

Institutional Capacity in Agriculture

Agriculture Policy

While Vanuatu has a clear statement of overall economic policy in the form of the CRP document, it has no comprehensive policy for agriculture. This does not mean that there is no policy direction, as CRP principles also apply to agriculture. These principles include private-led development, privatization or contracting out of commercial activities, and user charging for the provision of services. However, the CRP is macro- rather than micro-oriented. There is a need for an agriculture policy built on CRP principles that provides a detailed road map for the development of the sector. In particular, there is a need to define the role of Government. Many of the constraints on agricultural development identified in this review can be linked directly to inappropriate policies and regulations.

Most of these are economy-wide policies, such as import protection, distorting taxes, and barriers to entry. Agriculture has also been harmed by policies and regulations specific to the sector, such as state involvement in marketing and production. The sector has also not received much benefit from Government agricultural programs, such as extension and research, because these have been poorly focused and insufficiently resourced.

A key focus of the CRP is economic development led by the private sector. This means that the MAQFF needs to focus on its core activities. These are:

- Regulating economic activity to address externalities (for example, quarantine services and environmental regulations)
- Providing services that are inadequately provided by the private sector, that is, correcting market failures (for example, the certification of products such as kava)
- Identifying and working to remove policy and other constraints on the development of agriculture

These roles if competently carried out would facilitate sustainable private-sector development and ensure that such development is in the national interest.

Past governments in Vanuatu pursued noncore activities such as production, the supply of planting materials, capital, and other inputs to smallholders, and commodity marketing. These are not core activities and recognizing that they are best performed by the private sector, the CRP has directed the MAQFF to withdraw from these noncore activities. But while there has been some withdrawal from these activities, the MAQFF is still in the livestock business, the

extension service still supplies planting material, as does the VARTC, and a number of state enterprises, such as Metenesel, have yet to be privatized. Most of these functions could be provided more efficiently by the private sector. It is important that MAQFF resources not be diverted from core functions by noncore activities that could be provided by the private sector.

A major part of the core activities of the MAQFF in relation to the sector involve the provision of information. This would include agricultural extension services focused on technical issues, market information (relating to trends in demand, prices, and emerging opportunities), and agronomic and economic research. The MAQFF's activity in these areas is justified only to the extent that markets do not provide adequate information. However, information is a commodity that is costly to produce and has market value. It is critical therefore that the MAQFF does not prevent the development of markets in agricultural information by providing subsidized or free sources of information.

Capacity and Activities of the Ministry

In this part of the review the structure, objectives, activities, and resources or capacity (funds, staff, expertise) of the MAQFF and each of its divisions are assessed. The objectives and activities are assessed for consistency with CRP principles. The capacity and performance of each of the divisions are analyzed to determine if the MAQFF's overall budget could be reallocated to achieve more efficient outcomes. The discussion then turns to how the various services (or core activities) provided by the MAQFF need to evolve so as to assist rather than hinder the development of markets in agricultural products, supplies, and services (including information). Funds budgeted in the year 2000 for the various agriculture programs are summarized in Table 3.

Policy development, market information, and economic research

Programs and activities

The Corporate Division provides policy advice related to the activities of the MAQFF, and corporate services to the divisions. It does research and prepares policy papers.

Evaluation of performance

The Division has no capacity to undertake its functions, since it has no funding and has only one person in its staff. The corporate, economic research, and policy development functions and resources

Table 3: Agriculture Division Expenditure in the 2000 Budget, by Program (vatu)

Budget Programs	Total Expenditure	Government Contribution	Donor Grants	Aid in Kind
47AA Tree crops extension	0	0	0	
47AB Other crops extension	6,963,000	6,963,000	0	
47AC Vehicle and building maintenance	7,030,000	7,030,000	0	
47AD Extension administration	11,965,000	11,965,000	0	
47AE Food security project	12,107,000	837,000	11,270,000	
47AG Farming system	2,180,000	1,596,000	584,000	
47AJ POP	120,273,000	31,962,000	0	88,311,000
47AL Belerou project	74,600,000	2,600,000	0	72,000,000
47AM Animal production services	12,848,000	12,848,000	0	
47AR Metenesel	0	0	0	
47A Agricultural extension	247,966,000	75,801,000	11,854,000	160,311,000
47CA Perennial crop research	57,877,309	0	0	57,877,309
47CC Diversification	15,584,000	0	15,584,000	
47CE Coconut-based farming system	2,930,000	0	2,930,000	
47C Research	76,391,309	0	18,514,000	57,877,309
47DA Corporate services	20,021,998	19,591,998	430,000	
47DB Information	17,250,964	17,250,964	0	
47D Corporate services	37,272,962	36,842,962	430,000	
47EA Economic support services	6,172,220	3,055,220	3,117,000	
47EB Marketing assistance	2,157,966	2,057,966	0	100,000
47E Economic support services	8,330,186	5,113,186	3,117,000	100,000
Total agriculture	369,960,457	117,757,148	33,915,000	218,288,309

Source: Government of Vanuatu (2000)

were to have been transferred to the Division from other divisions as part of the restructuring.⁵⁰ Twenty-three new positions were to be created. However, the Ministry of Finance rejected funding for the Division in 1999 and 2000, despite the approval of its establishment by the Public Service Commission. As a result, the MAQFF has no resources to develop policy based on sound research, and no capacity to provide advice on ongoing policy issues. It cannot provide the sector with economic and market research or facilitate private-sector investment. Finally, it has no capacity to engage in consultations and necessary cooperative policy development with other ministries.

Future directions

Wide-ranging policy and regulatory constraints hinder the development of the agriculture sector. While the MAQFF is not primarily responsible for removing these impediments, it does have a role in representing the interests of its clients and can usefully undertake research to show how these constraints restrict development and to quantify the benefits that the national economy can derive from their removal.

A major constraint facing farmers, particularly smallholders, is isolation from markets, in terms of physical distance and lack of access to modern communications. The Ministry can play a useful role in collecting and disseminating market information such as demand trends, prices, and market opportunities, for existing as well as new products. This information needs to be collected and distributed in a targeted and cost-effective manner. The Ministry could make greater use of mass media, including newspapers, video, and radio, as well as Internet-based delivery of information to central points, such as an extension facility, where this is feasible.

