SPS CAPACITY IN SIERRA LEONE

WATH/Accra Technical Report No. 14

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DISCLAIMER

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ACRONYMS AND ABBREVIATIONS

AG	Attorney General
ARSO	African Regional Organization for Standardization
CODEX or CAC	Codex Alimentarius Commission
DFID	Department for International Development of the United Kingdom
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organization
GMO	genetically modified organisms
HACCP	Hazard Analysis for Critical Control Points
IPPC	International Plant Protection Convention
ISO	International Standardization Organization
IPM	Integrated Pest Management
IPPC	International Plant Protection Convention
ISPM	International Standards for Phytosanitary Measures
LMO	Living Modified Organisms
MCS	Monitoring, Control and Surveillance
MDAs	Ministries, Departments and Agencies
MES	Ministry of Environment and Science
MOFA	Ministry of Food and Agriculture (Ghana)
NaNA	National Nutrition Agency (The Gambia)
NARI	National Agricultural Research Institute
NEP	National Enquiry Point
NPPO	National Plant Protection Organization
OIE	*Office International des Epizooties*
PCE	Phytosanitary Capacity Evaluation
PQS	Plant Quarantine Services
PRA	Pest Risk Assessment
PSRSA	*Programme Spécial Régional pour la Sécurité Alimentaire*
RASFF	Rapid Alert System for Food and Feed
SPS	sanitary and phytosanitary
TCP	Technical Cooperative Program
UEMOA	*Union Economique et Monétaire Ouest Africaine*
U.S.	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VPH	Veterinary Public Health Unit
WATH/A	West Africa Trade Hub/Accra
WTO	World Trade Organization

1. BACKGROUND

In the World Trade Organization (WTO) Agreement on Sanitary and Phytosanitary (SPS) Measures, Annex A defines an SPS measure as one applied:

- for the protection of animal[1] or plant[2] life or health within the territory of a member from risks arising from the entry, establishment or spread of pests[3], diseases, disease-carrying organisms or disease-causing organisms;
- for the protection of human or animal life or health within the territory of a member from risks arising from additives, contaminants[4], toxins or disease-causing organisms in foods, beverages or foodstuffs;
- for the protection of human life or health within the territory of a member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or
- for the prevention or limitation of other damage within the territory of a member from the entry, establishment or spread of pests.

Globalization has increased international trade in agricultural food products and with it the risk of spreading new food-borne diseases internationally. Global food issues now demand international standards, that is, food standards and controls enforced in all countries. If standards are harmonized internationally, they will facilitate trade, both domestically and internationally. Trade itself promotes economic development and improves the standard of living. Harmonized standards also contribute to a more open trading system that is rule-based, predictable and non-discriminatory.

1.1 Highlights of the WTO-SPS Agreement

The agreement on the Application of Sanitary and Phytosanitary Measures (the "SPS Agreement") came into existence with the establishment of the World Trade Organization on January 1, 1995. Basically, the SPS Agreement aims to maintain the sovereign right of any government to provide the level of health protection deemed appropriate, but at the same time ensure that these sovereign rights are not misused for protectionist purposes or as barriers to international trade. The Agreement mandates that such regulations be based on science, and that they be applied only to the extent that they are not arbitrary.

The agreement encourages WTO member countries to use international standards, guidelines and recommendations, where they exist, e.g., in the case of the *Codex Alimentarius*.[5] However, the agreement still allows countries to use different standards and methods of inspecting products, as long as the regulations are based on analysis and assessment of objective and accurate scientific data. If the national requirement results in a greater restriction of trade, a country may be asked to provide scientific justification and demonstrate that the relevant international standard would not diminish the level of health protection the country considered appropriate. An acceptable level of SPS risk can be achieved by the use of different criteria. Among the alternatives, governments should use the least trade-restrictive criteria that at the same time meet the health objective. The agreement checks unjustified discriminate use of SPS measures, whether trade barriers favour domestic producers or subsidies enjoyed by foreign suppliers.

Additionally, the agreement emphasizes the transparency of SPS measures. Governments must, if requested, make known the factors taken into consideration in the systematic risk assessments they performed to arrive

[1] "animal" includes fish and wild fauna
[2] "plants" includes forest and wild flora
[3] "pests" includes weeds
[4] "contaminants" includes pesticides and veterinary drug residues and extraneous matter
[5] The relevant standard-setting organizations for the SPS agreement include: the Food and Agriculture Organization of the World Health Organization (FAO/WHO), *Codex alimentarius* (for food), the International Animal Health Organization (*Office International des Epizooties,* for animal health) and the FAO's Secretariat of the International Plant Protection Convention (IPPC) (for plant health). Individual governments can add any other international organizations membership, which is open to all WTO members.

at their measures. They must also notify other countries of any new or changed SPS requirements that affect trade, as well as set up offices ("enquiry points") to provide information on new or existing measures. The agreement requires that governments be open to scrutiny of their methodologies for the application of SPS measures. The systematic international exchange of information and experiences provides a better basis for national standards.

1.2 Trends and developments in global safe food supply

Food safety is increasingly becoming a food chain issue, and plant and animal health at the primary production level can impinge upon safety of the final food product. As a result, new food safety organizations are responding to a previously fragmented approach to food safety. New SPS institutional restructuring now tends to cover the entire food chain within a single agency or authority. As a result of these new challenges, retailers now shift responsibilities for food safety backwards in the supply chain towards the producer. All international supply chain companies must comply with the latest product and process requirements, with regards to food safety and chain transparency. Traceability and, therefore tracking and tracing systems, now form a critical part of those requirements.

New challenges include:

- New non-tariff barriers like the European Union (EU) General Food Law requiring EU food companies to have fully operational tracking and tracing systems by January 2005.
- Increasing preferred and exclusive partnerships based on trust and audits between supply chain partners.
- Analytical methods continue to improve in detecting previously immeasurable amounts of contaminants, e.g., herbicides, pesticides, hormones. When detection levels increase, stricter standards are set.
- Non-governmental organizations, consumer organizations, animal welfare organizations, and environmental organizations closely watch and critique activities which might endanger sustainable food supply.
- Some governments have introduced new food safety concerns, e.g., bioterrorism in the United States (U.S.) and allergies in the European Union (EU).

These developments are likely to lead importing countries and companies to select countries that already have a relatively strong infrastructure (efficient SPS institutions, certification boards, research institutes, laboratories, export boards, etc). They may also make entry into new markets, or even keeping existing markets, difficult for developing countries that are too far away from meeting the new demands.

Thus it is important to make traceability part of the legal framework and policy, with regards to increasing a country's competitive position, guaranteeing food supply in the region and local sustainable entrepreneurship.

All West African states, with the exception of Liberia and Cape Verde, belong to the WTO and have obligations under the SPS Agreement. In West Africa, as in other parts of the world, the level of implementation of SPS measures varies from country to country, depending on the context of domestic policy and regulations, technical capacity, availability of finances, logistics and resources.

Compliance with WTO standards on sanitary and phytosanitary regulations constitutes a basic requirement for countries seeking increased market access for their agricultural products in the international trading arena. Countries in West Africa currently lack efficient SPS systems which are needed to optimize their participation, both in the global market for agricultural products and among themselves as a sub-region. Several exporters from West Africa suffer rejections of products in foreign ports due to non-compliance with importing country SPS regulations. Countries in the Economic Community of West African States (ECOWAS) have little choice but to harmonize their SPS measures with international standards, in order to increase market access in the global multilateral trading system.

Secondly, low technical capacity – combined with inadequate legal, policy and regulatory frameworks in ECOWAS countries – opens the door to low-quality food imports from the rest of the world, products that may endanger the health of West African citizens. Consumer associations now exist in most West African countries that put pressure on their governments to improve and control the safety of both imported and locally-produced foodstuffs.

Third, most countries in West Africa lack the product critical mass required to fill orders from the multilateral trading system, whether they are regular or large orders. While a buyer in another part of the world could have sourced an agricultural commodity from a pest-free area spanning two or more West African countries, this becomes difficult, due to several, quite different sets of quality standards, making purchases more expensive, and rendering West African countries less competitive.

Harmonization of sanitary and phytosanitary regulations in West Africa would:

- Increase market access of agricultural products in the global multilateral trading system.
- Result in economies of scale with current limited resources, by pooling national resources under a regional authority.
- Facilitate intra-regional trade and lower costs for third countries that want to trade with several West African countries by adopting a common set of SPS standards.

1.3 Overview of the European Commission RASFF

Most West African countries trade with the European Union. Since 1979, the European Commission (EC) has published a weekly overview of alert and information notifications on food items rejected at the ports of EU member countries.

The purpose of the Rapid Alert System for Food and Feed (RASFF) is to provide the control authorities with an effective tool for exchange of information on measures taken to ensure food safety. Information provided is classified under (a) alert notifications and (b) information notifications.

Alert Notifications
Alert notifications are sent when food or feed presenting a risk is on the market and when immediate action is required. Alerts are triggered by the EU member state that detects the problem and has initiated the relevant measures, such as withdrawal/recall. The notification gives all members of the network the information to verify whether the product is on the market so they can take the necessary measures.

Information Notifications
Information Notifications concern a food or feed for which a risk has been identified, but for which the other members of the network do not have to take immediate action because the product has not reached their market. These notifications mostly concern food and feed consignment that have been tested and rejected at the external borders of the EU.

An analysis of country rejections suggests the following:

Animal and Seafood Products

- Rejects in EU involve mostly shellfish food items—particularly shrimp, mussels, oysters, prawns—and pistachios. These products contain chemical residues and aflatoxin. Common chemicals are nitrofuran, furazolidone, sulphites. The products originate mostly from China and Iran.
- Listeria monocytogenes are found in frozen chicken, primarily boneless skinless breasts from Brazil.

Plant Products

- Causes for rejects of vegetable oil imports into the EU are due to the presence of Sudan dye 4 in natural red and "zomi" palm oil. Origin countries include Ghana and Nigeria.
- Aflatoxins appear in ground and whole melon seeds, and in dried ginger. Insects are found in melon seeds. Main culprit is Nigeria.

