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Sanitary & Phyto-sanitary Capacity Evaluation of The Gambia, Ghana and Nigeria

Main Report

Technical Report No. 6

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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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
GSB	**Ghana Standards Board**
GMO	Genetically Modified Organisms
GOTC	Government of The Gambia
GSB	Ghana Standards Board
GTZ	Germany Development Organization
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 Phyto-sanitary 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)
NAFDAC	The National Agency for Food and Drugs Administration and Control **(**Nigeria)
NARI	National Agricultural Research Institute
NEP	National Enquiry Point
NIS	Nigerian Industrial Standards
NPPO	National Plant Protection Organization
OIE	*Office International des Epizooties*
PCE	Phyto-sanitary Capacity Evaluation
PQS	Plant Quarantine Services
PRA	Pest Risk Assessment
PSRSA	*Programme Spécial Régional pour la Sécurité Alimentaire*
SON	Standards Organization of Nigerian
SPS	Phyto-Sanitary Harmonization Agreement
TCP	Technical Cooperative Program
UEMOA	*Union Economique et Monétaire Ouest Africaine*
US	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VPH	Veterinary Public Health Unit
WATH	West Africa Trade Hub
WTO	World Trade Organization

1.0 BACKGROUND TO SANITARY & PHYTO-SANITARY HARMONIZATION

According to Annex A of the World Trade Organization (WTO), a-Phyto-Sanitary Harmonization Agreement measure is any measure applied:

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

Globalization has seen growing levels of international trade in agricultural food products and with it increasing 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 naturally facilitate trade, both domestically and internationally, and trade itself is adjudged to promote economic development and improved standards 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 Phyto-sanitary Measures (the "SPS Agreement") came into existence with the establishment of the World Trade Organization on 1st January 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.

[1] "animal" includes fish and wild fauna;
[2] "plants" includes forest and wild flora;
[3] "pests" include weeds
[4] "contaminants" include pesticides and veterinary drug residues and extraneous matter.

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 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, standards are set even more stringently
- Non-governmental organizations, consumer organizations, animal welfare organizations, and environmental organizations closely watch and, if necessary, criticize all activities which might endanger sustainable food supply
- some governments have introduced new food safety aspects, e.g. bio-terrorism in the United States (US) 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 high infrastructure (efficient SPS institutions, certification boards, research institutes, laboratories, export

[5]The relevant standard-setting organisations 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 Organisation (*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 organisations membership, which is open to all WTO members.

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.

It has, therefore, become 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.

1.3 Justification for SPS Regional Harmonization for West Africa

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 Phyto-sanitary regulations constitutes a basic requirement for countries seeking increased market access for their agricultural products in the international trading system. 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. Economic Community Of West African States (ECOWAS) countries, therefore, 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 framework 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 and put pressure on their governments to improve and control food safety, of both imported and locally-produced foodstuffs.

Thirdly, most countries in West Africa lack the product critical mass required to meet orders from the multilateral trading system, whether they be regular or high 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, rendering West African countries less competitive.

Harmonization of sanitary and phyto-sanitary regulations in West Africa is, therefore, expected to:

- 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

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 horizontally integrate or harmonize their SPS systems. This would facilitate trade among themselves. 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

[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.

"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 necessary preludes to developing effective SPS treaties.

1.4 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, and therefore aims to increase trade in agricultural commodities within its boundaries. 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 a US$84 million programme to undertake a wide range of food-security activities. Given UEMOA's orientation towards regional integration and its member states' dependence on agriculture, PSRSA adopted a trade-based food-security approach, encouraging the trade of food commodities between member states and with non-UEMOA countries. Within this context, in October 2000, UEMOA and FAO signed an agreement for a priority PSRSA sub-programme that allocates US$ 2.2 million to regional harmonization of SPS regulatory structures through a sub-regional treaty and to their implementation. 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, phyto-sanitary 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:

- 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 programme for officials who will interpret and implement the treaties (March-April 2004)
- The reinforcement of quality-control laboratories (March-April 2004).

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

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 Project (USAID/WARP) and the United States Department of 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 issue of constraints that SPS poses for trade. These workshops have contributed significantly to the development of UEMOA's ongoing SPS activities within the PSRSA framework.

1.5 Objective of the Study

West Africa Trade Hub (WATH), supported by the West Africa Regional Programme (WARP) of USAID- sees an opportunity to support ECOWAS regional economic integration by assisting on-going UEMOA SPS harmonization processes, as well as initiating a similar process for the remaining non-UEMOA West Africa. Eventually, this should lead to the integration of the two SPS systems, permitting a truly regional harmonisation of these regulations through an ECOWAS treaty.

2.0 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 - namely International Plant Protection Convention (IPPC), responsible for plant health, Office International des Epizooties (OIE), responsible for animal health, and 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

Evaluation formats adopted were developed by the sister organizations for each area of SPS covered under this study (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 in an efficient and sustainable manner. One way to review a country's position in relation to its capacity to fulfill its international obligations is to develop an inventory of the functions and resources that are needed for basic SPS services and to then comply with WTO measures and 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

- 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
- National legislation's adoption of WTO/SPS terms, terminologies, definitions and concepts
- The fragmentation of authority between national ministries, or departments within ministries, and at national and sub-national levels
- Adequacy of legal powers for search and seizure and obligations of Customs to report to SPS national agencies
- Prescription of powers, under the law, to National Ministers through their respective departmental heads for review of national regulations and procedures without necessarily going back to parliament
- Availability of printed copies at official sales points or website, or at official enquiry points
- Equal treatment of local and foreign products, in terms of fees levied for permits, certificates and other services

- Equivalence of measures and whether agreement has been reached on measures that would correspond to others adopted by countries, either on bilateral or multilateral basis, so as to minimize conflicts and reduce the need for arbitration
- Provision for the following:
    - a deterrent level of penalties
    - for the establishment of Notification Authority and National Enquiry Points
    - for transparency and access by interested parties to information on laws and regulations

Institutional Issues and Capacity

- Identification of departments 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 degree of fragmentation authority between national ministries, departments within ministries, both at national and sub-national level
- Geographical coverage of SPS activities through design of its national and sub-national administrative areas

Human Resource 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
- Existence of under-staffing and multi-tasking (same officers performing several roles)
- Provision for regular training programs on technical and management procedures
- Training in concepts and application of WTO measures
- Budgetary and resource allocation, competitive salaries and work incentives. Adequacy of budget, internal and external sources, and mechanisms of funding

Documented Procedures

- 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, data bases, retrieval systems and networks across country.

Facilities and Equipment

- Adequacy of laboratory facilities, equipment and diagnostic capability at entry/exit points
- Physical resources and equipment and their distribution at national, regional and district levels
- Adequacy of quarantine and disposal facilities
- Existence of library facilities

International and Regional Participation

- Membership in international institutions like WTO, International Plant Protection Convention (IPPC), Codex Alimentarius Commission (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

Key issues for the ECOWAS SPS harmonization process

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

2.3 Scope of Study

Volume one of this study summarizes the findings of an evaluation of SPS institutions in the three non-UEMOA countries – The Gambia, Ghana and Nigeria. It also includes an annex containing fact sheets in tabular format. Volume two contains the executive summary of the evaluation findings.

In addition, the following regional institutions were also 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 Office Banjul, Accra, and Abuja

3.0 THE GAMBIA

The Gambia, a small country located at the western end of West Africa, occupies a land area of 11,800 square kilometers (sq. km.) and a population of 1.42 million (2001 estimates), which is growing at the rate of 2.8 percent per annum. The climate is tropical, with an average annual rainfall of 500 mm during a uni-modal rainy season occurring from July to September. As a tropical country, The Gambia is predisposed to prevalence of tropical insect pests and diseases, for which it must have adequate disease control systems.

The Gambian economy is predominantly agricultural with an estimated 80% of the population engaged in agriculture and related activities. Roughly 52 percent of total land area is arable, of which an estimated 55 percent is given to cultivation of groundnuts, mainly for export. Though an important agricultural activity, livestock rearing is carried out largely for local consumption and very little for exports. The potentials for agricultural development for The Gambia lie in irrigation, using the waters of River Gambia, and also seafood exports, from both marine and freshwater sources. The nearness of The Gambia to the US and the EU also gives it export advantage, compared to most other West African countries. Despite these potentials, agri-industry's contribution to the GDP in The Gambia remains low. (See Table 1.)

Table 1 Major Agricultural Exports for 2002

Product	Amount Exported
Groundnut and groundnut products -	272,193 thousand metric tonnes
Fish and fish products	21,180 thousand metric tonnes
Hides and skins	1,502 thousand metric tonnes
Food and vegetable	17,806 thousand metric tonnes
Cotton	2,598 thousand metric tonnes

The Gambia imports large quantities of agricultural food products, mainly from the US and the EU. Increase in trade by The Gambia with the multilateral trading system in agricultural products requires that it adopt international trading regulations and harmonize its sanitary and phyto-sanitary regulations in line with international standards. This has become imperative since, its neighbour Senegal's involvement with other UEMOA member countries in SPS harmonization.