It is also important to take into account that markets are very efficient at providing information to prospective buyers and suppliers about opportunities, prices, new technology, and other matters. The MAQFF has to be sensitive to market developments to ensure that its services complement, and not compete with, the information services provided by the market.

⁵⁰The Training and Information Section ceased to exist despite its activities being integral to extension work. No budget submissions were made to provide staff and resources for training and information programs in 1999 and 2000, the reason being the directive that those training and information services were now the responsibility of the Corporate Division. The former Information Officer was reassigned as Purchasing Officer. The well-equipped training and information facilities, provided through the ADB-funded extension project in the 1980s, are still found in the Agriculture Division at Tagabe but without budget provisions.

Agricultural Extension Service

The Agricultural Extension Service within the Division of Agriculture and Rural Development (DARD) promotes improved crop and livestock production techniques, particularly on smallholder farms. The service also assists in marketing and the supply of inputs to farmers. Broadly speaking, the extension service works to improve the welfare of farmers by sustaining and improving crop and livestock production techniques and facilitating the marketing of agricultural products to raise incomes and to meet the nutritional needs of rural populations.

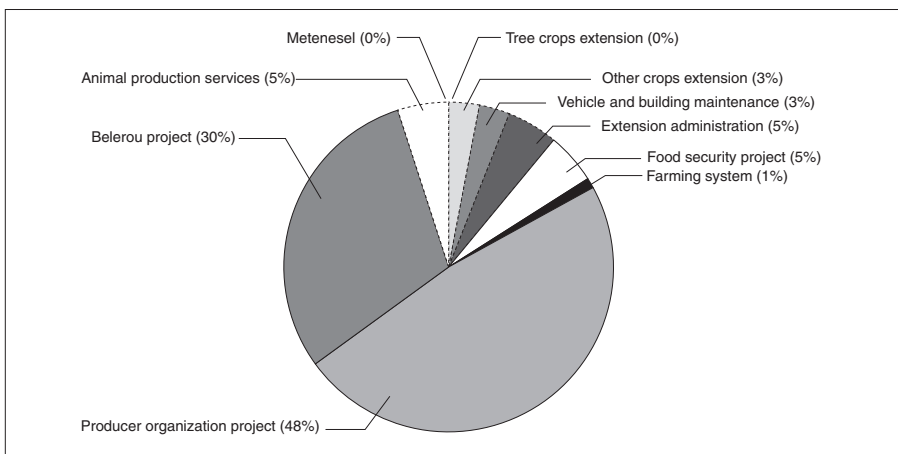
Funding for the Agricultural Extension Service in the year 2000 is set out in Table 3 above. The allocation of funding across the various extension programs is presented in Figure 9. In 2000, the Agricultural Extension Service accounted for 67 percent of total budgeted expenditure.

In 1999, a total of 92 staff positions were approved for the Service. However budget ceilings restricted staff to 67 filled positions. Most of the unfilled positions are senior staff positions. Many of the staff are scattered around the islands where they have been for long periods on low salaries. Only four extension officers have a university degree.

Programs and activities

Tree crops extension. Tree crops extension covers coconuts, cocoa, coffee, and citrus. The program aims to increase production and

Figure 9: Distribution of Funds Across Extension Programs



Source: Government of Vanuatu (2000)

quality by disseminating improved planting material and farming and processing techniques, promoting the development of alternative uses of crops (in the case of coconuts), and promoting business awareness and skills. An objective of the cocoa extension program is the establishment of organic cocoa associations on the islands of Malekula and Malo.

Service delivery in the case of coconut extension is achieved by distributing improved planting materials from the VARTC, conducting training, and assisting farmers in developing alternative uses. In the case of cocoa, delivery is through the dissemination of planting material and farming practices, training in basic business management, quality control, and marketing, and inspection of dryer facilities before a license is issued. For coffee, service delivery involves raising coffee seedlings in three nurseries in Tanna, providing training in field management and processing, and assisting in the establishment of the Tanna Agricultural Marketing Cooperative (TAMC) and ensuring its smooth operation. The citrus extension service ships seedlings to Aniwa and trains farmers in disease and pest control.

A range of performance measures has been developed for each service. For coconut extension the performance measure is 47 hectares of new plantings in the four northern provinces and an increase in the total number of farmer nurseries. Cocoa extension will measure its performance against the yardstick of 31 hectares of new plantings of hybrid material, the issue of at least 75 licenses, a 10 percent improvement in bean quality, and better access to markets for producer organizations. Progress in coffee will be measured against plantings of 60,000 seedlings and the start of marketing by the Tanna Agricultural Marketing Cooperative (TAMC). The performance measure for citrus is the planting by Aniwa farmers of 24,000 improved citrus seedlings.

Other crops. This program covers food crops and spices. Its objective is to increase the production of food and vegetable crops for local and overseas markets, to make improved planting material available to farmers, and to strengthen market information systems. The spices program seeks to promote and develop spices, and to improve quality and production methods.

Service delivery in the case of food crops is done by establishing marketplaces for local food crops and setting up multiplication and demonstration plots and on-farm trials. For spices, service delivery is through facilitating the supply of planting material and providing market information and training in farming and processing tech-

niques. The performance measures for food crops are the financial benefit to farmers from the sales (whatever that means). For spices, the performance measure is an increase in the total volume of spices (pepper and vanilla) produced by smallholders.

The other crops extension program had a budget of around Vt7 million (US\$53,000) in 2000. This is equal to 3 percent of the total extension budget of the Service. Of this amount, wages and salaries account for 77 percent, leaving only US\$12,000 for other expenses. It is obvious that the budget is a major constraint on the provision of effective extension services to smallholders.

