travel and other costs.

Option: Marine Resource and Aquiculture Database

Congress could direct USDA's National Agriculture Library to provide assistance to the Micronesia Area Tropical Agriculture Data Center (MATADC) at the University of Guam to include appropriate tropical aquiculture information developed locally and culled from USDA's Aquaculture Information System. Similar information on warmwater aquiculture could be provided to the University of Puerto Rico.

MATADC maintains a computerized database of published and unpublished documents produced in Micronesia concerning tropical agriculture and related subjects, and provides bibliographic information retrieval and document dissemination services. In addition, MATADC maintains a database of scientists and current research to assist with location of experts in various resource-related fields. Expansion of these databases to include information on warmwater aquiculture, tropical marine resources and resource uses, and scientists with expertise relevant to the islands could provide valuable, additional benefits from this program in supporting local research and resource development.

Because bibliographic information on aquaculture already is collected and organized in USDA's Aquiculture Information System, this effort should be inexpensive and readily accomplished. To maintain its usefulness, regular information updates should be provided under a continuing program.

EDUCATION

Future development of sustainable, renewable resource development programs and projects and maintenance of esthetic, productive environments depend heavily on: 1) the availability of an ecologically aware public, 2) technologically capable practitioners, and 3) scientifically skilled entrepreneurs and managers. Education underlies the development of these cadres of people.

Issue: Traditional Knowledge and Skills

Traditional knowledge and skills are eroding as older generations cease to teach younger islanders and as island youth increasingly look to emigration or professional education for “white-collar” employment opportunities.

Many traditional island renewable resource uses and products can be considered manifestations of cultural identity and, thus, their preservation is of importance to island cultures. Some traditional resource use systems, when incorporated with modern techniques, may form the basis for development of sustainable technologies. In addition, traditional insular resource-related knowledge could be of considerable value to island renewable resource management and development. Traditional products might form the basis of local industries, such as handicrafts industries. Similarly, traditional skills could provide the basis for non-traditional small industries development, such as carpentry.

Option: USDOJ Historic Preservation Evaluation

Congress could direct USDOJ to reexamine its historic preservation activities on the U.S.-affiliated islands, especially regarding the preservation, oral or otherwise, of islanders’ knowledge of resource systems and of skills related to sustainable uses of renewable resources.

USDOJ could evaluate and report to Congress the effectiveness of current historic preservation activities in fostering local awareness of

the importance of maintaining traditional knowledge and skills and on making use of the information and skills in resource and economic development.

Option: Preserve and Support Traditional Skill Education Programs

Congress could support National Endowment for the Arts (NEA) educational programs designed to transfer traditional knowledge and practices using island renewable resources to island youth.

The Palau Museum’s Master-Apprentice program, supported by a grant from NEA, allows master carvers to pass on their knowledge to unemployed but talented youth. A second NEA project in American Samoa supports master carvers in rotating employment. Tapa artists visit schools on the island to instruct students in their craft. Other traditional skill studies are occasionally inserted into school curricula, but this varies with administrative policies and funding, and such studies are considered secondary to academic studies. Through NEA, the Federal Government could encourage more of this activity throughout the Pacific and Caribbean regions.

Issue: Environmental Education

While the island areas each have well-developed educational systems, few curricular materials are available for primary and secondary schools developed specifically to educate students on island land and sea ecology, on the relationships between environment and development, or on the relationship of traditional culture to resources. In addition, most U.S. Pacific colleges are 2-year institutions, necessitating study off-island to complete graduate-or college-level educations.

Option: Develop Environmental Education Programs

Congress could direct the U.S. Department of Education’s Office of Education Research and Improvement, in cooperation with lo-

cal government Departments of Education, Coastal Resource Management programs, and other programs already interested and involved in environmental education, to assess ecology curricula materials for island environmental education programs.

Educational materials developed by regional and international organizations for small tropical islands (e.g., the South Pacific Regional Environment Program) should also be assessed. where appropriate, financial assistance could be provided for dissemination of identified materials, and for development of materials suitable for primary and secondary schools.

Improvements in ecological education programs in primary and secondary schools could assist development of an island environmental ethic, that eventually could reduce the need for regulatory and incentives programs and could

contribute to the maintenance of environmental quality. In addition, such programs could increase students' scientific knowledge and interest and stimulate them to seek further education in resource-related areas.