- Aflatoxins appear in peanut butter and in tiger nuts; the main source is Ghana.
- Clostridium sulphite reducer is found in tapioca flour from Ghana.
- Lead appears in calabash chalk from Ghana.
- Spoilage and mold in fresh vegetables from Ghana.

Information from alert and information notifications from the EU highlights the common causes of unwholesome food for the EU market. It also points to ways that West African countries should improve their food safety capacity for both imports and exports.

1.4 Justification for SPS harmonization for West Africa

Though harmonization is a vertical integration process between a member country and the WTO-SPS sister institutions[6], countries within regions and zones–especially those that share a common language, financial structures and trading systems–may wish to integrate horizontally and harmonize their SPS systems. This would facilitate trade between countries. Under these circumstances, countries may wish to develop equivalence agreements as a means of entering into bilateral or multilateral arrangements concerning food import and export inspection and certification systems. Such agreements may be binding instruments, taking the form of "International Agreements" under the *Vienna Convention on the Law of Treaties*, or they may be other less formal arrangements, such as memoranda of understanding. Such agreements may be limited to specific areas of trade or specific products, include provision for certificates or other forms of certification of particular traded products or provide for dispensing with certificates and other forms of certification. The building blocks for establishment of SPS treaties include improvement of information exchange, the organization of discussion workshops and technical cooperation, and the development of infrastructure and food control systems. These are prerequisites to developing effective SPS treaties.

1.5 Support for regional SPS harmonization

UEMOA

The *Union Economique et Monétaire Ouest Africaine* (UEMOA) is a regional organization of eight contiguous, Francophone countries in West Africa that share a common currency and are committed to evolving towards a common market.[7] Agriculture dominates the economies of its member states, however, the heterogeneity of the rules and regulations governing food, plants and animals in UEMOA's member states, and the inconsistency of their implementation, constitutes a large non-tariff barrier to trade. The World Food Summit in Rome in October 1996 called for a major program of food security in developing countries. Thus, the heads of state of the member states of UEMOA were receptive to a proposal made in 1998 by the Director General of the FAO that a Special Regional Programme for Food Security (*Programme Spécial Régional pour la Sécurité Alimentaire*, PSRSA) be set up under UEMOA's auspices. In August 1999, UEMOA produced a framework document, establishing an $84 million program to undertake a wide range of food-security activities. Given UEMOA's orientation towards regional integration and its member states' dependence on agriculture, PSRSA adopted a trade-based food-security approach, encouraging the trade of food commodities between member states and with non-UEMOA countries. Within this context, in October 2000, UEMOA and FAO signed an agreement for a priority PSRSA sub-program that allocates $2.2 million to regional harmonization and implementation of SPS regulatory structures through a sub-regional treaty. Regional SPS harmonization involves three activities: the preparation of the legislative framework and associated treaties, training of officials to interpret and implement the treaties, and reinforcement of quality-control laboratories. The work programme identifies four components: food safety, animal health, phytosanitary control, tariff and fiscal affairs. UEMOA and FAO have recently agreed to prolong the PSRSA – originally scheduled to end in December 2003 – until December 2004.

For each of the four components, the process of preparing the legislative framework and associated treaties includes:

[6]In this context, "country" includes regional economic integration organizations to which a group of countries have transferred competencies, as regards food import and export inspection, and certification systems and /or the negotiation of equivalence agreements with other countries.

[7] Member states are Benin, Burkina Faso, Côte d'Ivoire, Guinée Bissau, Mali, Niger, Senegal and Togo.

- A study of the current SPS situation in each UEMOA member-state with recommendations for improvements (first half of 2003).
- Synthesis of the eight national studies into a regional report (third quarter of 2003).
- National discussion of the regional report (January 2004).
- Regional discussion of the regional report (March 2004).
- Amendment of the regional report (March 2004).
- Drafting of an SPS treaty between UEMOA member states, satisfying their obligations under the WTO's SPS Agreement (March-April 2004).
- Designing the details of the training program for officials who will interpret and implement the treaties (March-April 2004).
- The reinforcement of quality-control laboratories (March-April 2004).

UEMOA pioneers the promotion of regional SPS harmonization in West Africa. However, its efforts have not taken into consideration non-UEMOA West Africa of which Nigeria, Guinea and Ghana form a large share of the market and trade within ECOWAS.

USAID

In the past five years, the United States Agency for International Development's West Africa Regional Program (USAID/WARP) and the United States Department for Agriculture (USDA) have encouraged UEMOA and non-UEMOA ECOWAS countries to discuss the implications of SPS harmonization. They jointly sponsored a series of four public-private workshops on the constraints that SPS poses for trade. These workshops have contributed significantly to the development of UEMOA's ongoing SPS activities within the PSRSA framework.

1.6 Objective of the study

The West Africa Trade Hub in Accra (WATH/A), supported by USAID's West Africa mission (WA), sees an opportunity to support ECOWAS' regional economic integration by assisting the ongoing UEMOA SPS harmonization process, as well as initiating a similar process for non-UEMOA West Africa. Eventually, this should lead to integration of the two SPS systems, permitting a truly regional harmonization of these regulations through an ECOWAS treaty.

2. EVALUATION APPROACH AND METHODOLOGY

Since January 1996, WTO assumed the overall authority for SPS issues at the global level and now expects each member country to incorporate WTO standards into its governance structures. It operates and uses as reference point the recommendations made by the three sister organizations: (1) International Plant Protection Convention (IPPC), responsible for plant health, (2) Office International des Epizooties (OIE), responsible for animal health, and (3) Codex Alimentarius Commission (CAC), responsible for food safety.

By identifying the main features of the SPS systems in these non-UEMOA countries and comparing them with those of the UEMOA, the present study will provide ECOWAS with the necessary basis for preparing an SPS strategy that could then lead to the total integration of the SPS systems of ECOWAS member states.

2.1 Format for evaluation of SPS capacity

Evaluation formats were developed by the sister organizations for each SPS area that this study addressed (that is, food safety, plant health and animal health). The current evaluation format is based on the premise that contemporary needs of a national SPS institution can be estimated by a measure of its capacity to meet the international SPS obligations efficiently and sustainably. One way to assess a country's capacity to fulfill its international obligations is to develop an inventory of the functions and resources that are needed for basic SPS services and compliance with WTO regulations. To ensure that fully operational SPS systems and institutions are established, countries need to comply with certain requirements comprised in its structure.

2.2 Areas of evaluation

Highlights of the format and specific criteria evaluated are presented below.

Legal and Regulatory Framework

Generally, evaluation of the legal framework focused on a comparison of the existing country's laws and regulations with international standards, identifying strengths and weaknesses and areas for improvement. Some specific areas investigated were:

- National legislation's use of WTO/SPS terminology, definitions and concepts.
- The national, legal and regulatory framework's emphasis on the relationship between each SPS area (food safety, plant protection, and animal health) with international trade, and the extent of fragmentation of authority between national ministries, or departments at national and sub-national levels.
- Availability of human resource and capacity for drafting and amending country's laws on SPS.
- Adequacy of legal powers for search and seizure and obligations of Customs to report to SPS national agencies.
- Prescription of legal authority to national ministers through their respective ministerial heads for review of national regulations and procedures without necessarily going back to parliament.
- Availability of printed copies of acts, laws and regulations at official sales points or websites, or at official enquiry points.
- Equivalence of measures and whether agreement has been reached on measures that would correspond to others adopted by countries, on a bilateral or multilateral basis, so as to minimize conflicts and reduce the need for arbitration.
- Provision for the following:
    - Penalties with a deterrent effect.
    - Establishing Notification Authority and National Enquiry Points to facilitate transparency and access by interested parties to information on laws and regulations.

Institutional Structure and Capacity

- Identification of ministries and units responsible for food safety, animal and plant disease control and positions in overall organizational structure of the ministry or public service.
- Assessment of the fragmentation of authority between national ministries, departments, units within departments, at the national and sub-national levels.
- Geographical coverage of SPS activities through design of its national and sub-national administrative areas.

Facilities and Equipment

- Adequacy and capacity of laboratory facilities, equipment and diagnostic capability at entry/exit points. Assessing those laboratories that can play a regional role within ECOWAS.
- Physical resources and equipment and their distribution at national, regional and district levels.
- Adequacy of quarantine and disposal facilities.
- Existence of library facilities.

Human Resources and Development

- Human resource availability and distribution at national and sub-national levels.
- Distinction between technical and management staffing and difficulties in retaining scientific staff in technical positions.
- Quality of human resource (qualification and skills level) and availability of trained managers for national programs.
- Adequacy of staffing and staff multi-tasking (same officers performing several roles).
- Provision for regular training programs on technical and management procedures.
- Training in concepts and application of WTO standards.
- Budgetary and resource allocation, competitive salaries and work incentives. Adequacy of budget, internally generated sources of funds and legal authority to retain part of funds. External sources of funds and mechanisms of funding.

Documented Procedures and Systems

- Operational manuals on all aspects of surveillance, such as pest listing, export certification, inspection, diagnosis, etc.
- Existence of internal audit, quality assurance and reporting systems.
- Existence of computerized information systems, databases, retrieval systems and networks across country.

International and Regional Participation

- Membership in international institutions like WTO, IPPC, CAC and OIE.
- Participation in international conferences, international committee meetings and contribution to debates through position papers.
- Adequacy of funds to support participation in regional and international SPS harmonization programs.
- Existence of notification and enquiry points to handle international affairs.

Recommendations for the ECOWAS SPS Harmonization Process

- Identification of specific issues of concern for West African SPS harmonization.
- Identification of regional institutions to support SPS harmonization.