Farming systems. There are two programs on farming systems, the Farming Systems Development Project and the Coconut-Based Farming Systems Project (supported by IGPRI). Together, these projects had a budget of Vt5 million in 2000. The objective of the Farming Systems Development Project is to investigate and develop sustainable, socially acceptable, and viable farming systems and to extend agro-forestry soil and nutrient conservation technologies to farmers. The means of service delivery are on-farm research, the establishment of tree multiplication plots for distribution to farmers, and the compilation of extension “packages” on different farming systems. Performance is to be measured by the number of farmers adopting practices to sustain soil productivity.

The Coconut-Based Farming System Project seeks to document coconut genotypes and their uses, to test intercropping systems on farmers’ land, and to extend suitable technologies to other farms. The means of service delivery are the identification of farmers experiencing land pressure, the establishment of on-farm trials, and data collection. The performance benchmarks are the establishment of five on-farm trials and the financial and social benefit realized from an intensified system.

Cooperatives. There are two projects involving rural cooperatives. These are the Producers Organization Project (POP) and the Beleru Project. Both projects are sponsored by French agencies. In 2002 the European Union will also support the POP. These two projects together account for 79 percent of total expenditure budgeted for the Agricultural Extension Service (see Table 3). The total planned expenditure on POP for 2000 was Vt120 million (including Vt88 million in “aid in kind”); Vt75 million (including Vt72 million in “aid in kind”) was planned for Beleru. The Government contributed Vt32 million for POP and Vt2.6 million for Beleru in 2000—around 46 percent of its total contribution to the extension service (Table 3).

The objective of the POP is to stimulate economic development in rural areas by developing rural producer cooperatives and improved marketing. The stated means of service delivery are assistance in the registration and licensing of cooperatives where farmers have indicated an interest, and training in business management, quality control, and agronomy. The performance targets are the establishment of at least five cooperatives that operate independently and successfully, and new markets in organic cocoa, coffee, and kava.

The Beleru project has the objective of establishing a producer cooperative for the Beleru community. This will be achieved by registering members, providing a technical assistant with a Ni-Vanuatu counterpart, training members to manage the cooperative, and assisting in finding markets. The establishment of a legally recognized production and marketing cooperative serving the interest of its members and the financial benefits to farmers are the performance measures for the project.

Animal Production Service. This program aims to promote sound husbandry and management practices, to improve the breeding stock, to facilitate marketing, to develop and extend improved pasture and small-animal feed technologies, and to promote meat hygiene. The total funding for the animal production service in 2000 was Vt12.8 million, or US\$98,000. Of this amount, 76 percent was to be spent on wages and salaries.

The means of delivering service involve providing training when required, arranging the trucking and barging of cattle to abattoirs and restockers, providing improved breeding stock from Government and private farms, and establishing rural butcherries to promote marketing and hygiene. The success of the program is to be measured against the benchmarks of the delivery of 17 courses, 24 hectares of new and rehabilitated pasture development along with the establishment of pasture nurseries, the construction of a holding yard to support marketing on Tanna, the establishment of viable rural butcherries, and an increase in the number of small livestock.

Evaluation of performance

A US\$2.23 million investment loan project from ADB for the Agricultural Extension and Training Project was implemented between 1983 and 1990. The original project was redesigned midway through implementation to establish eight farm development centers instead of establishing experimental plots and demonstration farms, which was found to be inappropriate. A post-evaluation of the project by ADB in 1994 concluded that the project was only partly successful

because “project performance was impeded by acute shortages of staff and funding resources.” Only three out of the eight farm development centers were completed, and available fellowships and study tours were underused. Subsequently, field agricultural extension services were severely reduced following the 1993 civil service strike that resulted in low staff morale and loss of experienced staff.

The School of Agriculture, which had provided curriculum-based certificate-level training in agriculture, was closed in 1983. As a result, 95 percent of current front-line extension workers in the Division are not appropriately trained. Staff had been recruited from the Young Farmers Program, and when this program was terminated, school leavers were recruited. Thus it is not surprising that the provision of agricultural extension services is weak and ineffective.

The reduction in staff following the implementation of the CRP further worsened the capacity of the Division to provide extension services in the villages. There was no proper manpower needs assessment for the Division, or for the MAQFF in general, to determine the most cost-efficient manpower requirement that would enable the MAQFF and its divisions to fulfill their mandates effectively.

Extension services are handicapped by a lack of extension support materials due to the absence of funding for the now idle information unit. Field extension staff receive no in-service training. Infrastructure for extension service staff is inadequate. There is a lack of transport for field extension staff and staff housing is in disrepair. As a result, the field extension staff are not technically equipped to support and advise farmers. There is also no proper mechanism for linking VARTC research and the Extension Service, resulting in little dialogue between the two services.

In 1998, the Extension Service became involved in organizing farmers through the establishment of formally instituted cooperatives (generally referred to in Vanuatu as “producer organizations”). This initiative has been driven more by the VARTC than by the Extension Service. Around 80 percent of the tight budget for the Extension Service is now spent on programs designed to develop and assist producer cooperatives.

There is no cost recovery in the provision of extension services and, at least until recently, planting material is made available free of charge. This is inconsistent with CRP principles that require each ministry to pursue cost recovery, particularly in the provision of services that could be provided by the private sector. Agricultural extension may be justified given the early stage of development of commercial farming. However, there comes a point where such free or

subsidized services act as a barrier to the development of private-sector extension services.

There is also no contracting out of extension services. Such services were identified under the CRP as a priority area for outsourcing, yet the decision was made not to contract out these services. Given the high proportion of MAQFF funds spent on extension and the poor return on funds spent, the option for contracting out should be reviewed.

The future of extension

Since independence, the Agriculture Division has operated a farm extension service aimed at increasing the knowledge and, it is hoped, the productivity of the smallholder sector. The Extension Service has also been involved in promoting new and improved planting materials and the growing of diversification crops. While lip service has been paid to marketing assistance, most extension has been focused on growing rather than selling crops. This has sometimes had the unfortunate consequence of growing crops for a nonexistent market.

The Agricultural Extension Service in Vanuatu has limited capacity because of funding cuts and because qualified and experienced staff have not been available to replace those who have left the service. The closing of the School of Agriculture in the 1980s, the 1993 civil service strike, and the rightsizing exercise of the CRP have all weakened the extension service to a point where it is no longer effective. There are not enough extension staff to serve smallholders and in many cases the information they provide is of little use to smallholders.