3.1 Food Safety and Public Health In The Gambia

Ministries, Departments and Agencies

Under the existing laws (April, 2004), several Ministries, Departments and Agencies (MDAs) share responsibility for food control, including food hygiene, food safety and food trade. However, the overall control and oversight rests with the Department of State for Health. The MDAs (and their specific departments) involved in food control in The Gambia are listed as follows:

Department of State for Health under the Public Health Act

- Port Health Services
- Food Hygiene and Safety Education Unit
- School of Public Health

Department of State for Agriculture

- Department of Livestock Services
- Department of Agricultural Services
- Plant Quarantine and Pest Control Unit
- National Agricultural Research Institute (NARI)

Department of State for Fisheries, Natural Resources and the Environment

- Fisheries Department
- National Water Resource Council
- National Environment Agency (NEA)

Department of State for Trade

- Standards and Consumer Protection Bureau
- Customs

Others include:

- Attorney General's Chambers and Department of State for Justice
- Department of State for Tourism
- Department of State for Local Government
- National Nutrition Agency (NaNA)

Legislative and Regulatory Framework

Several uncoordinated, piecemeal and fragmented legislations under various MDAs characterize the existing legislative framework for food safety. No single legislation in The Gambia addresses food control in its entirety. As a piece of legislation on food safety, 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.

The Gambia has already commenced a review of the Food Law and Regulations in order to address the inadequacies contained in the earlier acts , as well as to bring the Food Act in line with the CODEX standards. The draft of this act designated the National Nutrition Agency (NaNA) as the institution responsible for the overall coordination of the several departments of state involved in food safety. The draft of the law aims at protecting the health and life of consumers by ensuring the safety and wholesomeness of food for human consumption, and by guaranteeing quality of both locally-produced and imported food items.. The draft addresses the relationship between the national food safety control system and international trade, and harmonizes definitions, terminologies and concepts to those used by WTO/SPS and CAC. It also provides legal powers for search and seizure, accreditation and specifies procedures for national consultation and international notification. Though the existing law does not ban the import of any food product, imports are subject to inspection and certifications before they are released for sale.

The draft act has yet to become law. With the coming into force of the new food law, NaNA will be the focal point for notification and enquiry on food safety issues in The Gambia. Already the National Codex Committee was established and inaugurated in May 2001 and the Codex Contact Point/Enquiry Point was relocated to the National Nutrition Agency.

The Gambia is undergoing public sector reforms under World Bank, the International Monetary Fund and other donor programmes. This includes decentralization and the devolution of national structures, roles and functions to sub-national structures. However, the draft law does not adequately address decentralization and food safety. The new food law must take this reform process into consideration and identify those aspects of law enforcement that need to be devolved to local government authorities.

Institutional Structure and Capacity

The NaNA, an autonomous body, co-ordinates the implementation of the policy and national plan of action for food safety. This arrangement removes the previously overlapping responsibilities of national and sub-national authorities and the sectoral bias of nutrition being either a health or an agricultural issue. The draft law now regards food safety as an issue of development with all sectors to ensure proper accountability in the food sector and to enhance import and export trade in food and food products. This restructuring also addresses the emerging concept to recognize SPS as a food supply chain issue.

In this regard, NaNA receives assistance from FAO and the Government of The Gambia (GOTG) under the Technical Cooperation Program (TCP) "Strengthening the National Food Control Systems in The Gambia".

National Consultation Mechanisms

The drafted Food Law makes provision for the establishment of a 19-member Food Control Board comprising representatives of various stakeholder institutions. This arrangement ensures representation, national consultation and accountability of stakeholders..

Food Safety Programs and Funding

Under the FAO and the GOTG project "Strengthening the National Food Control Systems in The Gambia", NaNA provides funds for the rehabilitation and capacity building of respective departments to strengthen their capacity for controlling food safety. NaNA has implemented these programs to improve the food safety regime of The Gambia. One expects the program to establish a food inspection network in the country and upgrade the capabilities for laboratory and analytical support services, as well as train supervisors of street food vendors. Specific areas of training needs include risk assessment and standards setting, meat quality and meat product handling and inspection, and HACCP for food processors.

Recommendations for Capacity Building Needs

NaNA also plans to pursue a program of upgrading the capabilities and facilities for laboratory and analytical support services for the implementing agencies. Plans for capacity building in food hazard and risk analysis, as well as in Food Safety Surveillance and Inspection Systems, are also being developed. NaNA has already produced several manuals on procedures and food safety management system and has developed computerized systems for data capture. Plans exist to further expand these to implementing agencies, even though some collaboration is occurring in other areas of the field.

The current FAO TCP/GAM 0166 (A) "Strengthening the Food Control Systems of The Gambia" addresses most issues regarding the legislative framework, organizational structures and institutional issues, documentation and training, and finally, infrastructure and equipment. The draft Food Law establishes harmonization of its food safety measures with the international standards. The creation of NaNA should increase coordination and control over food safety across all responsible institutions and departments in The Gambia.

However, the following actions must be taken to strengthen the process:

- Improve the legal, regulatory and institutional framework
- Review the draft law taking into consideration decentralization and devolution of roles and responsibilities to sub-national structures
- 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 its neighbors and ECOWAS members in order to promote cross country and intra-regional trade
- Develop a program for enforcing the regulations throughout the country

- Improve laboratory analysis capability particularly for products meant 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

Regional SPS Harmonization

Currently, The Gambia is not directly involved in West African efforts at harmonization of food safety measures under SPS. However, it is part of the FAO regional initiative "Strengthening the National Food Control Systems in The Gambia". As part of the process of updating the Food Law, reference was made to existing food laws of several Anglophone countries in West Africa. The GOTG 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 imported from across border
- 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

Although not a member of the CAC, The Gambia does belong to the WTO. Since the WTO Agreement on SPS adopts the Codex Alimentarius Commission rules as the source of international food standards, The Gambia is bound by these standards, since they provide international benchmarks aimed at facilitating trade and management of food safety risks.

3.3 Plant Health And Phyto-Sanitary Measures In The Gambia

Legislative Framework

The existing laws and regulations evolved from a series of acts and regulations over the years. These comprise of *Plant Importation and Regulation Act CAP 143* enacted by the colonial government on 31st March 1936 and amended in 1963 by *Law No. 83* and the *Prevention of Damage by Pests Act, 1962 (CAP. 66:02).*

A subsidiary legislation under this act is the *Prevention of Damage by Pests Act Chapter***,** which was enacted 31st July 1962 and amended by L.I **10 of 1964 and L.I 9 of 1965**. This act provides an index of subsidiary legislation on:

- Prevention of Damage by Pests (Infestation of Food) Regulation (*L.N. 60/1962*)
- Prevention of Damage by Pests (Rice Importation) Regulations (*LO.N. 52/1964, 1965*)
- Prevention of Damage by Pests (Flour Importation) Regulations

See ANNEX 2 for the current legislation that has not been specifically stated.

In 1997, the State Department for Agriculture appealed to and received assistance from the FAO to draft a new phyto-sanitary regulatory framework, in line with international standards set by the IPPC, for The Gambia. The draft of the new law addresses the deficiencies in the existing law and largely complies with WTO/SPS and IPPC regulations. The draft also emphasizes the relationship between the national plant protection system and the requirements for international trade. The current act is being updated to conform to the CODEX requirement for minimum pesticide residue contents of groundnuts for export and domestic consumption.

The proposed act would provide the quarantine officers with the necessary legal authority to act in accordance with these changes. The newly drafted act would also provide NPPOs with the following powers:

- 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 the import of biological control agents
- Inspect mails and posts
- Regulate packing materials
- Exempt preserved, dried, canned or otherwise processed goods

However, outstanding issues noted are the need to provide for a separate and independent Department of Plant Protection and Regulatory Services, instead of the existing unit under Agricultural Services Department. This will enhance its capacity to communicate directly with International Standard setting institutions, as well as improve its management of resources.

After the drafting of the law in 1997, it was not submitted to Parliament for enactment. Due to this lapse of time and the fact that new developments have taken place in WTO-SPS regulations since 1997, the State Department for Agriculture must again review the draft before its submission to Parliament.

Institutional Structure and Capacity

Structure and Organization of the NPPO

The former Ministry of Agriculture operated a Pest Management Unit until 1992, when it was re-designated "Plant Protection and Phyto-sanitary Unit" under the Department of Agricultural Services. It now has 6 sections - Training, Research & Development, Field Inspectorate, Plant Quarantine & Stored Products, Laboratory and Administration.

Human Resources

The total human resource capacity of the National Plant Protection Organization (NPPO), currently estimated at 45% of actual required, is clearly inadequate for the implementation of an effective plant health control program. Table 2 shows the human resource situation of the Unit.

Table 2 Human Resource Position of the NPPO

Departmental Section	Planned Staff Number	Actual Number	Adequacy
Training	4	1	25%
Research and Development	4	1	25%
Field Inspectorate	12	4	25%
Plant Quarantine & Stored Products	48	24	50%
Laboratory Services	4	1	25%
Administration	4	2	50%
TOTAL	**73**	**33**	**45%**

The qualifications and background of staff are shown as follows:

- Masters Degree Holders 4
- Higher Diplomas 8
- Certificate in General Agriculture 7
- High School Certificate 10

Some training was undertaken in the last 5 years for staff of the Unit. In 1999, FAO provided training in basic plant quarantine procedures for 20 participants, including customs officers. This evaluation rated the human resources capacity of the Unit as FAIR 45%.

Funding and Financial Administration
The Unit receives funds from a variety of sources:

- Government subvention
- Donor projects, such as IFAD spell out please- Rural Finance Project and the FAO's "Strengthening Food Control Systems of The Gambia"
- National Environmental Agency support of Integrated Pest Management Program
- National Nutrition Agency (NaNA)

Overall funding, also rated FAIR, totals 60% of annual requirements. As a means of generating internal revenue, the Unit proposed a plan for 50% sharing of revenue generated by fees charged from import-export permits, health certificates, etc., but this has yet to be approved. If this is approved, it would provide additional source of revenue to the Unit. In addition, the Pesticide Residue Laboratory, once established, will generate added income for the Unit. These fees are non-discriminatory between exports and imports.