Option: Assess Island Manpower Needs and Skill Requirements for Resource Development

Congress could direct USDOJ to assist island governments in analysis of manpower needs and subsequent education requirements to fulfill insular development plans.

These analyses could be carried out in cooperation with local government agencies, and reports made available to Congress for consideration annually or with evaluation of each 5-year development plan required under the Compact of Free Association (Public Law 99-239).

RESEARCH

Improvement in the fit between present and future Federal programs for U.S.-affiliated islands relating to integrated renewable resource management and planning and island economic development is a key element to a program's success. Many Federal programs extended to the U.S.-affiliated islands are based on research conducted in the temperate continental U.S. environment. This environmental misfit in some cases causes programs to fail and may even cause hardships to island inhabitants. Yet research results potentially applicable to the U.S.-affiliated islands are housed in certain Federal, regional, and international agencies and opportunities exist for improved transfer of that information to the islands.

Programs exist in certain Federal agencies that commonly are designed with a tropical environment in mind; these programs relate mostly to renewable resource management in tropical developing countries. For example, the U.S. Agency for International Development (AID) supports resource-related research and development in many developing countries. In certain cases, this AID research as well as other

U.S.-funded research conducted by the Food and Agricultural Organization of the United Nations, and the World Bank, is directly applicable to tropical insular resources. The islands benefit little from this relevant agricultural and renewable resource research.

Option: Screen U.S. Development Assistance Research for Its Application to U.S.-Affiliated Islands

Congress could direct USDA's Office of International Cooperation and Development, and Forestry Support Service, which work closely with AID, to screen U.S.-funded research results on agriculture, forestry, and other renewable resources in tropical developing countries for its applicability to U.S.-affiliated islands, and to provide the information for island use in an appropriate published form.

AID has had about 25 years of on-the-ground experience in working with the developing countries of the tropics worldwide. This wealth of experience and the associated research pro-

vide a storehouse of information on renewable resource management, planning, and development in the tropics, large parts of which may benefit the island governments. USDA, with its great diversity of technical skills, would be in a position to adapt this information for island needs. The cost to the United States for this development assistance information is large, yet the cost for making it available to the islands would be small.

Agriculture and Forestry

Option: Link Tropical and Nontropical Land-Grant Institutions

Congress could direct AID to develop a mechanism whereby nontropical U.S. land-grant institutions could link their research activities, funded under Title XII of the Foreign Assistance Act of 1966, with the research activities of tropical land-grant institutions on U.S.-affiliated islands.

Such arrangements would allow for testing of the applied research of the continental land-grant institutions for suitability in a tropical environment prior to transfer to developing countries. This linkage would very likely strengthen the island land-grant institution's activities in integrated renewable resource planning and management.

This Title XII-funded research arrangement ultimately could improve U.S. development assistance efforts in developing countries. In addition, it should strengthen overall U.S. competence in tropical natural resource management.

Because of the travel that would be required from the continental research institutions to the islands, larger amounts of the overall Title XII funds would go for travel, thus reducing the funds for research.

Option: Extend Section 406 Programs and Funding to All Tropical Land-Grant Institutions

Congress could extend Section 406 of the Food for Peace Act of 1966 to cover all tropical land-grant institutions and provide the

necessary funding to pursue the goals of the section.

Tropical land-grant institutions are: the University of Guam, American Samoa Community College, the College of Micronesia, the College of the Northern Marianas, the University of Puerto Rico, and the College of the Virgin Islands.

Section 406 of the Food for Peace Act of 1966 directs USDA to develop research contracts and agreements with American institutions in the field of tropical and subtropical agriculture, and that USDA should make the results available to friendly developing nations. The goals of Section 406 are twofold: 1) to provide USDA and land-grant scientists with tropical experience and training, and 2) to provide foreign nationals with a place to learn techniques and methodologies from U.S. specialists under tropical conditions. The University of Hawaii and the University of Puerto Rico were the two original tropical institutions to receive research funds under Section 406. Today, five additional tropical land-grant institutions exist in Guam, American Samoa, the Federated States of Micronesia, the Commonwealth of the Northern Marianas, and the U.S. Virgin Islands.