The future of extension services in Vanuatu needs serious consideration. Extension accounts for 67 percent of the DARD budget, yet it is not clear that the current program is contributing at all to agricultural development. Areas to be examined include the scope of extension activities, who should provide extension, and who should pay.

A high proportion of extension activities (78 percent of funding for extension programs) are devoted to the development of rural cooperatives under the POP and the Beleru Project. In consultations, concerns were put to the Review Team about the dominance of collective projects in the Ministry's agricultural programs and whether this was an effective use of these funds, which were being drawn away from other effective means of providing extension services, particularly the use of mass communications to reach farmers. The concept of agricultural cooperatives was very much the fashion in the 1950s and 1960s. But cooperatives set up in various coun-

tries, especially those driven by public funding support, have not been generally successful or sustainable.

The international literature indicates that externally induced or sponsored cooperatives are not sustainable. This experience suggests that cooperatives, to be successful, need to evolve from informal farmer groups. When induced from above, cooperatives have generally failed and in many cases have led to anticompetitive markets and become a burden on the public sector.

According to Cracknell (1996), the FAO experience has been as follows:

. . . The overall health of rural organizations, especially farmer cooperatives, in developing countries—excluding some Latin American and some more developed Asian countries, such as Korea and Taiwan—is not good, and particularly poor in Africa and the Near East. In fact, cooperatives in most less developed (LDC) and newly industrializing (NIC) countries are undergoing a difficult transition process as they adjust to free market conditions and diminished government intervention and support as a consequence of structural adjustment programs and market liberalization.... Indeed, FAO's experience gained during the past decade in Africa and Asia...has provided new insights regarding the advantages of using more participatory "bottom-up" approaches to building rural people's self-help organizations, including farmer cooperatives, but starting with the small informal group as the basic building block. Though this "bottom-up" organization-building process takes more time, field evidence has clearly shown that the organizations formed are far more sustainable and self-reliant than their "top-down" government imposed counterparts

In a World Bank discussion paper, Collion and Rondot (1998, page 3) observe that:

Legitimacy (of co-operatives) is often a concern—both the legitimacy of the organization itself and that of its leaders. Lack of legitimacy is often the result of externally-induced organizations that have been formed either by the government or by donors (such as the case of government-induced cooperatives formed in the 1960s).... Donor-induced organizations have emerged primarily to substitute for inefficient public agencies. As such, they tend to replicate public agencies' programs.... Both types of induced organizations are often not sustainable and their leaders' legitimacy remains questionable, as they do not necessarily represent members' interests and they are not accountable to them.

FAO (1996) recommended the following approach to addressing the sustainability of co-operatives:

. . . In FAO's view, the solutions to resolving this cooperative crisis are threefold: (a) improving the quality of legal and policy reform aimed at "de-officialization" and transformation of existing agricultural cooperatives and other farmer organization structures from state-supported rural enterprises into more independent, farmer-owned and financed cooperative-type businesses; (b) re-orientation and re-training of existing cooperative/farmer organization managers and government officials so as to promote more participatory, member-service-oriented approaches to strengthening farmer cooperative business performance; and (c) strengthening of the weak member capital base of agricultural cooperatives.

Cooperatives, though established to encourage more efficient dissemination of knowledge and to capitalize on economies of scale in marketing, can introduce economic inefficiencies. For example, they can reduce the range of buyers a grower can sell to and prevent them from capitalizing on higher offer prices. Reduced competition may not provide incentives for cooperative managers to continually seek the highest prices for their products and to continuously seek to reduce marketing and other costs.

The Review Team does not consider anything wrong in principle with cooperatives as a form of economic organization, provided the members can make a voluntary judgment that the benefits outweigh the costs of membership. The relative benefits and costs will vary from country to country and across historical periods. Whether or not cooperatives are appropriate to Vanuatu and in which circumstances they are appropriate will be revealed only if there is a grassroots demand for cooperative arrangements. The concept can be introduced, but whether it is adopted should be subject to the wishes of the smallholders. The Review Team does not advocate one form of organization or production system over another. In a free market, one would expect to see a range of arrangements, including cooperatives and individual business enterprises.

A fundamental difficulty with cooperatives in practice is that, through social pressures or exaggeration of benefits, they may become forced on individual growers, who otherwise would not consider the benefits of membership to outweigh the costs of individual marketing. If this is the case, then cooperatives are not an efficient way of organizing production and marketing activities. If individuals do see net benefits in acting collectively, they will do so. Indeed,

traditional society has evolved in a way that involves a high degree of cooperation between members of rural communities. This after all is the basis for the pooling of capital and labor through firms, partnerships, and other forms of business organization. An important feature of market organizations, however, is that continuation of membership is voluntary and members can therefore take their resources out and employ them elsewhere. Before spending scarce resources on state-sponsored cooperative arrangements, it is important to determine whether these funds could be more effectively spent on other forms of extension and on the improvement of the capacity of the Extension Service to provide its core services.

What information should be provided to farmers? Smallholders are adept at growing a wide range of crops and they have learned their science by a long process of trial and error across generations of farmers. There is no basis to assume their farming systems are inefficient, given the available resources and constraints with which they must deal. Extension could focus on new crops and techniques of which farmers have not been previously aware. However, the ability of the extension service to deliver such a service through the traditional means of one-on-one communication or communication to small groups needs to be reassessed. Mass communication is a highly efficient means of communicating large amounts of information to large groups of farmers. Unfortunately, Vanuatu's communications infrastructure is basic, although most people have access to newspapers and radio. The dismantling of the information unit in the DARD is unfortunate, as this unit could have focused on mass communications extension.