Office Accommodation
While adequate for the head office, housing needs renovation. The holding areas at the field stations also need improvement. The airport entry/exit point is in the process of acquiring a new office space for operation. Overall rating is GOOD at 60%.

Communications
The head office has email and Internet access, as well as telephone facilities. However, stations at the airport and the seaport have no telephone facilities. Staff resort to private cell phones and communication centers to inform the head office of issues requiring laboratory testing of samples and feedback results. Overall rating for the head office is 80%, and 20% for out-stations.

Transport
Only one vehicle is operational within the Unit. The overall transport situation rates poor at 10% of what was actually planned. (See Table 3.)

Table 3 Transport Situation of the NPPO

Departmental Section	Planned Number	Actual Number
Training	1 Vehicle	0
Research and Development	1 Vehicle	0
Field Inspectorate	1 Vehicle 9 Motorcycles	0
Plant Quarantine & Stored Products	1 Vehicle	0
Laboratory Services	1 Vehicle	0
Administration	1 Vehicle	1

Phyto-sanitary inspectors do not have any access of transport, other than use of public vehicles. Considering the long distances between entry/exit points and the head office/laboratory, inspectors need a reliable vehicle at the head office to reach the stations on request, particularly to obtain samples for analysis and provide feedback results in a timely manner. This requires adequate communication facilities between the out-stations and the head office to reduce delays in information provision to exporters and importers.

Pest and Disease Diagnostic Capabilities

Human resources are generally inadequate, particularly at the senior professional level; namely virologists, mycologists, hematologists, bacteriologists and weed science experts are lacking. Some of these professionals are, however, available in NARI. Low stock and poor quality of laboratory equipment and materials for pest and disease diagnosis require attention, as does training. Areas identified for human resource development for the NPPO include training in laboratory residue chemical analysis for pesticides, veterinary drugs and mycotoxins.

Pest Risk Analysis

Verification and demarcation have not yet identified pest-free zones and zones of emerging diseases. A list of regulated quarantine pests has also not yet been prepared. The Gambia has no trained staff in PRA and has not been able to produce PRA for any crop. Requisite equipment and facilities for information search, such as CLIMEX and GIS (MapInfo), are not available.

Area for Risk Analysis	Overall Capacity Rating
Hazard identification	Poor
Risk Assessment	Poor
Risk Management	Poor
Risk Communication	Poor
Identification of pest-free areas	Poor

Surveillance and Emergency Response

The Field Inspectorate section operates a network of 6 phyto-sanitary stations in the main Administrative Divisions in The Gambia in the following locations:

- Western Division
- Lower River Division
- North Bank Division
- Central River Division North
- Central River Division South
- Upper River Division

The Unit also maintains 28 data collection points for disease surveillance and monitoring, considered 40% of expected. The Unit adopts the village auxiliary approach for community plant health control. Village Auxiliaries, volunteers trained by the Unit, undertake extension and first stage control of diseases at community level.

Agricultural extension staff control the use of pesticides and public awareness through collaboration with the Environmental Protection Agency. The Unit has administrative powers for granting import permits for approved pesticides, inspection and registration of facilities for sale of pesticides, chemicals and imported planting materials and products. It is necessary for neighboring countries to exchange information on approved lists of chemicals and

pesticides, likely environmental effects for each country and measures in place for training farmers, since farmers are using chemicals which are not on the approved list of the Unit. Recently, the Unit drew attention to the fact that farmers in The Gambia purchased pesticides from neighboring Senegal without the required import permit. These same farmers do not receive training and guidance from the Unit.

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

Inspection Systems at Entry and Exit Points

The Phyto-sanitary Unit operates 9 stations throughout The Gambia, a satisfactory (100%) number for the size of the country. They are located on strategic commercial routes into and out of The Gambia. Following is a list of stations:

- Banjul International Airport
- Banjul Harbour
- Soma (land entry point)
- Farafenni (land entry point)
- Basse (land entry point)
- Jiboroh (land entry point)
- Darsilami (land entry point)
- Tanjay (land entry point)
- Amdalie (land entry point)

The Plant Protection & Phyto-sanitary Unit enforces regulations throughout the country in collaboration with customs 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 entry and exit points inspect and certify import and export consignments and issue phyto-sanitary certificates, clearance certificates, import permits and re-export certificates based on IPPC formats.

Inspection Equipment at Entry/ Exit Points

Examination of equipment at entry/exit points shows poor availability. Overall assessment rates it as POOR: 15% of expected. (See Table 4 on next page.)

Table 4 Equipment and Facilities at Entry/Exit Points

Equipment	Adequacy (%)	Remarks
Inspection table	100	No provision for effective lighting
Hand lens	0	Not available
Tweezers	0	Not available
Glass vial	0	Not available
Microscope	10	Not functional
Slides	0	Not available
Stains	0	Not available

Laboratory Services

The laboratory at Yundum, the head office, identifies pests and diseases, and is capable of undertaking most analysis. This laboratory collaborates with others outside The Gambia to conduct tests, if necessary. The laboratory is presently not equipped to undertake residue analysis, although equipment has now been procured for setting up a residue examination and analysis laboratory by end of 2004.

Facilities for Treatment and Disposal

Overall assessment rates it at 25% or POOR. (See following table.)

Table 5 Facilities for Treatment and Disposal

Equipment	Adequacy (%)	Condition
Fumigation Chambers	1	Fair
Hot water tanks	1	Fair
Dipping Tanks	1	Fair
Dry heat Oven	1	Fair
Irradiation equipment	0	n/a
Incinerators	1	Fair
Steam sterilizers	0	n/a
Sewerage Disposers	1	Fair
Autoclaves	0	n/a

Entry/Exit and post-entry inspection and diagnostic laboratories, equipment and facilities also need improvement. The distance of the post-entry center from the entry/exit points requires more efficient communication facilities and transport to reduce current delays in communicating laboratory sample analysis results to exporters and importers.

Inspection posts at the airport and seaport lack appropriate furniture, like inspection tables, lighting, lenses, etc. The new law must mandate the Civil Aviation and Port authorities to provide permanent offices to the NPPO.

Export Certification Systems

Generally, export certification systems are satisfactory and follow formats and standards of IPPC. Health certificates and export/import permits have been inspected and found to be in line with IPPC standards. There have been no reports of any rejections or interceptions of goods exported through the seaport, after they have been duly inspected. This is an indication of the effective work of the port inspection section.[8]

This evaluation found inspection at the airport to be fair, but not without need for improvement. Health certificates and export/import permits were also inspected and found to be in line with IPPC standards. Most horticultural exports from The Gambia go through the airport cargo section. Officials visually examine export plant materials.. The section lacks the necessary equipment to examine microscopic disease-causing organisms.

Some exporters do not comply with inspection and certification, thus risking seizure at foreign ports. The Unit has received a number of notifications from foreign countries, particularly the UK, of intercepted horticultural goods exported from The Gambia. The common organism isolated is *Bemisia tabaci*, which requires adequate equipment to inspect microbial organisms at the airport. The majority of rejection notifications received were for goods not officially inspected at exit points in The Gambia. In order to arrest the situation, exporters are now required to pass all their consignments through the head office for inspection and receive clearance prior to export. The situation has improved significantly.

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

Documentation and Information Communication

Availability of taxonomic keys for pest identification, pest data sheets for biological information on pests, textbooks, and scientific journals, database of import requirements for other countries was examined. Overall rating is FAIR 30%.

Table 6 shows the status of documentation and information communication capacity of the unit. The Unit operates adequate electronic database on plant materials, both exported and imported. This contains information on volume or metric tonnes (t) of plant goods imported and exported at entry and exit points.

[8] It is noted that Phyto-sanitary inspection at the seaport also covers dried and smoked fish products for exports. These are examined for moulds (fungi) and certified before exports are made.

Table 6 Status of Documentation for the NPPO

Documentation	Adequacy (%)	Remarks
Inspection Manuals	80	These manuals have been distributed to all inspection points in the country: • Plant Quarantine Inspection Manual (1998) developed by FAO • Plant Quarantine Training Manual (1998) developed by FAO
Taxonomic Keys	0	Not available
Pest Data Sheet	0	Not available
Text books	0	Not available
Scientific Journals	0	Not available
Information on Import regulations for other countries	0	

The database system 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 65% of required and notes the following as recommendations for improvement.

- Publication of information brochures and fliers on the structure and functions of the SPS institutions
- Development of manuals for surveillance, pest listing, (write out what acronym stands for first time) PRA, pest diagnosis, pest-free areas.
- Establishment of internal audit, self-assessment and reporting systems
- Formulate a strategic plan for future development and direction of the organization
- Improvement of national SPS database systems and progressive computerization of all information sources networking to zones and stations within each country

Performance Assessment and Audit Systems

While the Phyto-sanitary Unit collaborates with FAO in standards setting and has received various forms of assistance, 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 and is needed to better present the ideas now presented in various documents.

Recent History Of Plant Diseases In The Gambia

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

- Plant diseases eradicated nationally
- Plant diseases of which the prevalence has been controlled to low levels in the last ten years

- Plant diseases introduced to The Gambia from other countries
- Emerging diseases

International and Regional Collaboration

The department effectively collaborates with Customs Service, Veterinary Services, Fisheries and Public Health Services in the inspection of food items for both domestic consumption and export.
The Unit also collaborates with the following International Laboratories & Universities:

- Ceres Locustor Laboratory in Dakar, Senegal
- Regional Agzynei Center, Niamey, Niger

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

- It will provide uniform standards to the phyto-sanitary 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 pose the greatest risk to disease and pest control.