This congressional action would very likely result in a substantial increase in the total tropical agricultural research in the United States and its territories. Island residents and particularly college-level students would have access to training that they commonly have to travel thousands of miles to obtain. Many of these institutions are small and will need funds to equip research and training facilities to complement Section 406 funds. Population growth rates on most of the islands are high and, therefore, it seems probable that the new tropical agricultural research will quickly show benefits in expanding sustainable agriculture on the islands. Because of the proximity of foreign countries to many of the island land-grant institutions, it may be likely that these institutions will strengthen linkages between the United States and countries neighboring the islands.

Education and research are costly, and providing funding at the early stages of develop-

ment of many of these institutions may be viewed as wasteful. It may take many years for these schools to reach productivity levels comparable to the Universities of Hawaii and Puerto Rico.

Option: USDA Island Screening Committee for Agriculture Research

Congress could direct USDA to establish a small screening committee within USDA charged with reviewing USDA-funded proposals, and research results for their applicability or possible applicability to agriculture on U.S.-affiliated islands.

The screening committee could use USDA Current Research Information System computer data on research being planned or research that is underway to identify points of opportunity for the research to benefit the islands. The screening committee could suggest to appropriate researchers possible ways that the research projects might incorporate certain aspects of importance to U.S.-affiliated tropical islands. The individual researcher would make the final decision whether the research design should be modified or not.

The USDA funds important, major agricultural research across the United States. However, much agricultural research sponsored by USDA does not specifically consider its applicability to the tropical environments of the U. S.-affiliated tropical islands. Inadvertently, opportunities to apply the results of the research to this special environment may be missed. Certain small modifications made in research plans at the start of projects designed for continental, temperate lands may have significant pay-offs later to tropical island agriculture if the researchers have kept island agricultural problems in mind.

This probably is an inexpensive way to “piggy back” island agriculture research. Because the researcher would have the final decision, it seems unlikely that having a screening committee suggest possible changes would adversely affect the researcher or his/her project. Researchers like challenges and some might welcome the chance to approach the research in a different light. Because tropical agricultural scien-

tists probably are few overall in USDA, it may be an unduly heavy additional load to place on these few specialists.

Option: Expand Tropical Agriculture and Forestry Research Stations

Congress could direct USDA to evaluate research priorities and increase support for applied research in agriculture and forestry development on U.S.-affiliated islands conducted by the Tropical Agriculture Research Stations, and Institute of Tropical Forestry in Puerto Rico, and the Institute of Pacific Islands Forestry in Hawaii.

Examples of areas in which applied research might be expanded are:

- research on traditional farming systems;
- crop interactions and mechanisms governing productivity and stability in tropical agriculture systems;
- identification, maintenance, and increased use of superior varieties of local cultivars;
- sustained-yield mangrove forestry practices; and
- stable agroforestry systems for montane watersheds.

Aquaculture and Nearshore Fisheries

While insular research centers in tropical agriculture and island forestry have been established, no corresponding organization exists for warmwater or tropical aquaculture. The universities of Puerto Rico and Hawaii have been designated as Sea Grant institutions, and a Sea Grant representative is based at the University of Guam. However, funding for Sea Grant research has been declining and the representatives have little capability to direct research towards the needs of other islands.

Option: Establish an Institute of Tropical Aquaculture Research

Congress could direct NOAA to establish one or more Institutes of Tropical Aquaculture Research, based in the U.S.-affiliated islands, which could serve as a center of excellence for tropical aquaculture technology development.

The Institute(s) might profitably be associated with established Sea Grant institutions, but should have the mandate and capability to serve other U.S.-affiliated islands. Like the other federally funded tropical research institutions based on the islands, the Institute(s) would be a relatively small cadre of experts performing relevant research and could serve as a facility supporting graduate and post-graduate study. It also could serve as an information clearing-house and assist in identification of U.S. warm-water aquaculture experts for private firms, tropical universities, or government agencies interested in collaborative work and by identifying sources of funding for these kinds of exchanges.

Development of such an Institute would require funding for development of facilities and probably would take several years. Increased support for development of Sea Grant Program and/or insular government research capabilities might achieve virtually the same goal, potentially in a shorter time. Thus, alternatively, Congress could increase support for NOAA Sea Grant basic and applied research in such areas as aquaculture, fisheries, marine biotechnology, seafood quality, and seafood processing and marketing.