2.3 Regional institutions consulted

The following regional institutions were visited:

- Headquarters of UEMOA in Ouagadougou Burkina Faso, Coordonnateur de la Cellule du Programme Special Regional Pour la Securite Alimentaire (PSRSA)
- ECOWAS Secretariat, Agricultural Section, Abuja, Nigeria
- FAO offices in respective countries

2.4 Evaluation scoring system

It was important to define an objective system of scoring for the evaluation. Questionnaires were developed to solicit responses from department heads and key officials. For each standard or key issue, these respondents evaluated their country by comparing its available resources and capacity with standard requirements provided in the questionnaire. Officials could distribute their ratings across the following categories:

Poor	-	0% - 25%
Fair	-	26% - 50%
Good	-	51% - 75%
Very Good	-	76% - 100%

2.5 Report update

Following the preparation of the draft report, a workshop was held — June 27-29, 2006 — for both private and public sector officials and entrepreneurs in Sierra Leone, to discuss the draft report and update developments since the report was prepared in 2004. The outputs of this validation workshop were:

- An update of the legislative framework and institutional situation
- An analysis of the import–export SPS constraints
- Identification of issues for SPS harmonization by ECOWAS
- Formulation of a road map for national SPS harmonization

These outputs are incorporated into this report for Sierra Leone.

3. RESULTS OF EVALUATION FOR SIERRA LEONE

3.1 Country background[8]

The Republic of Sierra Leone is a small country located on the coast of West Africa with a land area of 72,325 sq km, a population of 4.9 million (2002 estimate) and an annual population growth rate of 2.4%. The country is surrounded by the Republic of Guinea to the north and west, Liberia to the southeast and the Gulf of Guinea to the southwest. The capital of Freetown has an estimated population of 550,000. It has three main provinces: Southern (provincial capital is Bo), Eastern (provincial capital is Kenema) and Northern (provincial capital is Makeni).

The terrain comprises mangrove swamp vegetation and beaches along the coastal areas, wooded hills in the immediate interior and mountainous plateau in the interior.

The climate is tropical with a single rainy season occurring July to September, and average annual rainfall of 3,500 mm, ranging from 2,000 mm in the north to 5,000 mm in the south around Freetown. Daily average temperature ranges from 23° C in December to 27° C in March.

The economy is predominantly agricultural with an estimated 67% of the population engaged in agriculture and related activities. Agriculture contributes to an estimated 42% of GDP. Arable land is estimated to be 30% of total land area of which an estimated 8% is presently cultivated. Of the cultivated land area, about 80% is for food crops while the remaining 20% contains cash crops such as cocoa, coffee and tobacco. Agricultural products include coffee, cocoa, ginger, palm kernels, cassava, banana, citrus, peanuts, plantains, rice, sweet potatoes and vegetables.

Sierra Leone also has great potential in fisheries and other marine resources. The fish industry is dominated by artisanal fishermen who form about 86% of the sub-sector. Livestock production is popular in the north of the country but very little is exported internationally.

The proximity of Sierra Leone to the United States (U.S.) and the European Union (EU) also gives it export advantage compared to most West African countries. Despite this potential, agro-industry's contribution to GDP remains low at 42%. Major agricultural exports for are cocoa, coffee, tea, fish and seafood products.

Table 1. Major agricultural exports for 2004.

Product	Value Exported ($)	Top 3 Destinations
Cocoa & cocoa products	12,127,000	Germany, Belgium, Italy, Canada, Netherlands
Processed meat, fish & seafood products	4,213,000	Guinea, Liberia
Coffee, tea & spices	1,320,000	Czech Republic, France, Belgium, Barbados, Guyana
Fresh fish, crustaceans, molluscs	904,000	France, Canada, Ghana
Roots & tubers	489,000	Guinea, Liberia

* Mirror trade data from TradeMap: URL: www.trademap.net/usaid/en/product_cluster

Sierra Leone imports large quantities of agricultural food products, mainly from the U.S. and the EU. These comprise meat and meat products, dairy products, edible vegetables, cereals, animal and vegetable oils, meat, fish and seafood preparations.

[8] Source: U.S. Department of State Country Background Notes (www.state.gov/r/pa/ei/bgn/5475.htm)

Since 1991, Sierra Leone experienced an outbreak of civil war that destroyed infrastructure, public and private institutions for food production and export. About 85% of the country's livestock was lost during the war. Though the war ended in 2002 with a return to multi-party democracy, many public institutions — including those responsible for food safety, crop and animal health — lost much of their original capacity in terms of physical infrastructure, human resources, institutional memory, databases and documentation. The state of SPS institutions in Sierra Leone is claimed to be worse that it was before the war. Massive injections of capital are therefore required to rehabilitate SPS structures to meet the standards of other countries in the sub-region as well as international standards.

Under the new democratic dispensation, Sierra Leone has embarked upon a process of decentralization under the Local Government Act of 2004. There are 13 district councils, 5 town councils and 1 city council. As a result of this process, plant health and animal/fish health departments are expected to devolve their activities to the local government areas.

For Sierra Leone to increase its trade in agricultural products with the multilateral trading system it must adopt international trading regulations and harmonize its sanitary and phytosanitary (SPS) regulations with international standards. As a tropical country, Sierra Leone is predisposed to tropical insect pests and diseases for which it must develop adequate disease control systems.

A major constraint hindering Sierra Leone is the non-adoption of the metric system domestically and in international trade. The country still operates the Imperial system in weights and measures although all countries in the ECOWAS sub-region have been using the metric system for over 20 years now. It is important that legislation be introduced to convert the system into the metric system in order to harmonize weights and measures along with other West African member states of ECOWAS. Sierra Leone has instituted a national metrication committee and all schools are being taught in metric system. What remains is the metrication of oil companies' facilities and legislation to give effect to the efforts of the Standards Bureau.

3.2 Food safety and public health

3.2.1 Ministries, Departments and Agencies

Ministry of Health

The National Environmental Health Policy of May 2004 charges the Ministry of Health and Sanitation with primary responsibility for food safety. However, in practice, responsibility for food hygiene, safety and trade spreads across several MDAs with overlapping and sometimes conflicting roles.

The Environmental Health Division (EHD) of the Ministry of Health does inspection of imported foods including cereals, pulses, canned food products as well as domestically prepared foods. Samples of permits and inspection certificates examined during the evaluation study showed that the EHD plays a lead role in food inspection for private importers and exporters, United Nation institutions such as World Food Programme (WFP) and United Nations High Commission for Refugees (UNHCR), and international NGOs such as CARE International.

The 2004 policy statement for EHD, however, focuses the activities of the division more on domestic environmental sanitation and food hygiene rather than on import and export food inspection. This relegates the Plant Quarantine Unit of the Ministry of Agriculture, Forestry and Food Security to inspection of vegetative planting materials and seeds at entry and exit points of the country. The role of the Standards Bureau of the Ministry of Trade and Industries for food safety is also not very clear. It appears that the Bureau is contacted by the other agencies when they require further chemical or physical laboratory testing beyond what is possible at the entry and exit points, particularly as it regards certification for semi- and fully-processed foods.

This author believes there is an urgent need to streamline the roles and responsibilities of the MDAs involved in food inspection, control and certification to reduce duplication of efforts and enhance efficiency.

Standards Bureau of Sierra Leone

The Bureau presently has three main technical committees: the National Codex Committee, Industrial Standards, and the Metrology Committee. Each committee bases its standards on those of international standards organizations such as CAC, ISO, IEC, ARAS and other standards from older reputed standards institutions (BSI AFNOR, DIN, SEN, etc.).

However, the Bureau's capacity to perform its statutory roles of facilitator of trade, industry and other economic activities, is severely limited by its lack of vehicles, office equipment, essential basic laboratory equipment and trained personnel to reach its target areas and people. This also affects the collection of revenue that its services will statutorily attract and on which its very existence depends. On 24 July 2003 the Minister of Finance and the Director General of the Arab Bank for Economic Development for Africa (BADEA) signed a financing grant to the Bureau that will be applied to procure essential laboratory equipment, a vehicle, basic training for a period of four weeks for five staff at the Jordanian Institute for Standards and Metrology (JISM) and the services of an Arab expert for two years.

The "Statutory Instrument" approving the revenue base of the Bureau has been published and the Bureau can now generate its own revenue for services carried out. The Bureau is also gradually expanding its presence into all provincial headquarters to allow for wider geographical and administrative coverage that will cover most or all entry points in the country.

The Bureau has a Codex and Food Department with technical committees to handle various aspects of food safety and to assist in the formulation and designation of standards on food and food products. These are:

- National Codex Committee
- General Purpose Technical Committee
- Animal and Animal Products Technical Committee
- Plant and Plant Product Technical Committee
- Special Technical Committee
- Ad-Hoc Task Force on Food Technical Committee
- Drafting Technical Committee

Presently, the Standards Bureau of Sierra Leone acts as the Enquiry and Notification Point on food safety regarding sanitary and phytosanitary standards for the country. The contact address is:

Sierra Leone Standards Bureau
S.L.P.M.B.
Headquarters Building, CT Box 11
Clinetown, Freetown, Sierra Leone

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3.2.2 Legal and Regulatory Framework

Several uncoordinated, piecemeal and fragmented legislations characterize the existing regulatory framework for food safety. No single legislation in Sierra Leone addresses food control in its entirety. For example, the Public Health Act and its regulations do not adequately address contemporary food safety concerns, such as proper labeling of locally produced and exportable products under the requirements of the WTO - Codex, IPPC and OIE standards.

Sierra Leone has no law specifically for food control. Rather, food safety is mentioned in parts of the Environmental Health Policy (May 2004). This policy touches on aspects of protecting the health and life of

consumers by ensuring the safety and wholesomeness of food for human consumption, and by guaranteeing quality of locally-produced foods. The policy does not address the relationship between the national food safety control system and international trade, nor does it attempt to harmonize definitions, terminologies and concepts to those used by WTO/SPS and CAC.

In February 1996, the Government of Sierra Leone established the Sierra Leone Standards Bureau by an Act of Parliament No. 2 of 1996. The Act came into force on 16 August 1999 and the Bureau started operations on 24 January 2000. This Act provides for the standardization of commodities and products, the Sierra Leone Standards Bureau (The Bureau), the National Standards Council (The Council) and related matters.

3.2.3 Facilities and Equipment

The Bureau has not been able to set up its own laboratories, thus it is presently utilizing the laboratories of the University of Sierra Leone to meet its testing requirements. It is presently engaged in inspection of food items entering the country at the Queen Elizabeth 11 Quay in Freetown, which is the country's major port of entry for goods into the country. As the Bureau's activities expand, inspection points will be replicated throughout the country.