The Gambia is not yet a member of the IPPC, but does belong to the WTO. However, it is now drafting a new legal framework based on IPPC standards in preparation of becoming a member. The Gambia does not provide notification to IPPC, because it is not a member, receives notification and enquiry point from other countries.

Recommendations for Capacity Building Needs

Regulatory Framework

- Review of the new draft 1997 Plant Quarantine Law on the basis of new developments in international trade and ISPMs before submission to parliament for enactment
- Establishment of Notification and Enquiry Points for exchange of SPS information with trading partners and among the WTO 3 sister organizations

Institutional Issues

- Adopt structures consistent with functions and obligations of international standard setting institutions.
- Establish a separate department for plant protection9, under the State Department for Agriculture
- Adopt terminologies for departments and units that are consistent with the functional areas of the respective international organizations
- Train staff in the areas of hazard identification, risk assessment, risk management and risk communication

Equipment and facilities

- Improve stock of inspection equipment at entry and exit points, particularly airport air cargo section
- Improve communication between stations and head office

[9] presently a unit under Agricultural Services

- Improve transport at all levels
- Establish a laboratory for chemical residue analysis

Documentation

- Publish information brochures and fliers on the structure and functions of the Unit
- Develop and 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

- The Gambia should consider becoming member of the IPPC
- Establish enquiry points 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 create of public phyto-sanitary measures
- Plan for sustainable financing of the Plant Protection and Phyto-sanitary 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 with Senegal on likely environmental effects for each country and measures for training farmers

3.4 Fish And Seafood Safety

Legislative Framework

The Department of Fisheries and Natural Resources is responsible for food safety with respect to fish and seafood products for both domestic consumption and export. It operates under the Fisheries Act 1991 amended in 1995 (Decree No. 440). The Act is the principal enactment governing the management of fisheries and the development of the fishing industry in The Gambia. The Act applies throughout "Fisheries waters" in the country – the inland waters and the territorial sea up to a distance of 200 nautical miles from the baseline of where the territorial sea is measured.

The Act, a comprehensive piece of legislation, addresses the administration of the marketing and processing of fish, prohibited fishing methods, powers of authorized officers, penalties, legal proceedings and power to make regulations. Section 34 (4) of the Act permits the Director of Fisheries, in consultation with the authorities responsible for health, to adopt schemes for the sanitary control of the supply of oysters or other shellfish products to hotels, restaurants, shops or other premises where such products are sold. Additionally, the director, by law, may

demand that any oysters or other shellfish supplied to such establishments undergo a specified procedure for depuration, purification and detoxification. Also, of relevance is section 38 of the Act that permits the Minister responsible for Fisheries and Natural Resources, in consultation with the Minister responsible for Health, to make the following regulations:

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

The Fisheries Regulations 1995 addresses these matters comprehensively. Regulation 20 enjoins all fish processing establishments to comply with the processing establishment certification requirements as set out in schedule XV of the regulations. The schedule addresses all matters relevant to the subject - the design and facilities of the establishments, hygiene requirements, storage and transportation requirements, quality management programs, health control and monitoring of production conditions. Regulation 22 provides for labeling of products of all frozen, canned or packaged products of an export fish-processing establishment, prior to their sale and should be clearly labeled indicating:

- The name and nature of the product
- The list of ingredients
- The net content
- The name and address of the manufacturer
- The country of origin
- The date of production and expiry
- The lot number

The regulations ban the export of lobsters, soles or cephaloids from The Gambia, except with the written permission of the Director of Fisheries.

"Authorized officers", namely fisheries officers, police officers, officers of The Gambian Maritime Unit, customs officers or any other person authorized by the Director of Fisheries enforce the Act and the Regulations by executing any and all of the provisions of the Act. These positions are accorded wide ranging powers under sections 41-42 of the Act, which include boarding and searching vessels, examining documents, taking samples of fish or seizing vessels found in violation of the Act.

The Act also give authorized officers the power to conduct periodic inspections of export fish processing establishments. Where the establishments lack sanitation or do not meet the required quality control standards, they may suspend further exports from the establishment or even shut it down until the requirements are met. Violation of the Act and the Regulations attract penal sanctions up to 500,000 dalasis (US$17,240) or imprisonment up to 5 years. Strict adherence to the requirements provided for in the Regulations should also enable processed fish products from The Gambia to meet international export requirements.

However, the following issues need to be addressed in any future revisions of the law:

- Though fishery laws and regulations are in place, provision for standards of microbial counts, and chemical levels to guide inspectors of fish and seafood products is inadequate.
- Field volumes are not standardized, leading to problems of measurement and estimation.
- Authorized personnel needs to better enforce the Code for Responsible Fisheries.

Institutional Structure and Capacity

The Fisheries Department is a department of its own under the State Department for Fisheries and Natural Resources,. This arrangement provides it with exercise greater control of its budget and resource allocation. The

Department has a total of 92 staff both national and field level and adequate office space. (See Table 7 for HR details.) It has four divisions - Extension, Research and Development, Inspectorate, Administration and Finance. These sections are organized along the following functional lines.

Extension Division: provides education for fishermen and processors in fishing technology, fish aqua-culture, repair and maintenance of fishing gear, quality control.

Research & Development researches fish technology and quality control, statistics, resources evaluation and management, aquatic pollution and implications for socio-economic development

Administration provides human resource development, finance and project monitoring

Inspectorate Division trains seafood workers and artisanal fishermen in fishing technology, processing methods, food quality and business management; provides health certification for seafood export. provides import and export permits; and inspects and licenses seafood establishments.

The department oversees 18 community fishery centers in the country, constructed by the Government of The Gambia with assistance from the Government of Japan. The GOTG granted the centers to communities for their own management.

Table 7 HR Status of the State Department for Fisheries & Natural Resources

Departmental Section	Planned Staff Number	Actual Number	Adequacy (%)
Extension	NA	59	Fair
Administration and Finance	NA	11	Good
Research and Development	NA	15	Poor
Inspectorate	NA	7	Fair
TOTAL		92	Fair

Inspection Systems at Entry and Exit Points

Laboratory and Equipment

The NaNA assists the department in the improvement of their laboratory facilities thereby developing more effective analysis of seafood. NaNA is also incorporating control of quality seafood products into the draft Food Laws. The African Development Bank (ADB) funds the current construction of a food hygiene and quality control laboratory, which will further enhance the standards of processed fish for exports.

Inspection, Equipment and Facilities

This evaluation rates the inspection systems at entry and exit points as GOOD (60% of required).

Communication equipment and facilities

The department, which has Internet facilities, is rated GOOD (60% of required).

Export Certification Systems

Systems are up to date and in compliance with international standards.

Documentation and Information Communication

The department has some documentation, such as the FAO Species Identification Sheets for Fisheries. More up to date documents will be required as guide to HACCP and other quality standards in seafood production.

International and Regional Collaboration

Under the DFID-sponsored Sustainable Fisheries Livelihoods Project, the Department collaborates with all stakeholders in the management of fisheries resources in the River Gambia. NARI also assists with research in post harvest fish technology and market research to improve trade links within the sub-region.

In addition, NaNA has established a Codex Enquiry Point to respond to information needs of various trading partners and institutions.

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Recommendations for Capacity Building Needs

Training
In the past, US companies and institutions, such as Pelican International Seafood and the Association of Food and Drugs, have provided training programs on food quality standards for the fisheries department. The department benefited from these programs, as well as the 1997/98 HACCP trainings in Namibia, sponsored by the FAO/INFOPEX joint program.

Even though the fisheries department has received training in the past,, the department needs more training to stay current with recent developments in WTO, EU and US import requirements, especially in HACCP and seafood quality standards enforcement.

Legal Framework
This evaluation found existing fishery laws and regulations to be generally, satisfactory. However, the following issues must be addressed in any future revisions of the law.

- Adequate provision for standards of microbial counts and chemical levels to guide inspectors of fish and seafood products
- Standardization of field volumes to improve measurement of volumes and weights in statistical data provision
- Need for legislation to address the control of artisanal fisheries
- Need to monitor rejection of fish and seafood products from importing countries and causes for rejection

Additionally, up to date documentation on seafood quality standards and HACCP requirements of major importing countries should be included in any future version of this law.

3.5 Animal Health and Food Safety

Legislative Framework

The Veterinary Service in The Gambia constitutes a unit under the Livestock Services Department of the Department of State for Agriculture. The old legislation, *Diseases of Animals Act 1965* and the *Diseases of Animals Regulations*, grants veterinary inspectors the power to inspect animals, restrict slaughter for purposes of preventing diseases, enter unto lands for purposes of inoculation and ascertaining whether any animal is suffering from any disease, and to adopt the necessary measures to deal with such diseases.

Meat and hygiene regulations (*Banjul and Kombo St Mary Act 1979*) deal with Veterinary Public Health Legislation in The Gambia. However, laws and regulations on control of slaughterhouses are contained in the Public Health Act and Regulations noted above.

The law on Veterinary Public Health, rated inadequate by this evaluation, does 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 State Department of Health, in the enforcement of the public health law. The law does not ban the import of any meat products, but all imported meat products require inspection and testing at points of entry.

NaNA, the new coordinating body, is preparing Guidelines on the Quality Control Requirements for Imports and Export of Food Commodities in order to address the import and export of animals and products of animal origin. There does exist, however, the need for new regulations 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. In this regard, arrangements have been made under the Food Act to delineate the functions of veterinary and health inspectors, so as to avoid these conflicts and overlaps.