Local and Regional Cooperation in Research

While U.S. Federal research organizations have considerable expertise in resource-related fields and technologies, little of this research is expressly oriented to tropical environments, and still less is aimed at the social and cultural conditions found on the U.S.-affiliated islands. In addition, island governments have limited capability to conduct research on other than critical local needs.

Local and Federal research could be supplemented by taking advantage of research performed by regional and international organizations, and at similar institutions on neighboring islands. Research conducted by the South Pacific Commission, South Pacific Regional Environment Program, the Caribbean Agriculture Research and Development Institute, and other

regional research institutions can provide useful information.

Option: Increase East-West Center Activities in U.S.-Affiliated Pacific Islands

Congress could direct the East-West Center to increase resource-related research and analysis for the U.S.-affiliated Pacific islands and provide increased funding for such activities.

Activities could include increased support of the Research and Information Network of the South Pacific Regional Environment Program, which includes the U.S.-affiliated islands.

The East-West Center, established by Congress in 1972, is mandated to provide analysis of social, political, and other issues for Asia and the Pacific. However, the Environment and Policy Institute often has to work where the larger populations and matching resources can be found (i.e., Southeast Asia and South Asia). Similarly, the Pacific Islands Development Program research and training activities in Micronesia might be expanded.

Option: Support Development of the Eastern Caribbean Center

Congress could extend continued support and appropriate funds through the Department of the Interior and/or the Department of State to accelerate development of the Eastern Caribbean Center.

A regional research and information dissemination center for the eastern Caribbean, based at the College of the Virgin Islands, has been modeled on the East-West Center. The Eastern Caribbean Center was proposed to serve as a link between the United States and the island nations of the eastern Caribbean. The center's areas of study include:

- agriculture and aquaculture technology needs assessment,
- insect and disease distribution,
- food production research,
- food processing,
- water research inventory,
- data systems improvement,

- professional and midmanagement training, and
- telecommunications.

This center would expedite two-way exchange of information relevant to sustainable resource management on small Caribbean islands.

Option: Establish Cooperative Relationships With Regional and International Research Organizations

Congress could direct the U.S. Department of State to assist the insular government research organizations in establishing cooperative relationships with regional and international research institutions or major universities that can help with broad strategic and basic research.

For the most part, Department of State assistance could take the form of identification of such organizations and of expertise relevant to islands within the organizations. For the Freely Associated States, assistance also could include funding for informal participation in international conferences or meetings relevant to sustainable resource management and development on the islands.

These efforts would cost little, but may require that Department of State staff be increased or redirected to allow timely response to insular requests, potentially detracting from other programs.

EXTENSION AND TRAINING

Even where research has been conducted, where information is available, and technologies have been deemed appropriate to island conditions, few technologies will be widely adopted without: 1) extension of that information to potential practitioners, 2) demonstration of the associated technologies, and 3) training of the practitioners to develop any new skills needed for implementation. Most local government departments of agriculture and marine resources have designated extension staff, but these offices tend to be small, underfunded, and to have numerous responsibilities, hindering their effectiveness in transferring technology to practitioners.

Option: Joint Extension Programs

Congress could direct USDA, NOAA, and USDOJ to have the major Federal resource-related agency extension programs—Cooperative Extension Service, Marine Advisory Service, State and Private Forestry, and Fish and Wildlife Service—in cooperation with local department extension services to hold jointly conducted training workshops for field extensionists in the islands.

Goals would be to improve local extension skills and to assist extensionists to understand the assistance opportunities offered by Federal agencies and local departments of agriculture, marine resources, and fish and wildlife agencies. This could improve the efficiency of extension on limited budgets.

They might also establish regular joint programs to assist island practitioners in locating and communicating with island resource extensionists, given that most islanders are not solely farmers or fishermen, but engage in multiple enterprises.

Agriculture and Forestry

Each island area has a designated Land Grant college or university with an associated joint USDA Extension Service/Land Grant College/territory government Cooperative Extension Service. While this system is a uniquely in-

³The College of Micronesia, with headquarters on Pohnpei, serves the Federated States of Micronesia, the Republic of Palau (the Micronesia Occupational College) and, when the Nursing School is relocated from Saipan to Majuro, the Republic of the Marshall Islands.

tegrated Federal Government/local government/academic system designed to educate and assist agriculturists, the isolation of populations and travel difficulties create special conditions in the U.S.-affiliated Pacific islands. Neither the local colleges nor the local governments can supply adequate funds to maintain the extension staff needed to reach remote rural and outlying populations.