Another drawback to the information provided by the MAQFF to growers is that it is still heavily focused on farm activities, with little resources devoted to the gathering of broader information about local and overseas markets and opportunities. The MAQFF conducts no market or economic research and does not publish of statistics, situation reports, or relevant news.⁵¹

Markets are very effective providers of information to buyers and sellers. There is a range of possible sources of information to small and large holders. First, private developers and suppliers of seedlings, implements, chemicals, and a host of other things have every

⁵¹ In 1998, the Food and Agriculture Organization (FAO) assisted, under its TCP funding, the Market Improvement Project with the objective of "increasing commercialization of agricultural marketing in the outer islands." Technical assistance was provided to the DARD to establish a market information service within the Division. This was to train extension workers in marketing and to develop proposals for improving market infrastructure facilities such as storage and market bays in the outer islands. The Ministry had no funds allocated to this activity in its 2000 budget.

incentive to provide information in various forms to potential customers. Second, buyers of produce also have incentives to supply information to growers that will improve the reliability of supply and the quality of produce.

The privatized Tanna Coffee estate operates as a nucleus estate purchasing coffee from smallholders on Tanna. The estate provides assistance and information about the growing of coffee and provides an outlet for coffee grown by smallholders. Smallholders can bypass the estate so there is no unequal contractual arrangement. The owners of the Tanna estate have all the incentives to raise the productivity of growers, as this will be reflected in lower cost and better quality to them. The incentives of the growers and the estate are perfectly aligned.

Another form of private extension service is that provided by consultants on a fee-for-service basis. Competition among different providers can be expected to improve service quality and to reduce the price of information. At present, only large holders use such services to any extent. This does not mean that this market will not grow in the future, particularly if constraints on the agricultural sector are eased by sound policies. It should be noted that free extension services, provided the quality of advice is of any value, could prevent the development of a service that needs to charge for its advice.

Many view the provision of extension service to be a necessary service provided to smallholders and believe that its provision should be subsidized, if not free. One advantage of pricing services is that it places a clear value on them and growers will be sparing in their use of such services. They will also be selective, paying only for those services that create value for them. This provides a useful discipline on the providers of extension services. If their client base is diminishing, this is a clear signal that their advice is not wanted. However, if the public service is not managed effectively, the providers may not respond to this information in a timely way with the result that they continue to devote staff and resources, increasingly idle, to providing unwanted services.

An approach to extension that may overcome some of these problems and increase the effectiveness of extension services is as follows. The MAQFF could agree to devote an amount of funds to extension as a public good or community service obligation. However, to improve the efficiency of its delivery, the service could be contracted out through competitive tender to private providers. Tenders would cover such matters as services to be provided, prices to be charged (to the Government or with contributions by growers), and performance targets to be achieved. Current and past extension officers

could form a pool of resources upon which this service could be based, although some expatriate officers would most likely need to be involved in the initial stages, partly to train their local counterparts. Where efficient, contracts could be awarded to more than one firm to allow competition and comparison of performance.

Under the current system, the MAQFF will always have a limited budget as long as it cannot recoup costs through fees. Even if it is able to increase its effectiveness, there will always be a limit on the services it can provide. Not charging for services means that the services have to be rationed such that those most in need of such services may not be sufficiently supplied. A more market-based system would have the advantage of calling forth increased supply as demand for services rises and directing those services to areas where they are more productive.

Agricultural research

The VARTC is responsible for conducting agronomic (cash crops and food crops) and livestock research and training agricultural staff.⁵² The services are provided under a contract with the Government. The Center is partly Government-funded and partly donor-funded. It is accountable to the Government through a steering committee chaired by the Director General of the Prime Minister's Department and consisting of Government and staff of CIRAD. The VARTC was created in 1992 and has been managed under contract by CIRAD since 1994 and headed by a CIRAD-funded expatriate Director.

In 1999, the VARTC had 85 staff paid for by the Vanuatu Government and six expatriates paid by CIRAD. The Government contribution to running the VARTC is made through the DARD budget submission. The Director of the DARD is required to make budgeted grants to the Director of VARTC quarterly.

Programs and activities

The objective of the VARTC is to undertake, implement, and manage agronomic research and training in agriculture in Vanuatu. The VARTC requested funding in 2000 for three main project areas: perennial crops research, livestock research, and diversification research. Perennial crops research covers coconuts, cocoa, and coffee research. The VARTC reinforces its research through technical assis-

⁵² At present, all agricultural research programs, with the exception of regionally funded research initiatives, are undertaken by the VARTC, with facilities in Santo. There are no built-up research facilities on any other islands, including Efate, where the headquarters of all agricultural agencies are located.

tance agreements with entrepreneurs and cooperative producer groups. In coconut research, the main priority for the next five years will be to develop the high-yielding tall Renell/tall Vanuatu hybrid. The coconut research programs are aimed at improving productivity and increasing value added, replanting old plantations with improved cultivars, intensifying cropping systems, associating coconuts with other crops and livestock, and training DARD staff.

The means of service delivery include the production of hybrids for dissemination, the provision of knowledge on and assistance in value adding, technical assistance agreements with private or public partners, advice on companion crop activities and technical committees, and training on relevant topics. Performance measures include the production of a number of seedlings of two hybrids, the performance of 45 training days, and the provision of three technical documents and services to the Extension Service and two reports on research activities and results.

Cocoa research and development seeks to promote cocoa production through the on-farm trial of improved cultivars, to improve quality through better post-harvest techniques, and to solve pest and disease problems. The VARTC is to deliver services by making available improved cultivars for dissemination, providing technical packages to improve yield and quality, and producing two reports on research activities and results.

The VARTC coffee program has the objective of developing coffee production through the production of robusta and arabica cultivars adapted to local conditions, increasing quality through improved post-harvest and processing techniques, and providing solutions to pests and diseases. The production of cultivars for dissemination and the provision of technical packages and reports are the means of service delivery. Performance is measured by the production and sale of 11,000 seedlings, the performance of 10 training days, and the provision of two technical documents and two support sessions to the Extension Service, 30 days of direct assistance to farmers, and two research reports.

The VARTC also performs livestock research and development, with the objective of improving productivity through the maintenance and dissemination of pure-breed cattle, research on forage production, and national scale genetic improvement programs. It delivers its services by providing high-genetic-standard animals to farmers, supplying improved forage feeds, promoting a data registration system, and providing training in artificial insemination techniques. Its performance targets are 20 genitors spread, 200 kilos of forage

seed sold, 30 training days performed, two technical documents and services provided to the Extension Service, and two research reports.