Institutional Structure and Capacity

Organizational Structure

The Veterinary Public Health Unit operates as one of seven units within the Department for Livestock Services (DLS) of the State Department for Agriculture. The various units are:

- Extension and Training
- Animal Husbandry
- Range Management
- Veterinary Public Health, Marketing and Industry
- Laboratory and Investigation
- Epidemiology, Statistics and Information

The lack of a separate, independent department for Veterinary Services increases its bureaucracy and tends to compromise adequate resource allocation and its authority to directly communicate disease information to international organizations.

Animal disease control and health constitutes the core responsibility of the Veterinary Public Health Unit (VPH) under the Department of Livestock Services. The department mandates that the VPH Unit apply veterinary skills, knowledge and resources to protect and improve human health by reducing exposures to hazards arising from interactions with animals and animal products. This mandate covers the inspection, examination, certification, exportation and importation of all products of animal origin.

Human Resource

Technical officers man the central abattoirs, sea and land ports at national level. Veterinary Officers in the head office also oversee operations of the abattoirs in the capital city of Banjul. (See the following table for availability of veterinary doctors at entry and exit points

Table 8. Availability of Vet Doctors at Entry/Exit Points

National Station	Category	Number available	Percent adequacy
Abuko Central Abattoir	Veterinary Doctor Meat Inspectors	1 8	Adequate
Banjul Central Abattoir	Veterinary Doctor Meat Inspectors	1 8	Adequate
Sea Port	Veterinary Doctor Meat Inspectors	1 1	Adequate
Airport	Veterinary Doctor Meat Inspectors	1 1	Adequate
Inland Stations	**Category**	**Number available**	**Percent adequacy**
All inland abattoirs are manned by meat inspectors	Meat Inspectors	6	Adequate

Livestock, especially cattle, is raised in almost all divisions of The Gambia. Therefore all six administrative divisions require adequate staffing of VPH at the field level. Ideally, a veterinary doctor, laboratory technician, field officers and inspectors would work in each division. However, currently there are no veterinary doctors stationed in any of the divisions. Instead, the divisions are manned by Livestock Station Health Officers and assisted by Community Livestock Workers as mandated by the Department of Livestock Services. They perform veterinary public health services, such as meat inspection at the village cluster level. The following tables present the coverage of veterinary doctors in the country.

Table 9 (a) Administrative & Geographic Coverage of Veterinary Doctors

Category of staff	Number Required	Actual	Percent
Divisional Veterinary Doctors	6	6	100
Divisional Livestock Station Health Officers	6	6	100
Laboratory Technicians	6	6	100
Community Livestock Assistants	150	50	30

There are 20 qualified veterinarians registered in The Gambia, all graduates from internationally recognized veterinary schools and registered in the WHO/FAO World Directory of Veterinary Schools. [See Table 9 (b)]

Table 9 (b) Administrative & Geographic Coverage of Veterinary Doctors

Institution	Number of Qualified Vets	Estimated Requirement	Percent
Government Veterinarians • Department of Livestock Services • National Research Institute (NARI) • Department of Wild Life • Medical Research Council	9 1 1 1	NA	NA
Sub-total	**12**		
International Staff International Trypanosomiasis Center (ITC) International Civil Servants (FAO)	4 1	NA	NA
Sub-total	**5**		
Private Veterinarians • Private practice	3	NA	NA
Sub-total	**3**		
TOTAL	**20**		

Veterinary Education and Training

Formerly, the Department of Livestock Services operated a livestock school, but this has now been transferred to The Gambia College of Agriculture for a two-year duration for the training of Livestock Assistants. No faculty of Veterinary Medicine at the University exists in the country. All veterinarians obtained training in other countries, mostly in Europe.

Financial Management

The Government of the Republic of The Gambia provides most of the funding for the Department of Livestock Services. Other sources include the EU and ADB for the PAN African Control of Epizootics (600,000 Euros for 5 years) and the Peri-Urban Smallholder Improvement Project.

When budgets are compared to actual releases, funding of the Department of Livestock Services is adequate. However, such incremental budgeting may not reveal the actual level of need for the Unit. For example, the GOTG did not fund Control of Epizootic Diseases, which was undertaken with donor funding from FAO/ WHO. (See Table 10 for details.)

Table 10 Adequacy of Funding

Government Funding of Budget for the Department of Livestock Services 1999			
Budget Item	Approved Estimates	Actual	Percent
Traveling Expense	84901	57943	68%
Telecommunication Expense	25000	23900	96%
Vaccines and Medical Stores	65640	52494	80%
Chemicals and Laboratory Stores	65640	53901	82%
*Control of Epizootic Diseases	10000	0	0%
Livestock products Development and Food Safety	29758	29941	101%
Operation and Maintenance of Vehicles	64680	60000	93%

**The EU, under the auspices of the PAN African program funds this department.*

Accommodation

The DLS headquarters at Abuko and its 6 divisional offices provide accommodation for staff. Four other sub-stations throughout the country also offer accommodation facilities.

Communications

Telephone and fax are available, as well as Internet facilities for the head office of DLS. However, this evaluation rates communication between head office and outstations as unsatisfactory.

Transport

Availability of transport is poor.

Pest and Disease

Diagnostic Capabilities

The Veterinary Public Health Unit generally lacks adequate staff, particularly at the senior professional levels, with respect to virologists, mycologists, nematologists and bacteriologists. These professionals are, however, available in NARI.

The Central Veterinary Laboratory for The Gambia is located at the DLS head office at Abuko. It has three main functional units namely - microbiology, parasitology and haematology. Each utilizes standard laboratory equipment and necessary reagents for diagnosis, and employs 3 laboratory technologists with 3 trained laboratory assistants working under their supervision.

At field level, a trained laboratory assistant is posted at each of the 6 DLS divisional stations country-wide. These laboratories are poorly equipped, but are able to analyse basic samples. The International Trypano-tolerance Center houses two laboratories at provincial level and one well-equipped laboratory at Kerr Serigne headquarters.

The reference laboratory for diagnosis of viral diseases is L'NERV at Dakar Senegal. Viral diseases include Foot and Mouth, Lumpy Skin, Rift Valley Fever, Pests des Petites Ruminants, African Horse Sickness and African Swine Fever.

Risk Analysis

A capable PRA team is not yet in place in the Unit. Continuous in-country support and training for PRA teams is required to get them off the ground. Required equipment and facilities for information search, such as CLIMEX and GIS (MapInfo), are also needed.

Surveillance Capacity is adequate.

Recent History Of Animal Disease

Adequate information exists on animal pests and diseases situation in the following areas.

Animal diseases eradicated nationally include:

- Rinderpest
- Contagious Bovine Pleuro-pneumonia

Animal diseases of which the prevalence has been controlled to low levels in the last ten years:

- Black Quarter (BQ)
- Haemorrhagic Septicaemia (HS)
- Anthrax

Animal diseases introduced to The Gambia from other countries

- Sheep and goat pox

Emerging diseases

- Rift Valley Fever

This evaluation identified areas of need in training and assistance. Testing imported, live animals with infected diseases and disease-causing organisms represents an area where training would be beneficial. Assistance is also required for the design of disease control programs based on risk analysis and epidemiological principles.

Surveillance systems are in place for known diseases. Areas of infestation are zoned for new diseases.

Disease recognition
The department collaborates with research laboratories in Senegal for diagnosis of viral diseases. (Rated as adequate.)

Exotic disease response (Rated as adequate.)

Establishment of disease-free areas, places and sites
The department identifies these areas and control measures targeted to these areas. Data on livestock pests is not properly collated. Lists of pests for which free areas, places of production and sites of production have been declared are not available.

Need for further training to improve capability in information documentation, computerization of database on animal pest, and number of livestock surveyed is apparent. There also exists a need for training of the surveillance teams, as well as the identification of a coordinator to head these activities. Equipment for surveillance also needs updating.

Inspection Systems at Entry and Exit Points

This evaluation mainly focuses on land border checkpoints, which are very porous and require greater attention, with respect to control of pests and diseases of livestock. Transhumance presents a great problem for disease control in The Gambia.

Quarantine stations are manned by health inspectors. Post-entry inspection and diagnostic laboratories, equipment and facilities also need upgrading. Communication facilities and transport present problems, as they cause delays in the reporting of laboratory sample analysis results to exporters and importers.

Export Certification Systems

Generally, export certification systems follow formats and standards of OIE and CAC. (Rated satisfactory)

Operational manuals
60% available

Establishment of Internal Audit Systems
Not effectively completed, apart from annual reports and position papers for presentation at seminars or to the government.

Accreditation with Standards Setting (Quality Assurance) Institutions
Export of meat and livestock products is not an important activity in The Gambia, hence accreditation with international standard setting organizations was not sought.

However, the author makes the following recommendations.

- Publish information brochures and fliers on the structure and functions of the SPS institutions
- Develop manuals for surveillance, pest listing, PRA, pest diagnosis, 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

International and Regional Cooperation

Notification and Enquiry Point
The department undertakes its own notification on diseases to countries through the WHO representative in The Gambia.

Contact Person for Notification and Enquiry
Dr. Foster
dls@gamtel.gm,
Telephone +220 439 2173.

No website exists for published information on animal diseases and health situation in The Gambia, and nor is there any official sales point for laws relating to Animal Health and Control of Diseases.