Option: Increase Support for Island Extension Services

Congress could direct USDA to increase support of insular agricultural extension programs to allow expansion of programs to reach remote populations.

This would coincide with the emphasis in the 1985 Farm Security Act on support for small-scale farms. However, this would require that monies be increased despite the current Administration's efforts to eliminate the program, or that funds be diverted from other extension programs for the continental United States during a period of decline in moderate- and small-sized farms, and may only be achieved within the framework of a general reorientation of the USDA Extension Service.

Aquaculture and Nearshore Fisheries

The University of Hawaii and University of Puerto Rico Sea Grant programs have established Marine Advisory Services to extend to practitioners information and technology for aquaculture, fisheries, and related marine-resource management. While these organizations have had a long-term interest in working with the other islands in their regions on problems pertaining to marine resource development, staffing and funding levels hinder the extension of Marine Advisory Service to U. S.-affiliated islands other than Guam.

Option: Expand Sea Grant Marine Advisory Service Activities in Islands

Congress could appropriate funds and direct NOAA to increase Sea Grant assistance in training and extension for aquiculture,

fisheries, and marine resource management for islands having Sea Grant representatives and to make such services available to the other U.S.-affiliated islands.

Additional Marine Extension Agents could serve the various island groups, either as on-island Sea Grant representatives or from bases at the Universities of Puerto Rico and Hawaii with travel funds provided to allow extension of information and technologies to other islands.

The infrastructure for the administration of the program already exists, but appropriate new personnel need to be identified and funded to serve islands presently without Sea Grant representatives. These people could be immediately tied into the existing Sea Grant System at universities that have the expertise to address the various problems. Training in key areas could then be more readily accessible to islanders wishing advanced technology or degrees.

Issue: Species Introductions

A need exists on the U.S.-affiliated islands for expert advice on proposed species introductions for aquiculture development and biological pest control and their likely impacts on island ecosystems. Without such expertise the islands run the risk of inappropriate species introductions with possible harmful effects on resources.

Option: Resident Fish and Wildlife Service Scientists

Congress could direct the U.S. Fish and Wildlife Service (perhaps jointly with NOAA Office of Sea Grant) to provide a resident scientist to the regions.

The scientist could provide advice on ecological aspects of agriculture and aquiculture, especially on introduction of aquiculture and biological pest control species and recovery of endangered species, and to conduct the necessary research to backup the advice. The resident scientist could be located at a certain land-grant institution within the islands, and provided with a budget to allow extension of this service to islands throughout the regions,

INCENTIVES

Some amount of regulatory measures and incentives are needed to prevent resource and environmental degradation in the short term until island residents become predisposed towards maintenance of resource productivity and environmental quality. In addition, incentives may be necessary to encourage people to undertake new or potentially high economic risk activities.

Initial incentives are availability and knowledge of potentially profitable technologies (provided by research and extension) and ability to implement them (provided by training). In some cases, where the social benefits are perceived to be higher than the private benefits, incentives or removal of disincentives maybe needed to encourage undertaking of appropriate activities. Incentives can be technical (e.g., marketing assistance) or financial (e.g., cost-sharing programs).

Issue: Marketing Assistance

Increasing agricultural productivity and establishing new island crops for export is important but only part of what is needed. Agriculture producers must have accurate, thorough information on markets for their products, and may need assistance in accessing those markets. Identifying markets and potential markets needs improvement in U.S.-affiliated islands.

Option: Agricultural Marketing Service Assistance

Congress could direct USDA's Agricultural Marketing Service to assist insular governments through three major programs: 1) the Federal-State Marketing Improvement Program, 2) provision of market news, and 3) agricultural product grading.

The Federal-State Marketing Improvement Program provides funds to States to solve marketing problems at the State and local level through Federal-State cooperation. *Market News* provides timely information on prices, demand, movement, volume and quality of all major agricultural commodities. Agricultural

Product Grading provides the producer and marketer of agricultural commodities with meaningful grades indicative of product quality.