The third VARTC program concerns crop diversification. Activities under this program include agricultural cooperative promotion and support, research and development on kava, and research and development on roots and crops.

The motivation for the cooperative program arose out of the view that a weak Agricultural Extension Service undermined the dissemination of VARTC results. To improve on matters, and “following the directives of the CRP,” it was decided to improve the links between the VARTC and farmer cooperatives or groups.

The objective of the program is to undertake research and development of products or activities that have market potential, “respond to commercial niches,” and are affordable to farmers organized in cooperatives or producer groups. The services are to be delivered through feasibility studies and the provision of support and technical services to private entrepreneurs and producer cooperatives, including advice on processing, packaging, and marketing. The performance benchmarks are the establishment of five producer organizations on three islands (Santo, Malekula, and Tanna), 90 field and training days, and two research reports.

The VARTC under its diversification program also does research and development work on kava and root crops. Similar objectives and means of services are stated such as production of cultivars, technical assistance to cooperatives, training, and feasibility studies. Performance is evaluated on the basis of the supply of a specific number of reports, cultivars, and training days.

Evaluation of performance

The Government of Vanuatu invests considerable funds in the VARTC in the critical areas of research and development and training. The agriculture sector has virtually no other access to such research and training in Vanuatu. Around 20 percent of the funds available for agriculture sector programs are directed to the VARTC. Moreover, through the POP, the VARTC directs a further substantial proportion of the budget available for agricultural programs. There are two issues. First, the substantial commitment of funds to the VARTC and to the POP raises concerns that not enough funds are left over for other programs. Second, it is critical that the people of Vanuatu receive a rate of return on their investment. Maximizing the contribution of Ministry activities to the development of the agriculture sector requires that funds be allocated across activities

according to the expected economic and social benefits that those activities generate.

The work of the VARTC has contributed significantly to the development of the agriculture sector in Vanuatu. Its work is internationally respected and the Review Team heard little criticism of the quality of its research. However, this is not to say that even greater benefits could be derived from the research. Concerns were raised regarding research priorities and how the Vanuatu Government and the private sector could influence these, about the practical relevance of the research, about the dissemination of research findings through the Agricultural Extension Service, and about the nonresearch activities of the VARTC.

According to the MAQFF Corporate Plan, the VARTC operationally acts as part of the MAQFF. However, it seems that the MAQFF, and even more so the private sector, has little influence on the activities of the VARTC and its research priorities.

Commendable efforts have been made by the VARTC to have some researchers located at Tagabe to work closely with extension staff in their respective research programs. However, institutional linkage between research and extension needs to be reviewed and if necessary further strengthened to enable DARD's field extension service to have greater and more meaningful input into research priorities. DARD staff raised concerns with the Review Team about the linkages between the VARTC and the Extension Services. It would be appropriate for the MAQFF to review the role of VARTC in serving DARD's extension service and to ensure that VARTC's research priorities for Vanuatu are consistent with DARD's extension needs.

The performance measures set out in the program narrative for the VARTC's research activities are not based on financial performance variables. The number of reports, training days, seedlings produced, cooperatives created, etc., do not indicate how well the VARTC is performing and certainly not the net benefits accruing to Vanuatu from this research and extension. The Review Team feels that better techniques could be introduced for selecting and evaluating research programs that attempt to take into account expected net economic and social benefits.

Since 1998 the VARTC has undertaken the lead role in establishing 10 agricultural cooperatives around the country under the POP. To date, five cooperatives have been established (one each on Tanna, Malo, and Ambae and two on Malakula). Each cooperative has a contractual agreement with the VARTC (signed by the VARTC Di-

rector) with regard to use of funds provided by the VARTC through the POP (such as revolving funds and funds for the procurement of materials).

The VARTC, in its report to the Steering Committee in 1999, considered the POP to be a high-priority project. A project proposal was prepared in 1998 for donor funding at a total cost of Vt482 million (US\$3.7 million) over five years to set up the 10 cooperatives. The Government expected to contribute Vt130 million under the proposal. The remaining Vt482 million, consisting of technical assistance valued at Vt155 million, was to be funded by potential donors. Up to the time this review was completed, no donor had come forward.⁵³

Despite the absence of donors, CIRAD funded two expatriate staff (a technical adviser for three years and one volunteer for a year) to start establishing the cooperatives basically following the project proposal. The Division provided two senior staff and support extension staff. Since there was no donor funding, the Government was asked to provide counterpart funding to CIRAD's initiative. A budget submission of Vt32 million by the DARD for the cooperatives was rejected; the DARD therefore had no budget for the cooperatives in 1999 and 2000. The DARD Director was directed to seek funding elsewhere within the Division's own annual budget to meet the VARTC budget request. In 1999, the DARD could hand over only Vt4.6 million directly to VARTC for the POP. The Division is expected to transfer another Vt20 million to the VARTC as counterpart contribution to CIRAD's funding for the POP.

Since no budgeted funds were provided for POP in 2000, DARD was forced to redirect funds from other budgeted programs (or "activity savings") to support the POP. This was inconsistent with the underlying reform principles for the public service under the CRP, especially when funds budgeted for other programs had to be redirected to the VARTC.

Encouraging informal farmer groups (not necessarily in formal cooperatives) through which to channel research and extension information may be an effective approach to extension. At present it would appear that the formation of formal cooperatives is very much initiated and managed by the VARTC, whose primary mandate is to undertake research. Moreover, it is not clear why the VARTC is involved in extension activities and in particular in the development of

⁵³It is understood that since the review progress has been made in establishing EU funding for the POP.

cooperatives. The DARD's role is seen as providing personnel support and funds through grant disbursement. However, control of the funds for establishing the cooperatives lies not with the Division but rather with the VARTC.

In a discussion with the Chairman of the Tanna Cooperative, the Review Team learned that the establishment and support for the cooperative was driven by the initiative of the VARTC. The Division's assistance in the field involves the assignment of one field assistant in Tanna to help the cooperative.