Harmonization of Animal Health Measures in West Africa sub-Region
The Gambia has not participated directly in ECOWAS SPS harmonization process, but views the idea as laudable. The Gambia has, however, participated in workshops to develop effective strategies against priority diseases under the PAN African Programme for the Control of Epizootics (PACE) and even hosted a workshop on harmonization of disease control strategies as follows:

- Disease control strategies for Rift Valley Fever (Dakar, Senegal)
- Control Strategies for CBPP (Conakry, Guinea)
- Epidemiology (Bamako, Mali)
- Disease Data Management (Banjul, The Gambia)
- Control of African Swine Fever (Banjul, The Gambia)

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
- 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 sub-regional harmonization workshops

Capacity Building Needs

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

Legislative

- Draft and enact new Veterinary Service Laws focusing on measures that address international trade in meat products and live animals

Institutional

- Consider upgrading the status of Veterinary Public Health from a unit to Departmental status 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 field divisional level
- Ensure regular veterinary public health training

Facilities and Equipment

- Improve facilities and equipment at national and divisional laboratories
- Improve 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 nature of livestock production, especially cattle
- Seek increased funding for participation and organization of sub-regional harmonization workshops
- Seek increased collaboration with neighboring countries to control emerging diseases

4.0 RESULTS OF EVALUATION STUDY ON SPS INSTITUTIONS IN GHANA

4.1 Country Background

Ghana is an Anglophone country in West Africa with a land area of 238,637 sq km and a population of 20.5 million (2002 estimates). The climate is tropical with ambient temperature generally between 21°C and 32°C. The southern half of the country has a two-peak rainfall season starting in April or May and ending in July. The northern half of the country has one peak rainfall season starting in July and ending in September. The amount and distribution of rainfall causes the difference in climatic conditions within the year. As a tropical country, Ghanaian agriculture is based on tropical food crops and rearing of livestock. Its tropical environment also predisposes it to prevalence of tropical insect pests and diseases, for which it must have adequate disease control systems. Due its southern 550 km border with the Gulf of Guinea, and its immense inland water bodies, such as the Lake Volta, fishery represents an important activity.

The Ghanaian economy, predominantly agricultural, engages an estimated 60% of the population. An estimated 1,800,000 hectares of land is under food crop production with key agricultural export crops being cocoa, pineapples, yams, vegetables, fish and seafood. Though livestock rearing represents an important agricultural activity, it is carried out largely for local consumption and very little for exports. Fish is the most important non-traditional export commodity and the fisheries sub-sector accounts for about 5% of the agricultural GDP.

The 1999 crop production statistics for Ghana puts the value of production at an estimated US$2.4 billion. However, estimated total crop losses caused by crop pests for 1999 was 20 percent, which translates to US$480 million of crop losses to the Ghanaian economy. This figure varies between 20 percent and 40 percent depending on several factors. Use of inappropriate applicators and control strategies cause unnecessary use of pesticides and unacceptable levels of pesticide residues that endanger human health and pose food safety risks for the population, threatening international export markets. This calls for more efficient and sustainable plant protection strategies at all levels, including plant quarantine, seed certification, bio-control, application of IPMs by farmers and sensible use of chemical pesticides.

Consequently, Ghana imports large quantities of agricultural food products, mainly from the United States and the EU. Its increasing trade with the multilateral trading system in agricultural products requires that Ghana adopts international trading regulations to harmonize its sanitary and phyto-sanitary measures.

4.2 **Evaluation of Food Safety and Public Health Systems**

Legislative and Regulatory Framework

No single legislation in Ghana addresses food control in its entirety. Like in The Gambia, several Ministries, Departments and Agencies (MDAs) share the responsibility for Food Control, including food hygiene, food safety and food trade. However, the overall control and oversight rests with the Ministry of Health. The following MDAs are involved in food control in Ghana.

Ministry of Health

- Port Health Services
- Food Hygiene and Safety Education Unit

Ministry of Food and Agriculture (MOFA)

- Veterinary Services /Council
- Directorate of Animal Production Services
- Directorate of Agricultural Extension Services: Women in Agricultural Development
- Directorate of Crops Services
- Plant Protection and Regulatory Services (PPRS)
- Directorate of Fisheries

Ministry of Environment Science and Technology

- Environmental Protection Agency (EPA)
- Council for Scientific and Industrial Research
- Food Research Institute

Ministry of Trade and Industry

- Ghana Standards Board (GSB)
- Customs Excise and Preventive Service

Others include:

- Attorney General's Department and Ministry of Justice
- Ministry of Trade and Tourism. (Ghana Tourist Board)
- Ministry of Local Government and Rural Development

The Food and Drugs Law, 1992 (*PNDC 305B*) was enacted to control the manufacture, importation, exportation, distribution, use and advertisement of food and drugs. Amended through the *Food and Drugs Act 523 of 1996* the law aims to provide for the fortification of salt to alleviate nutritional deficiencies and disorders. The legislation also lays down standards for quality assurance and control parameters to ensure safety, efficacy and acceptable quality of food and drugs. There exists a provision for the use of sanctions as a legal backing to deter offenders and to empower administrators to take necessary disciplinary actions.

The legislation also provides for the establishment of a Food and Drugs Board as an administrative authority with powers to implement the provisions of the Food Law and to:

- Advise the Minister of Health on all matters relating to the administration and implementation of the law
- Ensure adequate and effective standards for food and drugs in co-operation with the Ghana Standards Board
- Monitor compliance with the Food Law through the District Assemblies and other agencies of state

- Advise the Minister on need for review of regulations required for the full implementation of the provisions of the law

Presently, the Food Law is under review in order to address the inadequacies contained in the earlier Acts and to bring the Food Act in line with international Codex standards. The legislative review committee is looking at the legislation of various countries and organizations in order to learn best practices that can be incorporated into the Ghana Food Law, as well as seeking justification for repeal of old provisions. The draft law aims to increase the protection of the health and life of consumers by ensuring the safety and wholesomeness of food for human consumption and by guaranteeing quality of both imported locally-produced food items. The draft law also addresses the relationship between the national food safety control systems, international trade. It further harmonizes definitions, terminologies and concepts with those used by WTO/SPS and CAC. Finally, the Ghana Food Law provides legal powers for search and seizure, accreditation and specifies procedures for national consultation and international notification.

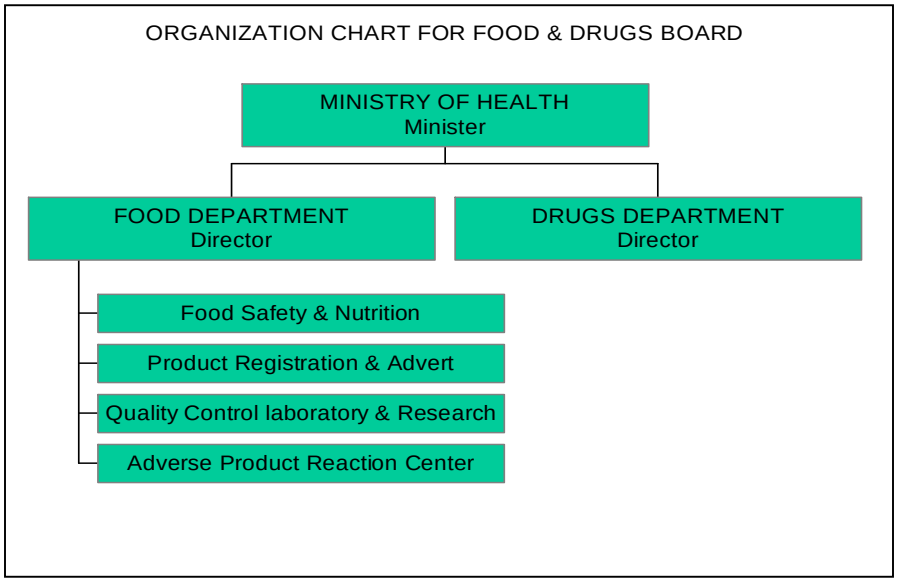
Institutional Capacity

The Ministry of Health is at the top of the hierarchy and with the Food and Drugs Board (FDB) and its Chief Executive following. (See Organization Chart below.) The Chief Executive directly controls the two main Departments (a) Food and (b) Drugs.

The Food Department deals with water, beverages (alcoholic and non-alcoholic), confectionery, processed foods etc. Within the Food Department are:

- Food Safety and Nutrition Inspectorate
- Product Registration and Advertisement Unit
- Quality Control Laboratory and Research Unit
- Adverse Product Reaction Center

Table 11 Food and Drugs Board



The various units provide valuable services, which are listed below.

Food Safety and Nutrition Inspectorate Unit

- Pre-licensing and post-licensing inspection of manufacturing industries
- Liaising with the appropriate units to organize educational and training programs for industry personnel
- Sampling, inspecting and testing on-line and finished products
- Collecting data on local manufacturing capacities
- Enforcing quality assurance systems in industry
- Inspecting ports and sampling of imports, as well as export products
- Collecting data on import and export
- Post-marketing surveillance activities
- Issuing import and export permits

Product Registration and Advertisement Unit

- Receiving product applications, dossiers and samples for registration
- Evaluating dossiers and samples
- Submitting samples to quality control laboratory for analysis
- Maintaining product registers
- Reviewing labeling and promotional information
- Receiving and processing all product advertisements applications
- Reviewing product advertisement
- Disseminating current product information and alerts
- Reviewing standards and specifications

Quality Control Laboratory and Research Division

- Analyzing product import and export patterns
- Researching product quality trends
- Maintaining a library of relevant and up-to-date documents
- Organizing monthly lectures to keep staff informed about changing trends in products and about the activities in each department and unit
- Developing bulletins as mouth piece
- Collating information on local production capacities, import returns and product consumption patterns
- Managing the laboratory
- Developing,, reviewing and validating analytical methods
- Providing pre- and post-registration analysis

Stakeholder Involvement, Law Enforcement and Coverage

- The Board The Ghana Standards Board?) holds consultative discussions with stakeholders in the food industry, in order to seek views on implementing policy.