3.2.4 International and Regional Cooperation

Sierra Leone is a member of both the Codex Alimentarius Commission (CAC) and World Trade Organization (WTO). However, since 1996 when the war broke out, participation in regional or international conferences on food safety was reduced to an almost negligible level.

Currently, Sierra Leone is not directly involved in West African efforts at SPS harmonization of food safety measures. Sierra Leone views efforts at harmonizing food safety regulations in West Africa as laudable, because harmonization will:

- Provide standardized food safety regulatory systems for neighboring and other ECOWAS countries, thus protecting the health of consumers of food items moving across borders.
- Promote intra-regional trade through greater transparency and adherence to common food safety standards, as well as increase the confidence of foreign countries in the health standards of West African countries.

3.2.5 Analysis of Import-Export Food Safety Constraints

Analysis of SPS constraints for key imported food products

An analysis of SPS constraints for key imported and exported products for Sierra Leone reveals very low capacity of the country to diagnose and analyze for important pests, disease-causing organisms and contaminants. This accounts for the low rejection rate of imported food products; it is not because imported products meet high quality standards. The risk that this poses for the country's consumers and farming systems is therefore worrisome.

Table 2. Analysis of food safety constraints for key imported food products.

Top 5 Products	Exporting countries (trading partner)	% Rejection of products last year	Main causes for rejection of import product	Implications for SPS institution	Actions required to improve situation
(1) Rice	China, India, Thailand, Pakistan	Nil	Nil	Nil	Nil
(2) Cooking oil	India, Dubai, Holland EU,	Nil	Nil	Nil	Nil

(3) Meat and meat products	Holland, Brazil	5% rejection	Lack of testing capacity specifically for bird flu	Risk of passing unwholesome food products to consumers	Develop a standard food laboratory for analysis of samples at least to pre-confirmation stage
(4) Salt	Senegal, Ghana, Holland, Nigeria	Nil	Nil	Nil	
(5)Dairy products and beverage	EU, Asia, Africa	Nil	Nil	Nil	

Analysis of SPS constraints for key exported food products

Sierra Leone exports very little processed food product into the international markets. Hence no results are available for SPS constraints.

3.2.6 Food Safety Issues for Regional Harmonization

Participants were asked in work groups to identify key issues for ECOWAS regional food safety harmonization. Issues identified by Sierra Leone are presented below:

Table 3. Key issues for regional food safety harmonization

Key issues for regional harmonization	Proposed actions by ECOWAS
(1) Lack of regional referral laboratories with international accreditation to support national laboratories for specific important diagnosis and analysis	Need to identify laboratories for support and accreditation as regional laboratories to support country laboratories Establish a regional training program for capacity building of human resources in key food safety areas
(2) Varying testing methods and procedures for food safety analysis among countries in sub-region	Need for regional harmonization of methods and procedures for food safety testing and analysis, as well as equivalency agreements

3.2.7 Recommendations for Capacity Building

It is important for Sierra Leone to pursue a program of upgrading the capabilities and facilities for laboratory and analytical support services for SPS implementing agencies. Plans for capacity building in food hazard and risk analysis, as well as in Food Safety Surveillance and Inspection Systems, should be developed. It is also important to develop manuals for food safety management and computerized systems for data capture. The following actions would strengthen the process:

- Improve the legal, regulatory and institutional framework for food safety to remove overlaps in mandates of MDAs.
- Enact the Food Law through Parliament as soon as possible to provide a new and improved regulatory framework for food safety standards.

- Harmonize food safety regulations with neighbors and ECOWAS members in order to promote cross-country and intra-regional trade.
- Improve the current policy, taking into consideration decentralization and devolution of roles and responsibilities to sub-national structures.
- Develop a program for enforcing food safety regulations throughout the country.
- Improve laboratory analysis capability particularly for products intended for export.
- Establish clear food residue levels and capacity of institutions to undertake analysis.
- Increase transparency and access to SPS food safety information through publishing SPS information on websites and providing printed copies for the public at approved official sales points.
- Develop a strategic plan that would form the basis for future capacity building initiatives.

3.3 Plant health and phytosanitary measures

3.3.1 Legal and Regulatory Framework

The existing laws and regulations are based on the Agricultural Act (Cap 185) of 15 September 1946. This enables the Head of State and cabinet to make rules concerning *inter alia* all aspects of plant quarantine, international and domestic. The Plant Pest (Inspection of Crops) Rules were issued in 1946 to allow for the inspection, destruction and or/treatment of plants infected by any pest. The Plant Pest (Import) Rules were also issued under this Act between 1946 and 1952 and dealt with international quarantine. In 1956, the Noxious Weeds (Control) Rules were formulated to forbid the importation of any plant deemed to be a noxious weed or to cultivate or spread the weed within Sierra Leone. It also provides for the inspection and destruction of such invasive weeds as water hyacinth.

These rules were revoked in 1974 and replaced by the Agricultural Act (Cap 185) *The Plant Phytosanitary (Import) Rules of 1974*. The rules of this act provide only for the following:

- Conditions for issuing permits
- Contaminated plants to be destroyed or re-exported
- Restrictions on importation of plants, seeds, soils, etc.
- Application for permits to import plants, seeds, soils, etc.
- Examination of consignments of plants, seeds and soil
- Offenses: definitions and sanctions
- Authorized officers exempted from liability
- Power to impose restrictions on import

The Rules were supplemented in 1976 with the Plant Phytosanitary (Import Restriction) Notice. This Notice contains a schedule listing the conditions under which 64 categories of plants and plant products may be imported. It also lists a number of absolute prohibitions including one for soil. Plants that are cooked, pickled or imported in bottles and cans were excluded from the provisions of this Notice.

A summary of current legislation is as follows:

- The Agricultural Act, 1946
- The Plant Pest (Inspection of Crops) Rules, 1946
- The Noxious Weeds (Control) Rules, 1956
- The Plant Phytosanitary (Import) Rules, 1974
- The Plant Phytosanitary (Import Restriction) Notice, 1976

Since 1976, the legislation has never been reviewed and falls well behind modern requirements for International Sanitary and Phytosanitary Measures (ISPMs) of the International Plant Protection Convention (IPPC) and the provisions of the Inter African Phyto-sanitary Council (IAPSC). A complete revision is required of the Act and Rules to provide for some current IPPC concepts such as:

- Right to board vessels, aircraft and vehicles for inspection without warrant.
- Right to inspect and register facilities for sale of pesticides, chemicals and foreign plant products.
- Address country obligations and National Plant Protection Organization functions and obligation of customs to report to the Plant Protection Unit.
- Provide for funding emergency exotic pest responses.
- Authority to monitor the safe disposal of garbage or residues of plant materials.
- Establish an advisory committee on plant quarantine.
- Make provisions for government to import scientific research materials such as biological control materials and vital germplasm that are otherwise now not provided for under the current law.
- Inspect mails and posts.
- Regulate packing materials.
- Exempt preserved, dried, canned or otherwise processed goods.

- Customs and Postal Services must be made be responsible for holding goods of concern to plant quarantine until inspection and disposal by a quarantine officer.
- Provision for Quarantine Unit to order the destruction of any plant under the supervision of the quarantine service either in an established post entry station or elsewhere.
- Provision to be made for the handling of goods in transit in Sierra Leone.
- The current Plant Pest (Inspection of Crops) Rules of 1946 and the Noxious Weeds (Control) Rules of 1957 should be expanded beyond quarantine of domestic products to include quarantine of imported products. These should be part of a single body of rules that cover both international and domestic quarantine. The Rules should also be strengthened to allow the unit through its Minister to proclaim any part of the country as being infested by a particular pest as well as the control of the movement and cultivation of specific plants.
- Although the Agriculture Act of 1946 provides for rules to be made concerning the payment of fees for quarantine service, no such provision was subsequently made in later rules.
- The offenses for which a person can be convicted under the legislation should be defined in greater detail. The level of fines can be made more severe, with provisions for conviction in case of defaulting firms.

3.3.2 Institutional Structure and Capacity

Structure and Organization of the NPPO

The Phytosanitary Control Unit operates as a unit under the Crop Services Department of the Ministry of Agriculture and Food Security. In 1985, under an FAO/UNDP/SIL/85/004 Technical Cooperation Program "Strengthening of the Crop Service," the name of the unit was changed to Plant Quarantine Unit. However, clients continue to use the two names interchangeably.

The Unit has only one component, Field Inspection. Components commonly found in other countries such as training, research and diagnosis, etc., do not exist in Sierra Leone. The Field Inspection component comprises the following entry/exit points, with their dates of establishment:

- Port Authority Quay - 1974
- Lungi International Airport - 1975
- Kambia Border Port - 1977
- Buedu Port - 1978 - not functional
- Koindu Land Border - 1978 - not functional
- Mano River Bridge/ Zimmi - 1978 - not functional
- Kasirie (abandoned)

Operations at all land border points, especially at the Mano River, suffered from the civil war and efforts are now being made to reactivate the land stations. The general post office in Freetown, the airport at Hastings and a number of land border entry points are not presently covered by the plant quarantine service.

Inspection Systems at Entry and Exit Points

The Phytosanitary Unit operates three stations throughout Sierra Leone (listed above) and is rated about 30% (fair) for the size of the country. This implies that there are other border crossings that are presently not covered by phytosanitary staff but where plant materials and seeds cross the border on daily basis.

Where there are operational stations, the Phytosanitary Unit engages in enforcement of regulations in collaboration with Customs, Port Health, Immigration and other law enforcement agencies, in the hope of ensuring compliance by travelers, importers and exporters, airline and shipping agencies, airport and port authorities. All operational entry and exit points inspect and certify import and export consignments and issue phytosanitary certificates, clearance certificates, import permits and re-export certificates based on IPPC formats. However, over the past 10 years there have been occasional conflicts between Port Health, Customs and the Phytosanitary Unit for control over who issues phytosanitary permits. This situation urgently needs to be resolved through legislation.