Although the Federal-State Marketing Improvement Program probably has the greatest latitude for serving insular needs, *Marketing News* and the Agricultural Product Grading programs can be directed to provide information on major tropical agricultural commodities, such as fruits, to the insular governments. This may require expansion of their current programs.

Option: Sea Grant Evaluation of Aquacultural Marketing and Economics

Congress could direct the Department of Commerce to have NOAA's Office of Sea Grant programs conduct an assessment of aquacultural marketing and economics issues for island aquiculture development.

NOAA does not have a marketing assistance program corresponding to that of USDA described above. However, identification of potential markets is integral to the development of successful aquiculture enterprises. An assessment of local and export markets for aquiculture products that could be grown on the islands could provide an improved basis for estimating the potentials for aquiculture development on the islands, and might serve as an indicator of research needs (e.g., if a substantial market is identified but the present culture technology is unsuitable for implementation in the islands). Such an assessment might also identify barriers and means to overcome the barriers to exporting products into non-U.S. islands and nearby countries, such as Japan.

Issue: Conservation Cost-Sharing Programs

In recent years, cost-sharing and other incentive/assistance programs have been reduced in favor of U.S. Federal income tax incentives. However, such incentives programs have, in some cases, formed the basis for local government activities to develop resource enterprises.

Because the islands do not participate directly in U.S. Federal income tax structures, tax-based incentives are an ineffective means to encourage participation in sustainable resource-related activities. For example, despite a recent resurgence in forest planting and management in Puerto Rico, further reduction or elimination of the USDA Forestry Incentives Program (FIP) (which offers up to 70 percent of forest establishment costs) may bring local planting to a standstill.

Option: Establish Insular Resource Management Cost-Sharing Programs

Congress could authorize and appropriate for a new USDA program to provide cost-sharing and technical assistance to insular individuals undertaking approved agriculture, soil and water conservation, forestry activities (such as those offered by the current Agricultural Stabilization and Conservation Service’s Agricultural Conservation Program and Forestry Incentives Program), and fisheries and aquaculture activities.

To ensure that activities are appropriate to maintain island resource sustainability and productivity, individuals’ development plans might require approval by an appropriate Federal agency representative (as FIP participation requires plan approval by the U.S. Forest Service). Local government agencies, regional centers of excellence or similar agencies might be designated to administer the programs to mitigate travel costs and similar problems.

Issue: Impacts of Income Support and Food Programs

A high percentage of island populations are eligible for and participate in U.S. income support programs. Some analysts argue that this reduces the incentives to invest money and labor in resource-related enterprises.

In addition, USDA and the Department of Health and Human Services (DHHS) food programs operate in most U.S.-affiliated islands. For example, some 1 million pounds of food is imported each year into the U.S. Pacific is-

lands under the School Lunch Program. Locally grown island commodities, in some cases, account for 15 percent of program lunches. Increased use of locally grown foods in such programs could provide markets and incentives for expanded island agricultural activities and, as such, increased economic benefits to the islands.

Option: Analyze Income and Other Support Programs

Congress could direct USDA and HHS to perform a joint analysis of eligibility formulae, nutritional and other impacts of U.S. income and other support programs.

Should such an analysis indicate a high level of “marginal participants” (i. e., those participating in but not substantially benefiting from such programs), support funding could gradually be reduced or a proportion of such funding could be redirected to cost-sharing assistance programs.

Option: USDA Analysis of Island Contributions to the School Lunch Program

Congress could direct USDA to prepare a report assessing the current and potential role of locally grown island food in island School Lunch Programs.

USDA should address questions of nutrition, and the beneficial or adverse economic impacts on the island economies from increasing locally grown food in the program. Also, USDA should recommend a target level for incorporation of island grown food in the program and in proposing the target level, examine whether the locally grown food’s contribution to the program should, for example, be measured as a dollar percent, a weight percent, a volume percent, or as a percent of the total nutritive value of the lunches. Other USDA/DHHS food and nutrition programs such as Women, Infants and Children; Nutrition Program for the Elderly and derivatives of the Food Stamp Program could also be assessed.

Locally grown island foods may find greater acceptance among school children than certain imported items because of the familiarity with

the local crops. However, local storage and refrigeration facilities may not be adequate to assure schools of delivery on a regular basis. Increased purchase of local food to supply these

programs may have deleterious effects on the availability or price of food available on open markets.

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