Food Disease Diagnostic Capabilities

The Ghana Standards Board has adequate human resource and capacity to diagnose food quality. The Ghana Food and Drugs Board collaborates with the Ghana Standards Board (GSB) in the specification and enforcement of standards. The GSB falls under the Ministry of Trade and Industry and is the national statutory body responsible for Standardization and Quality Assurance of Goods and Services, for both local and export market. As part of its functions, the GSB provides the following services:

- Prepares, modifies or amends specifications and promulgates Standards, Specifications and Technical Regulations
- Collects and disseminates information on standardization and related issues
- Verifies weights and measures used in trade and commerce
- Calibrates industrial machines
- Operates an Information and National Enquiry Point which provide answers to standards-related trade questions

Where international standards are not available and applicable to certain local food products, such as "shittor" and "anago samina", the Ghana Standards Board formulates scientific standards and communicates these to requesting trading partners.

Areas identified for human resource development for SPS institutions include training in laboratory residue chemical analysis for pesticides, veterinary drugs and mycotoxins.

Food Hazard Analysis

The GSB maintains a databank of standards for most export and import products. These are available and accessible to both public and private sector on request from their Enquiry Point. An example of the data provided by the GSB data bank follows.

Scientifically determined maximum allowable fat contents for livestock and poultry products

Mutton (excluding back fat)	25% maximum
Mutton (including back fat)	30% maximum
Beef	25% maximum
Pork (excluding back fat)	30% maximum
Pork (including back fat)	35% maximum
Dressed Poultry and poultry parts	15% maximum

Food Disease Surveillance

The Board also determines food quality through random sample surveys of food products in warehouses and markets. The Board is decentralizing its operations in order to ensure that its relationship with the District and Municipal Assemblies becomes meaningful. It has begun establishing the following zonal offices.

- Central & Western Zone based in Takoradi
- Ashanti and Brong Ahafo based in Kumasi
- Bawku Paga Zone based in Bolgatanga
- In 2005, the Board will establish a zone for the Volta and Eastern Regions in Ho.

The Board collaborates with PPRS of the Ministry of Food and Agriculture in the enforcement of regulations for use of safe water for irrigating vegetables for urban gardeners, use of pesticides, management of pack-houses and improved food conveyance systems etc. The Board also collaborates with Veterinary Services, Laboratory Services and Port Health.

Food Inspection Systems at Entry and Exit Points

Generally, the airport and the two seaports have adequate coverage and representation of staff of the Food and Drugs Board. However, with respect to land border checkpoints, this evaluation found the numbers of checkpoints to be inadequate. The porous nature of land borders requires that greater attention be paid to control of food products.

Food laboratories, located in the Ghana Standards Board, are reasonably equipped for the task. Lack of vehicles constrains the Division from effectively enforcing the law and regulations. Facilities in FDB, GSB, Food Research Institute (FRI) and Universities must coordinate the use of the equipment, in order to optimize their utilization. Delay in producing results of tested samples presents a problem to the food industry.

Problems with communication facilities and transport cause delays in communicating laboratory sample analysis results to exporters and importers.

Export Certification Systems

Generally satisfactory, export certification systems follow formats and standards of CAC. Areas that need greater attention are measures to improve post inspection, as well as certification monitoring, to ensure that seals to containers are not tampered with or goods damaged.

Documentation and Information Communication

The Food and Nutrition Division has produced several manuals and procedures on food safety management systems and is assisting other implementing agencies in this regard. They have developed computerized systems for data capture, but this has yet to be networked with all implementing agencies.

The Division, in collaboration with United Nations Industrial Development Organization (UNIDO), prepared video documentaries and teaching materials for information campaigns. It also disseminated information through TV adverts, radio and posters, thereby increasing public outreach on food safety issues.

The GSB has a comprehensive collection of Standards Documents, as well as a number of search tools, to assist in determining requirements. Besides current Ghana Standards, it has standard collections for:

- International Organization Standardization
- Codex Alimentarius Commission
- Germany
- Great Britain
- India
- Japan
- Malaysia
- South Africa
- Sri Lanka

The Division also houses 3000 books and other reference materials in the form of trade directories, encyclopedias, project reports and periodicals. The center has over 40 CD ROMS on various fields in standardization, import/export requirements for certain countries and quality requirements.

Views On Regional SPS Harmonization

The Board considers the efforts at harmonizing Food Safety regulations in West Africa positive, because harmonization has the potential to:

Improve standardized food safety regulatory systems across countries, thus increasing the protection of the health of consumers of food items imported from across borders

Increase importer confidence in the health standards of West African countries, thereby facilitating international trade.

In May 2004, Michigan State University, USAID and Partnership for Food Industry Development and the USAID organized a West African Regional Food Safety course for participants from the sub-region, including Nigeria and Benin. Participants gained knowledge and scientific technical capacity for the appropriate deployment of innovations, in particular food safety risk assessment and risk management. The course also provided training in improved scientific based decision making and improved communications with the general public on food safety issues. The course organizers intend to extend the invitation to participants in both Anglophone and Francophone West Africa in future training programs.

Membership in CAC and Participation in International SPS Harmonization Sessions

Ghana belongs to both the CAC the WTO. A National Codex Secretariat is located in the offices of the Ghana Standards Board, as well as in the National Enquiry Point (NEP). These offices provide information on food safety issues in Ghana.

The Ghana Standards Board Information Center WTO/TBT Enquiry Point was established in 1999 to be responsible for technical regulations, standards and conformity assessment procedures. The center represents an effective information point in Ghana.

The NEP offers fax and e-mail notification services and gives advance notice of proposed changes to technical legislation. The GSB is a member of ISONET. Its library, open to both the private and public sector, provides a sales point for all documentation on standards.

Address:
Ghana Standards Board
P.O. Box MB 245
Accra Ghana
Fax +233 21 500 092
Tel +233 21 500 065/6
E-mail: gsbnep@ghanastandards.org

URL: www.ghanastandards.org/

Capacity Building Needs

Exports of food products from Ghana are sometimes seized and destroyed due to non-compliance with importing country regulations. The majority of exporters have inadequate knowledge of importing country regulations. The Department for International Development (DFID) of the UK has been providing technical assistance and training in Hazard Analysis for Critical Control Points (HACCP) over the past three years, in collaboration with the University of Greenwich. DFID has trained 60 people from roughly 35 food organizations and is being expanded into other regions and district assemblies. The Division shares information and experiences with its West African neighbor and is recognized as a training center for all of West Africa. The Food and Nutrition Unit of the Food and Drugs Board employs 3 lead assessors in HACCP training who are certified as 3rd party auditors to the British Retail Consortium.

Despite current efforts to improve food safety control and management in Ghana, greater effort is required in the following areas:

Improvement of the Legal, Regulatory and Institutional Framework

- Completion of the review of the regulatory framework and enactment of the Food Law, as soon as possible, to provide a new and improved regulatory framework for food safety standards.
- Review the draft law which takes into consideration decentralization, devolution of roles and responsibilities to sub-national structures.
- Harmonize food safety regulations with its neighbors and ECOWAS members to further promote intra-regional trade
- Improve law enforcement through increased inter-ministerial and inter-departmental coordination
- Include cost recovery mechanisms for services rendered in order to better support implementing agencies on a sustainable basis.

Infrastructure and Equipment

- Improve laboratory analysis capability, particularly for products meant for export.
- Improve coordination and utilization of laboratories and equipment of GSB, FRI and universities
- Reduce turn-around time for food sample analysis and provision of results to clients

Documentation and Operational Procedures

- Increase transparency and access to SPS Food Safety and information through website media
- Develop a strategic plan that would form the basis for future capacity building initiatives

Capacity Building Needs

- Improve local capacity through training in Field Auditing using international standards
- Provide continuous training in Risk Assessment, Analysis and Management
- Improve information network with USDA and FDA on topical issues, such as Bio-terrorism Act and its effect on export and imports, GMOs and LMOs certification

Accreditation for International Standards

The GSB should seek accreditation from international standard setting bodies to cover all its operations in order to exercise the necessary oversight and certification over private producers.

4.3 Evaluation of Plant Protection and Regulatory Services

Legislative Framework

The legislative framework of the National Plant Protection Organization (NPPO) comprises a number of international conventions and agreements, as well as national legislation.

The Prevention and Control of Pests and Diseases of Plants Act 307, an act of Parliament, established in 1965. The PPRS is identified as the NPPO and has the mandate and capacity to organize, regulate, implement and coordinate the plant protection services in support of sustainable growth of agriculture in Ghana. The national plant protection policy is detailed in the *Integrated Pest Management, (IPM) 1992*.

In 1972, the act was amended by *NRCD 100, 1972*, to include *Seed Inspection and Certification*. Again in 1996, an amendment (*Act 528*) was added to *The Pesticide Control and Management Act*.