Future directions for research

Agricultural research has a critical role to play in the development of the sector. Mechanisms need to be put in place to ensure that research reflects the needs or demands of the sector. Since the VARTC is the only agricultural research institution in Vanuatu, there is a need for greater input into research programs by the Ministry and by the private sector.⁵⁴ There is also a need to evaluate the benefits derived from VARTC research relative to the costs and to establish more economically oriented performance criteria. Likewise, more effective links must be established between research and the training of extension staff who will transmit the information to farmers. The Review Team notes the VARTC's frustration with the poor state of extension services. However, the VARTC has no role in providing extension services and certainly no role in establishing and supporting rural cooperatives.

The Review Team sees some merit in expanding agricultural research activities, by locating a facility on Efate. However, it is important that such a decision be taken only after a detailed review of existing research capacity and the requirements for agricultural research in Vanuatu, and a careful cost-benefit analysis of alternative options. This facility could complement and supplement research on areas not adequately covered by the research facilities on Santo, such as root crops, livestock, and indigenous crops. Encouraging a degree of competition between the facilities could also be of benefit in ensuring that research continues to be focused on meeting the demands of research clients. Any proposed research facilities at Efate, as with the VARTC on Santo, should meet the needs of the private sector as well as Ministry extension and policy staff. Preferably, for sustainability

⁵⁴Consistent with the recommendations made in this review, the Minister announced to a workshop on the review report (Port Vila, 9 November 2000) that the Government intended to undertake a review of agricultural research arrangements in Vanuatu.

and to ensure that its work is valued, the facilities should be self-supporting.

The proposed research facilities on Efate could also be used for providing training in agronomy and agricultural economics. The Government has indicated its intention to consider establishing an agricultural school or institute on Efate. There could be some synergies and economies in co-locating and linking the school with a research facility. The Review Team would recommend that such a school provide training in financial and economic aspects of agriculture, in addition to agricultural science.

Agricultural research in Vanuatu needs to adopt an increasingly commercial focus. There are a number of practical reasons for this. First, Government funding sources are very tight and funding for research is unlikely to increase in the future. Second, the private sector is also a source of research. Subsidized Government research has the potential to preclude the development of private research and development capability. Third, pricing of research provides strong incentives to ensure that the research undertaken contributes benefits that exceed its costs. Finally, while some research has the nature of a public good, and as such would not be adequately provided by the private sector, other research benefits distinct groups of farmers. Equity, as well as efficiency, requires that in such cases these beneficiaries should meet at least part of the cost of the research. If not, these individuals are being subsidized at someone else's expense.

Marketing

The experience with the VCMB indicates that direct government involvement in marketing is inappropriate. Under the CRP, the monopoly powers of the VCMB have been abolished and a restructured VCMB will now have to compete on its own merits with private marketers. The Review Team recommends that the VCMB be privatized as soon as practicable as there is no longer-term rationale for the Government to be involved in agricultural marketing.

What remaining role, if any, should the Ministry play in marketing? The Ministry has a role to play in facilitating private-sector development. This does not necessarily mean involvement in the actual marketing of commodities or the seeking out of new markets on behalf of producers. The private sector is better placed to do this. The Ministry can play a useful role in providing research and information about market developments in publications and in the media. In some cases, this research will have direct beneficiaries and there would be a case for user charges. In other cases the research

and information would be of a public nature, designed to benefit the whole sector. In such cases it may be less appropriate to recover full costs.

The Ministry has a role in promoting Vanuatu's export produce overseas by assisting the Ministry of Trade and the Ministry of Foreign Affairs with soundly based information about the merits of Vanuatu's agriculture exports and the opportunities for investment in Vanuatu. The Ministry also has a role in identifying barriers to access (put up by governments overseas) for Vanuatu's agricultural exports to overseas markets. In this role the MAQFF should support the relevant ministries in their market access activities and in their participation in international trade forums. There is a question of whether the MAQFF should be more actively involved in the development of overseas markets. Clearly, this would need to be assessed on a case-by-case basis. Generally speaking, the Review Team would consider the private sector to be responsible for market development. However, there may be circumstances where the MAQFF can efficiently provide a market development service to exporters. However, it would be important to recover the costs of such a service from those who benefit.

Exports of poor-quality kava in 1998 and poor-quality crops for a long time have raised concerns among both private operators and Government officials, leading to support for the consideration of export quality standards. Markets reward better quality with a better price. This is a powerful quality control mechanism that has worked all round the world and throughout history. Quality controls or standards, apart from those based on health and quarantine grounds, may reduce opportunities and stifle innovation in product design, composition, and presentation that "don't fit" the standard. As noted above, there are markets for all qualities to suit budgets and abilities to produce. Some growers may not be able to meet the standard—should they then be robbed of their livelihood? In any case, quality can normally be achieved only at a cost and therefore it is not always the case that production of the higher-quality grades is more profitable than the production of lower grades.

Serious thought needs to be given to situations where there is a prima facie case for export standards. Buyers are very good at quality control. If their standards are not met they buy elsewhere. But buyers purchase a range of quality grades suited to their purposes. One justification for standards is that poor-quality supply by one exporter can damage the reputations and sales of other exporters. This argument is not strong though. Normally culprits can be discovered and

penalized by lost contracts and markets are discerning, able to distinguish reliable from unreliable suppliers. In any case, poor quality of itself is not the real issue. What upsets buyers is unexpected quality: being sold something that is not up to their expectations. Again markets are better than governments in punishing poor suppliers and rewarding good suppliers. This provides buyers with every incentive to maintain standards. However, their decisions to invest in raising quality must be based on the expected costs and benefits. Optimal quality decisions will be made on this basis: the most profitable quality mix will be chosen. If governments set excessively high standards, this can present a barrier to industry development and competition,⁵⁵ and unnecessarily raise costs.⁵⁶

Quarantine and veterinary services

The Vanuatu Quarantine and Inspection Service (VQIS) is a newly created division that took over the regulatory functions of the former Departments of Livestock, Agriculture, and Fisheries. The VQIS has 47 approved positions, of which 35 are currently filled. A New Zealand aid program is being implemented to strengthen the Division's institutional capability. The VQIS is well focused on its core activities, which are to administer various laws and regulations. The Division is well served by technical assistance provided by New Zealand. While staff shortages are a concern, the Division is ahead of other divisions in the capacity to undertake its core activities. Moreover, as noted earlier, VQIS has taken steps to contract out some services and to introduce user charges.