3.3.3 Facilities and Equipment

There are no entry/exit and post-entry inspection and diagnostic laboratories. Apart from an old 150 m^3 fumigation chamber located in Freetown, not currently used, no other equipment or facilities for plant quarantine treatment, seed testing, or for destruction of seized goods exists. Likewise, there are no facilities for proper storage of goods under quarantine at any port of entry. There is an acute shortage of equipment; inspectors do not even have basic equipment such as lighting, hand lenses and knives to assist them in their work (see Tables 4 and 5). Overall assessment rates it at 5% (poor).

Table 4. Facilities and equipment at entry/exit points.

Equipment	Adequacy (%)	Remarks
Inspection table	50	No provision for effective lighting
Hand lens	0	Not available
Tweezers	0	Not available
Glass vial	0	Not available
Microscope	0	Not functional
Slides	0	Not available
Stains	0	Not available

Table 5. Equipment for treatment and disposal.

Equipment	Adequacy (%)	Condition
Fumigation chambers	0	n/a
Hot water tanks	0	n/a
Dipping tanks	0	n/a
Dry heat oven	0	n/a
Irradiation equipment	0	n/a
Incinerators	0	n/a
Steam sterilizers	0	n/a
Sewerage disposers	0	n/a
Autoclaves	0	n/a

Office Accommodation

Accommodation facilities are poor at the head office as well as other ports of entry and exit. There is no official residential accommodation for staff at any border posts. The new law must mandate the Civil Aviation and Port authorities to provide permanent offices to the unit. Complete rehabilitation is needed along with:

- Inspection rooms
- Plant treatment room with equipment
- Storage facilities for holding seeds
- Incinerator for destruction of confiscated and condemned materials

Transport

No vehicle is available for unit operations. The overall transport situation is rated poor at 0% of required. Phytosanitary inspectors do not have any access to transport, other than the use of public vehicles.

Considering the long distances between entry/exit points and the head office, inspectors need a reliable vehicle at the head office to reach the stations upon request and provide feedback in a timely manner. This requires adequate communication facilities between the out-stations and the head office to reduce delays in providing information to exporters and importers.

Communications

The head office has no email or Internet access. Telephone facilities are poor and staff use mobile phones and facilities at private communication centers to communicate with the head office. Overall rating for the head office is 40%, and 10% for out-stations.

3.3.4 Human Resources and Development

The Field Inspectorate section operates a network of three phytosanitary stations in the main Administrative Divisions in Sierra Leone. Due to severe understaffing, the Unit relies on Agricultural Extension for notification of disease outbreaks in the districts. Capacity for disease surveillance and monitoring is considered 40% of expected. The total human resource capacity of the Plant Quarantine Unit is currently estimated at 45% of actual needs. This is clearly inadequate for the implementation of an effective plant health control program. The grade of staff who issue phytosanitary permits and certificates is also below requirements of the IPPC. Table 6 outlines the human resources of the Unit.

Table 6. Human resources of the Plant Quarantine Unit.

Position	Number
Principal Crop Protection Officer	1
Asst Principal Crop Protection Officer	1
Senior Plant Quarantine Inspectors	5
Plant Quarantine Inspectors	19
Administration	4
TOTAL	**30**

The Head of the Unit is the Principal Crop Protection Officer. There are five agro-instructors or superintendents who act as senior plant quarantine inspectors at the airport and harbor ports of entry. However at the land border entry/exit points, 19 secondary school graduates are employed as plant quarantine inspectors.

The qualifications and background of staff are as follows:

- Ph.D. Degree Holders 1
- Masters Degree Holders 0
- Post Graduate Diploma 1
- Degree Holders 0
- Higher Diplomas 1
- Certificate in General Agriculture 10
- High School Certificate 9

Apart from three senior inspectors who attended short training courses in Egypt in the past, the Unit has provided only one in-service training. There is only one specialized entomologist, and no plant pathologists, virologists or bacteriologists.

Pest and Disease Diagnostic Capability

The unit has no human resources such as virologists, mycologists, hematologists, bacteriologists and weed scientists. Some of these professionals are available at the University but little collaboration takes place between these two categories of officers. Additional challenges include limited stock, poor quality diagnostic equipment and materials, and inadequately trained personnel. Establishing a laboratory would be a first step in improving the situation. The unit has already identified areas for human resource development in its

strategic plan. These include training in laboratory residue chemical analysis for pesticides, veterinary drugs residues and mycotoxins.

Funding adequacy

The Unit suffered from neglect of funding particularly during the 1996 to 2002 war period. Very few funds went to the national and sub-national structures for their operations. Fees charged to importers and exporters were paid directly through the National Revenue Authority (NRA) into the Consolidated Funds of Sierra Leone and none were retained for use by the Unit. During the first two years no funding was received and to date very little funding has been received from FAO and other donors except to support workshops and meetings. Overall funding is rated as poor at 5% of annual requirements.

3.3.5 Documented Procedures and Systems

Surveillance and Emergency Response

As mentioned above, the Field Inspectorate's capacity for disease surveillance and monitoring is considered 40% of expected with its network of only three phytosanitary stations in Sierra Leone.

Generally, documentation of surveillance systems for the Unit falls short of expectations, and data on plant pests is not collated to enable the maintenance of an effective surveillance system. Lists of pests in declared 'free' areas, places of production and sites of production are not available. Officials need training to improve information documentation, computerization of databases on plant pests and number of crops surveyed. Surveillance teams also require training, and surveillance equipment needs to be procured. Finally, a coordinator is needed to head these activities.

Current documentation available to the unit includes:

- Plant Import Permit
- Phytosanitary Certificate
- Passenger Declaration Form
- Sample Receipt
- Detention Receipt

Of these, only the Plant Import Permit and the Phytosanitary Certificates are used regularly. Apart from the Phytosanitary Handbook, other documentation such as taxonomic keys for pest identification, pest data sheets for biological information on pests, textbooks, scientific journals, and databases of import requirements for other countries are unavailable. Overall rating is poor (10%).

The database system is manual and not very efficient. This could be improved through modern software programs that enable sorting, queries, reference by categories and easy retrieval systems. The evaluation rated the database system at 25% of required and suggests the following improvements.

- Publish informational brochures and fliers on the structure and functions of the SPS institutions.
- Develop manuals for surveillance, pest listing, PRA, pest diagnosis, and pest-free areas.
- Establish internal audit, self-assessment and reporting systems.
- Formulate a strategic plan for future development and direction of the organization.
- Improve national SPS database systems and progressive computerization of all information sources, networking to zones and stations within each country.

Recent History of Plant Pests and Diseases in Sierra Leone

The Unit is unable to perform adequate pest and disease surveillance and monitoring, and therefore lacks current detailed information on emerging diseases and pest-free areas. Thus, no verification for the following exists:

- Plant diseases eradicated nationally
- Plant diseases for which the prevalence has been controlled to low levels in the last 10 years
- Plant diseases introduced to Sierra Leone from other countries
- Emerging pests and diseases such as the mango mealy bug, etc.

Pest Risk Analysis

There has been no verification and demarcation to identify pest-free zones and zones of emerging diseases. A list of regulated quarantine pests has not been developed. Sierra Leone has no trained staff in Pest Risk Assessment (PRA) and has not been able to produce a PRA for any crop. Requisite equipment and facilities for information searches, such as CLIMEX and GIS (MapInfo), are also not available. The capacity for each component of risk analysis—hazard identification, risk assessment, risk management, risk communication, and identification of pest-free areas—is rated as poor.

Export Certification Systems

Generally, export certification systems are fair and follow formats and standards of IPPC. Health certificates and export/import permits have been inspected and found to comply with IPPC standards. However, the grade of officers who issue the certificates does not meet IPPC requirements. There are reports of some exporters by-passing the process. The section lacks the necessary equipment to examine microscopic disease-causing organisms. Cocoa and tobacco are usually fumigated in the presence of phytosanitary staff before exported. However, personnel lack the means and equipment to monitor gas concentrations or make any other assessment on the effectiveness of the fumigation procedure.

Measures to improve post-inspection and certification monitoring, to ensure that seals to containers are not tampered with or goods damaged, also need to be improved.

Performance Assessment and Audit Systems

While the Phytosanitary Unit collaborates with FAO at the national level, it still does not collaborate with key international standard-setting and inspection institutions. The Director of the Unit prepares and writes annual reports regularly. However, no strategic plan exists to formulate better proposals for assistance from donor agencies such as FAO.

3.3.6 SPS Import-Export Constraints for Sierra Leone

SPS Import Constraints

This section reviews SPS constraints for the top five imported crops for Sierra Leone; it reveals the very limited capacity of the country to diagnose and analyze for important pests, disease-causing organisms and contaminants. The risk posed to the country's consumers and farming systems is worrisome.

Table 7. Analysis of phytosanitary constraints for key plant imports.

Top 5 products	Exporting countries (trading partner)	% Rejection of products last year	Main causes for rejection of import product	Implications for SPS institution	Actions required to improve situation
(1) Rice	Vietnam, Thailand, Pakistan, China	Nil- Unable to diagnose and analyze for basic pests and disease-causing organisms and contaminants	Nil- Unable to establish cause	High risk posed to health of consumers and farming systems	Improvement in testing and assessment capacity of plant products imported into Sierra Leone Improvement in the farm and marketing audit system in the
(2) Onions	Holland				
(3) Cooking oil	EU, Malaysia				
(4) Sugar	Vietnam, Brazil				

(5) Wheat	EU				country

SPS Export Constraints

Table 8 shows Sierra Leone's top five export crops: cocoa, coffee, ginger, sugar and piassava. The commodity boards for cocoa and coffee ensure fairly good compliance with international SPS standards. However, we note that quality systems for inspection, diagnosis and analysis for the traditional export agricultural products such as cocoa and coffee are more advanced than for the non-traditional horticultural crops and livestock.

Presently, not many non-traditional crops are exported from the country. However, in order to diversify its export economy, Sierra Leone—like other countries in the sub-region—may wish to increase exports of non-traditional crops. Developing SPS systems to gain market access for non-traditional export crops must accompany this effort.

Table 8. Analysis of SPS constraints for key plant exports.

Top 5 products	Exporting countries (existing & potential)	% Rejection of products last year	Main causes for rejection of export product	Implications for SPS institution	Actions required to improve situation
(1) Cocoa	EU	No major reported cases of rejections	Nil	Traditional export crops have reliable SPS systems	Need to develop improved SPS systems for non-traditional export crops
(2) Coffee	EU				
(3) Ginger	EU, USA				
(4) Sugar	EU				
(5) Piassava	EU, USA, Canada				

3.3.7 Key Issues for Regional ECOWAS SPS Harmonization

The Phytosanitary Unit rarely collaborates with international laboratories and universities, but does so occasionally with research institutes.

Even though Sierra Leone has not participated in workshops or meetings for SPS harmonization in the West Africa sub-region, it views its future involvement in these activities as important for the following reasons:

- It will provide uniform standards for the phytosanitary regulatory systems of ECOWAS countries, thus reducing disputes, permitting greater sub-regional trade, and lead to greater wealth and reduction of poverty in the sub-region.
- Attendance at workshops and meetings will facilitate information exchange between countries leading to greater control of pesticide use and regulation.
- It will improve the early warning and early reaction capability of West Africa.
- The Unit might find solutions to the risk posed by informal trade and travelers across borders who, by avoiding customs duty and permit fees, also avoid inspection measures. This category of traders and travelers poses the greatest risk to disease and pest control.

Table 9. Key issues for regional phytosanitary harmonization.

Key issues for regional harmonization	Proposed actions by ECOWAS
(1) Legal and regulatory framework	ECOWAS to assist in providing legal expertise for guidance and assistance in drafting laws for member countries
(2) Human resource development	ECOWAS to assist member states in • Human resource development in key areas of SPS, especially laboratory analysis • Identification of referral regional laboratories and help with their accreditation in order to support country laboratories in member states
(3) Regional surveillance of pests and diseases	ECOWAS to help develop uniform standards for pest diagnosis and surveillance and establishment of pest-free areas across borders and requirements for entry and exit from these areas
(4) Importation of dangerous agro-chemicals and pesticides posing risk to environment and farmers	Need to develop a regulated pesticide list for ECOWAS member states
(5) Health risks posed by informal trade across borders	ECOWAS to develop common laws to encourage informal traders to comply with SPS regulations at entry and exit points across borders

3.3.8 Recommendations for the SPS Harmonization Process

Legal and Regulatory Framework

- Review the 1974 Plant Quarantine Law on the basis of new developments in international trade and ISPMs before submission to parliament for enactment.
- Make formal arrangements with the Standards Bureau to incorporate phytosanitary information at Notification and Enquiry Points in order to exchange SPS information with trading partners and among the WTO sister organizations.

Institutional Structure and Capacity

- Prepare a new strategic plan for the organization showing vision, new activities and units, human resource requirements, etc., and negotiate for funding assistance from FAO and other donors.
- Elevate the Unit to departmental status under the Ministry of Agriculture and Food Security in order to give it the importance that is required to attract and manage its own budget and be recognized by international institutions.
- Adopt structures and terminologies consistent with functions and obligations of international standard-setting institutions.
- Expand the institutional structure to include units for laboratory diagnosis, field surveillance, and training, consistent with requirements of IPPC.
- Recruit trained and qualified officers to man the out-stations and issue phytosanitary certificates as required by IPPC.

- Train staff in the areas of hazard identification, risk assessment, risk management and risk communication.

Facilities and Equipment

- Improve stock of inspection equipment at entry/exit points, particularly airport air cargo section.
- Improve communication between stations and head office.
- Improve transport at all levels.
- Establish a laboratory for chemical analysis including residue analysis.

Documented Procedures and Systems

- Publish information brochures and fliers on the structure and functions of the Unit.
- Develop/improve manuals for surveillance, pest listing, PRA, pest diagnosis, and pest-free areas.
- Establish internal audit, self-assessment and reporting systems.
- Establish accreditation to international laboratories and universities.
- Formulate a strategic plan for future development and direction of the organization.

International and Regional Collaboration

- Establish enquiry point or collaborate with Standards Bureau to incorporate phytosanitary information at their already established Enquiry Point. This will enable the unit to manage international enquiries and exchange of SPS information with trading partners.
- Collaborate with neighboring countries and with ECOWAS on SPS harmonization efforts, particularly in areas of pesticide imports and regulations, fees levied for SPS services, development of standard procedures and certification requirements.
- Collaborate with external universities and laboratories.
- Seek funding assistance for participation in regional and international SPS harmonization meetings, seminars and workshops.

Development of a Strategic Plan

- Identify strengths and weaknesses of the Unit.
- Plan for human resource development.
- Plan for improving information systems and database.
- Plan for enhancing enforcement measures and creation of public phytosanitary measures.
- Plan for sustainable financing of the Plant Protection and Phytosanitary Units involving cost recovery mechanisms.
- Incorporate decentralization issues into strategic plan to allow for and encourage grassroots enforcement of regulations.
- Exchange information on approved lists of chemicals and pesticides with neighboring countries, such as Guinea and Liberia on likely environmental effects for each country and measures for training farmers.

3.4 Animal health (zoosanitary) systems

3.4.1 Legal and Regulatory Framework

Veterinary Services in Sierra Leone operates as a unit under the Livestock Services Division of the Ministry of Agriculture, Forestry and Food Security. The Animal Diseases Act of Sierra Leone, *An Ordinance Relating to Diseases of Animals December 1944,* provides the legislative framework for veterinary public health activities in Sierra Leone. This ordinance makes provision for:

- Checking diseases.
- Powers of officers to dispose of diseased carcasses, inoculation, disinfection, blood tests, slaughter, power of entry and inspection.
- Compensation for slaughter of diseased animals.
- Infected areas: rules for declaring infected areas, rules for negligently allowing escape of animals from declared infected areas.
- Rules: authority, delegation and purposes.
- Legal proceedings and penalties.

The above Ordinance is supplemented with a subsidiary legislation *An Ordinance to Consolidate and Amend the Law Relating to Public Health in Sierra Leone January 1961*. This food ordinance makes provision for food inspection, food poisoning, slaughterhouse and market inspection, offences for cruelty to animals. The 1961 ordinance, however, places responsibility for food safety under the Minister for Health but with portions of the ordinance relating to responsibilities of Veterinarians of the Livestock Services Department. This is where there are overlapping functions and roles between the Department of Livestock Services under the Ministry of Agriculture and the Public Health Department under the Ministry of Health. This has resulted in occasional conflict between staff of the two departments regarding areas of responsibility within this broad mandate. This confusion needs to be resolved through legislation.

We note that both ordinances of 1944 and 1961 do not address international requirements for importation and exportation of animals and products of animal origin. Several ministries share responsibility for enforcing the regulations without clear defining lines. There are also conflicts and overlapping areas in the mandate of veterinary officers, vis-à-vis health inspectors of the Ministry of Health, in the enforcement of the public health law.

New regulations are needed to address matters such as packing, marking, storage and transport of carcasses and other health hygiene requirements in the handling of birds, animals and products of animal origin as required by Office International des Epizooties (OIE). To avoid conflicts, the functions of veterinary and health inspectors should be delineated under the Food Act.

3.4.2 Institutional Structure and Capacity

Veterinary activities presently fall under the Livestock Services Division of the Ministry of Agriculture and Food Security of which the two main units are animal health and animal production. Veterinary doctors are mainly involved in animal health aspects of the Division which comprises:

- Laboratory investigation
- Research, epidemiology, statistics and information
- Field inspection, ante mortem inspection, disease surveillance and control

The lack of a separate, independent department for Veterinary Public Health Services is not considered relevant in the present circumstances. What is required is increased recruitment and training of veterinary staff to augment the overall staffing situation of the Livestock Services Department.

3.4.3 Facilities and Equipment

The Central Veterinary Laboratory and quarantine stations for Sierra Leone were destroyed during the war. The department thus has no capacity for laboratory analytical work. The need to establish a fully equipped laboratory is proposed to include functional units, namely microbiology, parasitology and hematology.

Accommodation

The Department of Livestock Services headquarters at Freetown and its field offices do not provide accommodation for staff.

Communications

Communication has improved between the department and outstations as a result of improvement in the mobile phone network throughout the country. Most officers use private mobile phones and private e-mails for communication.

Transport

The transportation situation is generally poor. Table 10 shows the current situation compared with the minimum required for effective operations of the department.

Table 10. Transportation profile of the Livestock Services Department

Type of Transport	Current Position	Required Minimum	Variance
4WD Field Vehicle	3	6	3
Motorcycle	12	19	7
Bicycle	0	149 x 3 = 447	447

The department operates in the four regions of the country comprising 13 agricultural districts and 149 chiefdoms. Ideally, a minimum of six vehicles is required for effective operations: four field vehicles for the regions, one vehicle each for head office and the Central Veterinary Laboratories). The Livestock Services Department requires three bicycles in each chiefdom for effective operations.

3.4.4 Human Resources and Development

Technical officers staff the central abattoirs, sea and land ports at the national level. Veterinary officers in the head office also oversee operations of the abattoirs in the capital city of Freetown. There are no veterinarians at any entry/exit ports or inland stations in the country:

- Port Authority Quay -
- Lungi International Airport -
- Kambia Border Port -
- Buedu Port -
- Koindu Land Border -
- Mano River Bridge/ Zimmi -

Livestock, especially cattle, are raised in almost all districts. During the war, Sierra Leone lost almost 85% of its cattle population through migration to neighboring countries and theft. Presently the highest concentrations of livestock are in the northern districts of Sierra Leone. Therefore all districts require adequate staffing of livestock officers at the field level. Table 11 shows the staffing positions of the department as well as those in private practice.

Table 11. Staffing positions of the Department of Livestock Services

Category of Staff	Head Office		Districts		Total for Department		Private Practice
	Current	Ideal	Current	Ideal	Current	Ideal	

Veterinary Doctors	3	3	3	13	6	16	8 (but 4 in active service)
Animal Production Officers (APO)	3	3	9	14	12	17	4
Livestock Inspectors	-	-	80	160	80	160	-

There are six veterinary doctors and 12 animal production officers in government service in Sierra Leone. Where there are no veterinary officers in districts, animal production officers and other technical staff man the stations and perform veterinary public health services, such as meat inspection at the village level, as well as carrying out extension services.