The VQIS practices cost recovery and revenues for the year 2000 were expected to total Vt40,000. Abattoir levies accounted for Vt22,000, pest management Vt6,000, drugs and animal treatment Vt3,300, and export permits and certificates Vt4,700. The Division currently recoups about 40 percent of its total outlay of Vt86,000.

There are, however, a number of issues with cost recovery. First, costs recovered are poorly related to outlays and poorly related to the beneficiaries. The level of cost recovery from veterinary services is also low. This raises some concerns as the VQIS is potentially competing with private providers of these services. The VQIS should, over time, work toward full cost pricing wherever possible and in

⁵⁵ Producers will invariably be consulted about the appropriate standards and these will be based on what they produce.

⁵⁶ Tax an activity and it will shrink. Regulate it and it will die a slow death, often bleeding money and taking large amounts of public monies with it.

the longer term consider privatizing veterinary services. Another issue that should be considered in the longer term is the scope for contracting out inspection and quarantine services.

VQIS has a critical role to play in preserving Vanuatu's natural resource base from disease and pest threats. Vanuatu's relatively pest- and disease-free environment makes a major contribution to food security and holds considerable potential for the development of fresh and organically grown food exports. This favorable status cannot be taken for granted and VQIS must continue to develop its capacity. In addition to this critical defensive role, VQIS may also play a positive role of assisting the private sector in capitalizing on Vanuatu's favorable pest and disease status. It could do so by negotiating agreements and protocols to ease the passage of Vanuatu's exports into other countries. It could also assist organic farmers in developing or using organic produce accreditation schemes.

Food security issues

Food security is a central policy objective in any sector policy and Vanuatu is no exception. In the past, there have been a number of approaches or models adopted to ensure food security, including the use of trade taxes or subsidies to encourage the domestic production of basic food products.

Food security is an important objective. Developed economies take it for granted because markets are developed and operate efficiently. As the experience of countries worldwide has shown, efficient markets provide a high level of food security at least cost. Achieving food security through import replacement can have the effect of raising the amount consumers need to spend to obtain their basic food requirements while at the same time increasing the risks of shortages. This is particularly the case if it is not profitable to compete with imports and if governments encourage the growing of crops that are inappropriate to local conditions. From international experience, the best way to achieve food security at least cost is to encourage the development of an internationally competitive agricultural sector. The Review Team has identified the factors that have undermined the competitiveness of Vanuatu's agriculture sector. The achievement of a greater degree of food security at lower cost requires the dismantling of these impediments.

Environmental and land use regulation

Agriculture in Vanuatu is subject to minimum environmental and land use regulations. This may well be appropriate, given the rela-

tively low environmental impact of traditional farming practices and the limited development of commercial farming. The Review Team did not discern any major environmental issues associated with the sector apart from isolated examples of soil erosion due to monoculture on sloping land, concerns that logging rates may be unsustainable in certain areas, fishing pressure near urban areas, and depletion of trochus on some reefs.

However, there is a need to anticipate adverse environmental issues and to develop appropriate regulations in advance of further commercial development. Otherwise environmental problems may emerge and developing industries may prove unsustainable. The current position of the Environment Unit is unclear. At the time of the review there was some consideration being given to moving the Unit to the MAQFF. Even if the responsibility for environmental protection is left outside the MAQFF, there may still be a responsibility for the MAQFF to examine actual and potential environmental effects specific to agriculture, forestry, and fisheries. The Agricultural Extension Service could play a more proactive role in encouraging sustainable farming and land care practices along with the Fisheries and Forestry divisions in continuing to encourage sustainable fishing and logging practices.

Conclusions and Recommendations

This review of the capacity of the MAQFF indicates that it is not equipped in terms of staff numbers, staff qualifications, and budgets to effectively carry out its core activities. This is particularly the case in relation to policy development, economic and market research, private-sector facilitation, and agricultural extension services. The divisions of the Ministry are carrying out noncore activities, such as some veterinary services and livestock and seedling production, that would be more appropriately carried out by the private sector. There has been little examination of the scope for contracting out services, apart from VQIS and VARTC research, and services that may be competing directly with the private sector, now and more importantly into the future, are provided free of charge.

The development of the agriculture sector requires a wide-ranging program of economic reforms and restructuring of MAQFF activities. The Ministry, in its current form and with its current resources, does not have the capacity to undertake these reforms alone and, given the outlook for the Government budget, is unlikely to receive additional funds from the Government that are necessary to recruit appropriate staff.

The Review Team makes the following specific recommendations with respect to institutional strengthening. There is a need to develop an agriculture policy or strategy. This policy needs to be developed by all stakeholders in the agriculture sector and formally adopted by the Government of Vanuatu. The policy will provide a road map or guidelines for the future regulation of the agriculture sector. It will define the goals for the sector.

The policy would clearly define the role of Government in the sector and the mandate of the MAQFF. It would set limits to the degree to which the Government could restrict and encroach on private-sector activities. The policy would also establish a set of principles to be followed by the MAQFF in relation to such matters as contracting out and charging for services provided. The core functions of the MAQFF need to be established, on the basis of the agriculture sector policy.

The next step in institutional strengthening would be to review the manner in which the MAQFF is currently conducting its core activities, including consideration of alternative approaches that are more likely to result in greater net community benefits. Given these core functions and the preferred approach to achieving these functions, there needs to be an assessment of the staff and other resources required by the MAQFF to effectively conduct its core activities.

The Review Team identified a number of weaknesses in the provision of extension services and in relation to current arrangements for agricultural research. The adoption and implementation of the agriculture policy, the subsequent review of core activities, and the resource needs assessment will address many of these institutional weaknesses.