There are 14 qualified veterinarians in the entire Sierra Leone who are all graduates of internationally recognized veterinary schools and registered in the WHO/FAO World Directory of Veterinary Schools. There are seven veterinarians outside government service but only four have an active private practice.

Veterinary Education and Training

The Animal Health and Production training center at Teko near Mekeni was destroyed during the war. Presently, the Njala University of Sierra Leone offers certificate and diploma (HND) courses in animal health and production. A degree course is also offered in animal science at the University of Sierra Leone at Njala, but no degree courses in veterinary health are provided at the universities.

Pest and Disease Diagnostic Capabilities

The Livestock Services Department generally lacks specialized staff, particularly at the senior professional levels, with respect to virologists, mycologists, nematologists, bacteriologists and epidemiologists. At entry and exit points, there are no quarantine facilities and animals are inspected visually. Outside the department there are two microbiologists in the Animal Science Department of the University at Njala. These may be available for consultancy work with the department.

Financial Management

The Government of the Republic of Sierra Leone provides some funding for the Department of Livestock Services. The budget for the Livestock Services Department forms about 9% of the total budget of the Ministry of Agriculture and Food Security. Annual funding of the Department of Livestock Services is about 15% of total budget requested for the Department, suggesting insufficient funding for animal health activities.

Though the department generates funds internally through livestock movement permits, butchers fees, etc., all revenues are paid to the government's consolidated account and no percentage is allocated to the department. This situation could be addressed through legislative amendment to enable the department to retain some percentage of its internally generated funds.

3.4.5 Documented Procedures and Systems

Inspection Systems at Entry and Exit Points

This evaluation focused on land border checkpoints, which are very porous and require attention with respect to control of pests and diseases of livestock. Transhumance presents a great problem for disease control in Sierra Leone. Inspection posts are manned by health inspectors. Post-entry inspection and diagnostic laboratories, equipment and facilities need upgrading.

Generally, export certification systems follow the formats and standards of OIE and CAC and are rated as satisfactory. The adequacy of operational manuals was judged to be marginal (50% of optimal). Internal audit

systems are not effectively established, apart from annual reports and position papers for presentation at seminars or to the government.

Surveillance Capacity

Surveillance capacity is fair. The department has a system in place to monitor movement of animals and animal products at entry points and within the country. It also carries out rinderpest campaigns, mass vaccinations, quarantine and culling.

Recent History of Animal Disease

- Rinderpest has been eradicated nationally. However continuous monitoring and reporting to AU-IBAR on a regular basis is needed.
- The prevalence of contagious bovine pleuro-pneumonia has been controlled to negligible levels in the last 10 years.
- Pestes de Petit Ruminants (PPR) were introduced to Sierra Leone from other countries. This disease is the main cause of high mortality in livestock, particularly small ruminants, in Sierra Leone.
- The prevalence of Newcastle Disease (in poultry) has increased in the last 10 years and is characterized by seasonal outbreaks.

Several areas could benefit from training and assistance. Testing imported, live animals with infected diseases and disease-causing organisms represents an area in which training would be beneficial. Assistance is also required for the design of disease control programs based on risk analysis and epidemiological principles. The Standards Bureau of Sierra Leone does not presently have the capacity for microbial analysis. Presently, there is little collaboration on disease recognition between the department and the universities and research laboratories outside Sierra Leone. This area requires active collaboration, improved laboratory facilities and training of staff in order to improve diagnostic and analytical capability.

Establishment of Disease-free Areas, Places and Sites

Staff of the department has knowledge of areas free of specific diseases but these are not documented or mapped. Mapping these zones requires capacity building through training of staff and acquisition of appropriate software. Guidelines also need to be provided to restrict movement of livestock into these areas.

There is an apparent need for further training to improve capability in information documentation, computerization of databases on animal pests, and number of livestock surveyed. The surveillance teams need training as well as a coordinator to head these activities. Surveillance equipment also needs updating.

Food Hygiene

Annual slaughter statistics are not available for the past three years by type of animal, nor is there information on commercial fresh meat establishments. This is partly caused by overlap of functions between staff from Veterinary Public Health and the Ministry of Health and this situation needs to be resolved through legislative amendments.

Accreditation with Standards-Setting (Quality Assurance) Institutions

Export of meat and livestock products is not an important activity in Sierra Leone, hence accreditation with international standard setting organizations was not sought.

Recommendations for Capacity Building

- Publish informational brochures and fliers on the structure and functions of the Livestock Services Department.
- Develop manuals for surveillance, pest listing, PRA, pest diagnosis, and pest-free areas.
- Establish internal audit, self-assessment, and reporting systems.
- Improve strategic planning for future development and direction of the department.
- Improve national SPS database systems and progressive computerization of all information sources networking to zones and stations within each country.

3.4.6 Analysis of Zoosanitary Constraints in Sierra Leone

Imports

Currently Sierra Leone imports several meat products including live sheep and goats, day-old chicks, table eggs, dressed chicken, and canned meat products.

Presently, the capacity for inspection, diagnosis and analysis in Sierra Leone is low. Consequently, major diseases, pests and contaminants cannot be diagnosed and analyzed. Inspectors usually rely on health inspection certificates from countries of origin. The result is the high risk posed by imported animal products from outside the country to consumers and to the farming systems.

Exports

Few livestock and poultry products are currently exported. However, potential exists in the short-term for exports of day-old chicks, live ruminants, dressed chickens and table eggs to neighbouring countries in the subregion.

Table 12. Analysis of zoosanitary constraints to importing key animal products.

Top 5 products	Exporting countries (trading partner)	% Rejection of products last year	Main causes for rejection of import product	Implications for SPS Institution	Actions required to improve situation
(1) Day-old chicks	Netherlands, UK	0% rejection Low capacity for diagnosis and analysis. Major diseases could not be detected if any. Usually relies on import health certificates of origin.	Not in position to identify causes due to low capacity to diagnose and analyze.	High risk of disease spread and consumption of unwholesome food by consumers.	Train human resources in inspection and diagnosis procedures. Improve local diagnostic capacity for microbial and chemical residue analysis. Update legislation on importation of animal products. Exchange SPS information with neighboring countries.
(2) Table eggs & hatching eggs	Netherlands, UK				
(3) Dressed chickens	Netherlands, Brazil				
(4) Fresh beef, pork and mutton	Netherlands, UK, France, India				
(5) Canned beef, pork, chicken	Netherlands, UK, France, India				
(6) Live sheep & goats	Guinea, The Gambia				

Table 13. Analysis of zoosanitary constraints to exporting animal products.

Top 5 potential products	Importing countries (existing & potential)	% Rejection of products last year	Main causes for rejection of export product	Implications for SPS institution	Actions required to improve situation
(1) Day-old chicks	West African subregion, Upper Guinea and Liberia	0%	Nil No information received from destination country.	Risk of spreading diseases to importing countries in subregion.	Department to improve capacity and vaccine stocks for mandatory MAREK vaccination at day old.
(2) Live small ruminants	West African subregion, Upper Guinea and Liberia	0%	Nil No information received from destination country.		Ensure regular inspection of hatcheries and poultry farms to ensure adequate sanitation and control of diseases.
(3) Dressed chicken and table eggs	West African subregion, Upper Guinea and Liberia	0%	Nil No information received from destination country.		

3.4.7 Key Issues for ECOWAS SPS Regional Harmonization

Notification and Enquiry Point

The department has not been active in notification on diseases to countries through the WHO representative in Sierra Leone. Annual subscriptions to international organizations are in arrears. No website exists for published information on animal diseases and the health situation in Sierra Leone.

Harmonization of Animal Health Measures in West Africa Subregion

Sierra Leone has not participated directly in the ECOWAS SPS harmonization process, but views the idea as laudable. Among the benefits that are likely to accrue as a result of harmonization are:

- Improvement of the early warning and early reaction capability of West Africa to disease outbreak.
- Development of consensus on the most appropriate strategies for disease control in West Africa.
- Facilitation of information exchange between countries.

Likely constraints are:

- The transhumance nature of livestock production, especially cattle and the porous nature of national borders.
- Limited funding for participation in and organization of subregional harmonization workshops.

Table 14. Key issues for regional zoosanitary harmonization.

Key issues for regional harmonization	Proposed actions by ECOWAS
Disease and pest control issues of regional importance. Rampant transhumance and porous nature of borders poses risk of disease spread.	ECOWAS to adopt regional measures on transhumance, e.g., • Approve designated routes in subregion for transhumance. • Approve designated quarantine stations in subregion for livestock inspection. • Approve uniform taxation and levies for livestock movement permits and quarantine charges in subregion.
Inadequate information flow on diseases and pests in the subregion. Lack of standards for locally traded meat and meat products in the subregion.	• ECOWAS to create a regional center of information sharing on zoosanitary issues among member states. • ECOWAS to support standards bureau in the region to document standards for locally traded meat products to facilitate commercial trade as against informal trade across borders. • Harmonization of testing methods and procedures in member states.
Low capacity of veterinary health infrastructure and human resources.	ECOWAS to support training of veterinary public health staff for regional SPS harmonization.

3.4.8 Recommendations for the SPS Harmonization Process

Weaknesses in the animal health service delivery system could be addressed through activities in the following areas:

Legal and Regulatory Framework

- Draft and enact new legislation focusing on measures that address international trade in meat products and live animals.

Institutional Structure and Capacity

- Increase funding support to the Department to increase its capacity to meet international obligations and to exercise greater control over budgetary and physical resources.
- Improve staffing of veterinary doctors, especially at the field divisional level.

Facilities and Equipment

- Refurbish rundown laboratories, and improve facilities and equipment at national and divisional laboratories.
- Improve inspection facilities and equipment at entry points.
- Provide adequate quarantine and disposal facilities.

International and Regional Cooperation

- Cooperate with neighboring countries on measures to control transhumance of livestock.
- Seek increased funding for participation and organization of subregional harmonization workshops.
- Seek increased collaboration with neighboring countries to control emerging diseases.

3.5 Fish and seafood safety

3.5.1 Legal and Regulatory Framework

Fishery activities in Sierra Leone fall under the Ministry of Marine Resources. Its legal framework and mandate are derived from Decree 18, *The Fisheries Management and Development Decree of 1994*.

Earlier legislative instruments include:

- The Fisheries Management and Development Act of 1988
- The Fisheries Management and Development Amendment Act 1990
- The Fisheries Management and Development Amendment Act 1992
- The Fisheries Policies of 2003
- Fisheries Sanitary Regulations of 2006

The Fisheries Department of the Ministry is responsible for food safety with respect to fish and seafood products for both domestic consumption and export. It operates under the laws listed above, backed by various administrative orders. These various administrative orders govern the production, marketing, water use, processing, and inspection procedures as well as quality assurance process. Law and administrative orders are the principal enactments governing the management of fisheries and the development of the fishing industry in Sierra Leone and these apply throughout the "fisheries waters" of Sierra Leone – the inland waters and the territorial sea up to a distance of 200 nautical miles from the baseline where the territorial sea is measured.

The legal framework provides regulations for the marketing and processing of fish, prohibited fishing methods, powers of authorized officers, penalties, legal proceedings and power to make regulations. They give the Director of Fisheries, in consultation with the authorities responsible for health, powers to adopt schemes for the sanitary control of the supply of fishery products to hotels, restaurants, shops or other premises where such products are used or sold. Additionally, the director, by law, may demand that any fishery product supplied to such establishments undergo a specified procedure for depuration, purification and detoxification. They permit the Minister responsible for Fisheries, in consultation with the Minister of Health and the Standards Bureau to:

- Provide for the inspection of fish processing establishments.
- Set conditions for the construction and operation of fish processing establishments.
- Provide for licensing schemes relating to fish intended for exports.

"Authorized officers" encompass fisheries officers, inspectorate of the Department of Health, police officers, officers of the Maritime Unit, customs officers or other persons authorized by the Fisheries Department to enforce the Act and the Regulations by executing any and or all of the provisions of the legislations. These positions are accorded wide-ranging powers under various orders which include boarding and searching vessels, examining documents, taking samples of fish or seizing vessels found in violation of the Act.

The legislations also give authorized officers the power to conduct periodic inspections of export fish processing establishments in collaboration with the Standards Bureau and the Ministry of Health. Where the establishments lack sanitation or do not meet the required quality control standards, they may suspend further exports from the establishment or shut it down until the requirements are met. Violations of the Act and the Regulations attract penal sanctions or imprisonment. Strict adherence to the requirements provided for in the Regulations should enable processed fish products from Sierra Leone to meet international export requirements.

The Sanitary Regulations Act of 2006 now provides for:

- Standards of microbial counts and chemical levels to guide inspectors of fish and seafood products.
- Standardizing field volumes to improve measurement and estimation. However, these need to use the metric system of weights and volumes

3.5.2 Institutional Structure and Capacity

Fisheries activities come under the Ministry of Marine Resources. This arrangement provides it with adequate power to exercise control of its budget and resource allocation.

There are four divisions under the Fisheries Directorate as presented in Figure 1. The Directorate does not have its own inspectors but relies on the inspectorate corps of the Department of Health and the Standards Bureau. The Inland Fisheries and Aquaculture division provides education for fishermen and processors in fishing technology, fish and shellfish culture, repair and maintenance of fishing gear, and quality control.

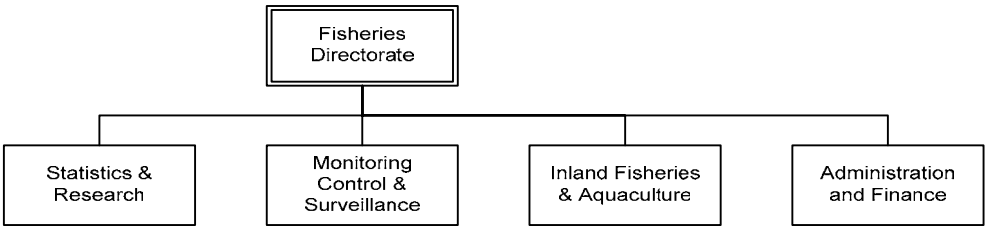

Figure 1. The Fisheries Directorate and its four divisions.

The Statistics and Research division carries out research on fish technology and quality control, resource evaluation and management, aquaculture, aquatic pollution and implications for socioeconomic development. Administration provides human resources and finance support. It also provides health certifications for seafood exports, import and export permits, and inspects and licenses seafood establishments.

Export from Sierra Leone

Sierra Leone's post-war situation limits its capacity for export. Presently, the country is banned from exporting to EU countries—once major export partners—because of their inability to meet EU health standards. The low volume of exports is also due to the country's limited private sector capacity. Asian vessels will often purchase catches from Sierra Leone fishermen, processing it on board for the export market. Table 15 shows past export figures for the country:

Table 15. Seafood exports from Sierra Leone-2000 to 2004 (metric tonnes).

Year	Fish	Shrimp	Others	Total
2001	4849	1325	691	6865
2002	1205	1187	3180	5572
2003	1343	1404	2846	5593
2004	1139	1587	1980	4706
2005	754	1281	1118	3153

Source: Department of Fisheries

The significant decline in fish exports seen above is mainly due to the EU ban. These data do not take into account export through third parties.

3.5.3 Facilities and Equipment

The Fisheries Department does not have its own laboratory but begun a partnership with The University of Sierra Leone which has a laboratory for marine biology and oceanography to do some of the needed analysis for food hygiene and quality control. The laboratory also does analysis of pesticide residue and heavy metals. The department works closely with the Ministry of Health.

The Department is presently receiving technical assistance from the EU to help implement and enhance the standards of processed fish for exports. There is a need for a laboratory in Freetown, the main exporting point for microbiological analysis and physiochemical analysis.

Inspections are done at the premises of exporting companies by the corps of fishery officers and officers from the Department of Health and the Standards Bureau, is the competent authority.

There are seven coastal stations and three inland stations in Sierra Leone where the Fisheries Department has offices: coastal stations include Freetown, Tombo, Goderich, Kambia, Shenge, Bonthe, Pujehun. Land stations are situated in Bo, Makali and Gbondapi.

Communication

The Fisheries Department has an Internet facility. The efficiency of the facility is rated poor because of irregular supply of electricity and the landline telephone system. At the stations outside Freetown communication is by means of SSB radios. There is no website to promote information about the Ministry's policies and programs. Officers at various stations use their private mobile phones where there is a network.

3.5.4 Documented Procedures

The Department has limited documentation, such as the FAO Species Identification Sheets for Fisheries, EU-ACP documentation and manuals. The EU is presently training staff on documentation requirements. This will update the documentation wing of the Research and Statistics Division. Training on Standards such as HACCP has so far covered four officers of the department. The department will require documentation and training in this area as well as in other quality standards in seafood production. Dissemination of research information is limited because of inadequate human resources in terms of specialists.

Export Certification Systems

Export systems lag behind international standards. The Department issues certificates of fish health but these apply mainly to dry fish. Samples sent to the Fisheries Department are subject only to visual inspection.

There are about 10 companies certified to export. However, most companies sell to Asian vessels or to the local market. Principal species for export include Gwan gwan, crocus, snapper, sole, barracuda, squid, lobster, shrimp and prawn.

3.5.5 Analysis of SPS Constraints for Seafood and Fish Products

Table 16. Analysis of seafood quality constraints for exported seafood and fish.

Top 5 products	Importing countries (trading partner)	% Rejection of products last year	Main causes for rejection of import product	Implications for SPS institution	Actions required to improve situation
Frozen shrimp	Spain	Nil Ban on exports so minimal volumes exported and no cases of rejection	Nil	Not apparent	Need to develop a training program in HACCP for quality management before ban is removed and to boost exports
Frozen fish	Spain				
Smoked fish	UK U.S.				
Fresh fish	France Germany Belgium				

Frozen Lobster	Spain Germany France				

3.5.6 Key Issues for Regional Harmonization of Fish and Seafood Safety

Table 17. Key issues for regional harmonization of seafood quality.

Key issues for regional harmonization	Proposed actions by ECOWAS
Existence of unscientific fish export bans in legislation of West African countries that limit intra-regional fish and seafood trade.	ECOWAS to support regional meetings to remove such arbitrary legislation.
Lack of referral laboratories for specialized analysis.	ECOWAS to identify laboratories to serve as referral laboratories and provide support for their accreditation and logistics and equipment.

3.5.7 International and Regional Collaboration

The Fisheries Department collaborates with International SPS institutions and also with bilateral countries such as Guinea, Liberia within the context of the Mano River Union. Sierra Leone is a member of CODEX Alimentarius. At regional and subregional levels they participate in various conferences and workshops.

3.5.8 Recommendations for Capacity Building

Training

Training should be approached in a systematic manner in Sierra Leone. A comprehensive training needs assessment should be conducted and a training plan developed in order to meet Departmental needs. Short-term training in HACCP is needed for fishery officers to meet inspection and production requirements and for the private sector to meet standards. With no laboratory for risk analysis, training of specialists is critically important. Partnership with the University and other private laboratories should be considered in the short term while the acquisition of a well-equipped public laboratory should be a long-term goal. Planning for specialists in microbiological analysis and physiochemical analysis is also important.

The EU is presently providing training on their documentation and quality standards requirements. Private sector consultants need to be certified as IRCA Auditors to be able to effectively assist private sector players in the implementation of HACCP.

Laboratory Capability

A dedicated laboratory for fisheries analysis needs to be supported by donors and the government budget in order to meet international requirements. Partnership collaboration with foreign and regional laboratories needs to be developed in the medium term to ensure quality and meet requirements.

Legal Framework

Existing fishery laws and regulations are being reviewed in line with the new multilateral trading system and with WTO SPS agreements. The following are recommended:

- Provide adequate standards of microbial counts and chemical levels to guide inspectors of fish and seafood products.
- Standardize field volumes to improve measurement of volumes and weights in statistical analyses.
- Promote legislation to address the control of artisanal fisheries.
- Monitor rejection of fish and seafood products from importing countries and document causes for rejection.

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