However, in 1998, Parliament conducted a major review of the entire act bringing it up to date with international standards of the WTO-IPPC. A draft law was prepared and submitted to the Attorney General (AG) for comments. However, following the current exercise by WATH on Phyto-sanitary Capacity Evaluation (PCE) requirements it was noticed that certain legal areas still fall short of the IPPC standards, hence a decision was taken to withdraw the present draft law from the AG for further review. Additional issues to be incorporated are:

- Need for the act to have precedence over decentralized local government entities, such as the District Assemblies in phyto-sanitary issues involving international trade.
- Need for the NPPO to be responsible for determining details of import requirements, protocols, including the auditing phyto-sanitary functions performed by trading partners
- Need for the act to place responsible for ensuring that phyto-sanitary security of consignments after certification regarding composition, substitution and re-infestation prior to export with the NPPO

The Directorate intends to send the reviewed draft document to the IPPC Legal Department for their scrutiny before submission to the AG and Parliament.

Institutional Capacity

The PPRS is a full Directorate under the MOFA Ghana. The National Plant Protection Policy aims to establish an efficient system that will ensure that crop losses caused by biological, environmental and ecological factors are contained in a sustainable, economical and environmentally acceptable manner. This would be achieved through updated plant protection legislation and enforcement of a national regulatory and control system, the promotion of IPM practices complemented with regional and international cooperation.

These four divisions perform regulatory as well as the following technical services:

- Crop Pests and Disease Management
- Plant Quarantine
- Pesticide Management
- Seed Inspection and Certification

National IPM Oversight Committee and the IPM Secretariat oversee the activities of these divisions

The Pesticides Control and Management Act 528 of 1996 dictates the regulation of pesticides with the EPA of the MES designated as the national authority to coordinate pesticides regulation activities. In this regard, PPRS responsibility is limited to post-registration surveillance of pesticides management.

Although a National Seed Policy is not yet formulated for Ghana, the *Seed (Certification and Standards) Decree NRCD 100 of 1972* and *the Seeds Bill 1995* serve as regulatory instruments for the management of the seed industry. The following established agencies implement regulations for the management of seed production and certification.

- National Seed Committee
- Variety Release sub-Committee
- Seed Inspection and certification Division of PPRS Agricultural research institutes, like the Council for Scientific and Industrial Research, the Universities, the Grains and Legumes Development Board and the Agricultural Extension Services, also play major roles in the seed industry.

Funding

PPRS receives its budgetary allocations from the National Consolidated Fund. Through the regulatory services, additional funds are generated internally and paid into the national consolidated account, from which an agreed percentage can be accessed for maintaining the operations of the Directorate activities.

Pest and Disease Diagnostic Capabilities

Crop Pests and Disease Management Division

The senior professional level staffing is generally inadequate, especially with respect to virologists, mycologists, nematologists, bacteriologists and weed science experts. Some of these professionals are, however, available in the National Research Institutes and the University. Low stock and poor quality of laboratory equipment and materials for pest and disease diagnosis remains a problem and would require re-stocking and training. Areas identified for human resource development for the NPPO include training in laboratory residue chemical analysis for pesticides, veterinary drugs and mycotoxins.

The Division develops Good Agricultural Practices for Integrated Pest Management (IPM), publishes information, provides training and diagnostic services, monitors the pest situation in the country, keeps field statistics, manages calamity pest outbreaks, e.g. army worms, grasshoppers, etc. and carries out bio-control measures. The Division, in collaboration with GTZ, USAID, Seafreight Pineapple Exporters of Ghana (SPEG) and the Horticultural Association of Ghana (HAG) developed 3 IPMs on Good Agricultural Practices for mango, papaya and pineapple.

The Division also trains trainers in IPM, technical backstopping on crop pest identification and integrated control strategies, as well as assists farmers and exporters identify pests. Finally, the Division provides support in certification and pre-audit training.

Pest Risk Analysis

Overall capacity to undertake risk analysis in the department is evaluated as follows:

- Hazard identification - Good
- Risk Assessment - Good
- Risk Management - Good
- Risk Communication - Good
- Identification of pest-free areas. Good

The Department has trained a team for PRA, and has produced three PRAs for okra, mango and eggplant in 2003/2004. APHIS-USDA is processing these. However, identification of pest-free zones and zones of emerging diseases has yet to be verified and demarcated. A list of regulated quarantine pests is also lacking. Requisite equipment and facilities for information search, such as CLIMEX and GIS (MapInfo), are not available.

Surveillance and Exotic Pests/Disease Response

Surveillance and exotic pest and disease response is undertaken for the following:

Seed Growers: Registration, training in the production of certified seeds and planting materials, certification of foundation seed, field inspection seed testing (viability, quality, health) certification.

Seed Dealer Registration, monitoring quality of certified seeds, engaging in promotional support, monitoring of sales and storage premises, and training.

Pesticide Management Division

The Division works closely with the EPA in the management of pesticides in the country. The Division supervises and trains inspectors, publishes information material, trains, registers and inspects pesticide dealers and applicators, keeps records, as well as statistics, of the working field and manages pesticide stocks for national use. The Pesticide Management Division also provides extension training: technical backstopping on pesticides management and training of trainers in pesticides management for certification purposes. Finally, the Division registers pesticide dealers and applicators, provides training on pesticide management and facilitates the removal of obsolete chemicals.

Plant Quarantine Division

The division works closely with Customs Officials, Postal Agencies and Immigration at all the official entry points. It supervises and trains inspectors, develops and publishes information, keep statistics and records of plant imports and exports, the importers and exporters, as well as the pests and diseases of quarantine interest. The Division issues phyto-sanitary certificates and import permits. It also operates the SPS Enquiry Point at the Ministry of Food and Agriculture.

Generally, documentation on surveillance systems for the NPPOs is inadequate and data on plant pests is not collated well-enough to enable an effective surveillance system to be maintained. Lists of pests for which free areas, places of production and sites of production have been declared are not available. Improved capability in information documentation, computerization of database on plants pest, number of crops surveyed requires further training. The surveillance teams would benefit from more training. The Division additionally needs to identify a coordinator to head these activities. Finally, equipment for surveillance must be up-dated.

Inspection Systems at Entry and Exit Points

The Phyto-sanitary Unit operates 43 stations throughout Ghana. This evaluation rates this number as satisfactory (100%) for the size of the Ghana. The stations are located on strategic commercial routes into and out of Ghana. (See the table on the following page.)

Table 12 Inspection Stations and Staffing

REGION	STATION	STAFF STRENGTH
Greater Accra	4	18
Eastern Region	1	1
Western Region	4	8
Ashanti Region	2	3
Brong Ahafo Region	5	6
Central Region	1	1
Upper West Region	2	4
Northern Region	5	5
Volta Region	12	26
Upper East Region	7	22
TOTAL	**43**	**94**

The Plant Protection & Phyto-sanitary Unit enforces regulations throughout the country in collaboration with customs and other law enforcement agencies, ensuring compliance by travelers, importers and exporters, airline and shipping agencies, airport and port authorities. All entry and exit points inspect and certify import and export consignments and issue phyto-sanitary certificates, clearance certificates, import permits and re-export certificates based on IPPC formats.

Entry/Exit and Post-entry inspection and diagnostic laboratories, equipment and facilities also need improvement. The distance of the post-entry center from the entry/exit points requires more efficient communication facilities and transport which would reduce the delays in communicating laboratory sample analysis results to exporters and importers.

Inspection posts at the airport and seaport lack the appropriate furniture, inspection tables, lighting, lenses etc. Any new legislation should mandate the provision of permanent offices to the NPPO by the Civil Aviation and Port authorities.

Export Certification Systems

Generally, export certification systems satisfactorily follow formats and standards of IPPC . Additionally, this evaluation found health certificates and export/import permits to be in line with IPPC standards.

Documentation and Information Communication

Even though an Enquiry point was established within the library block of the Ministry of Food and Agriculture in early 2004 and staffed by trained personnel in PRA, the enquiry point has yet to become fully operational.

International and Regional Cooperation

The NPPO belongs to the IPPC, Inter-African Phyto Sanitary Council and participates in some of the meetings of these international and continental bodies.

Capacity Building Needs

This evaluation identified the following areas as needing further action, and the author offers the following recommendations.

Regulatory Framework

- Complete review of the draft law, submit to the Legal Department of IPPC and later to AG and Parliament for adoption.
- Institutional Issues
- Offer training in hazard identification, risk analysis and assessment, risk management, and risk communication.

Equipment and facilities

- Improve stock of inspection equipment at entry and exit points
- Improve communication between stations and head office
- Improve transport at all levels

Documentation

- Develop and improve manuals for surveillance, pest listing, PRA, pest diagnosis, and pest-free areas
- Establish internal audit and reporting systems
- Establish accreditation to international laboratories and universities

International and Regional Collaboration

- Improve operation of Notification and Enquiry Points for exchange of SPS information with trading partners through the establishment of websites
- Collaborate with neighboring countries and ECOWAS 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 Directorate
- Plan for human resource development
- Plan for improving information systems and database
- Plan for improving enforcement measures and awareness creation of public phyto-sanitary measures at district assembly level
- Incorporate decentralization issues into strategic plan for grassroots enforcement of regulations.
- Exchange approved lists of chemicals and pesticides with neighboring countries, such as Cote d'Ivoire, and information on likely environmental effects for each country
- Implement measures for training farmers

4.4 Evaluation of Fish and Seafood Sanitary Systems

Legislative Framework

The legal basis for fisheries management in Ghana evolved from ordinances into laws and regulations. The first legal backing for the rules controlling fisheries was the Fisheries Ordinance enacted in 1946 as Cap 165. This was followed by Fisheries Regulations to give effect to Cap 165. Over time, revisions were made to meet the challenges of the rapidly developing fishing industry. Continuous review was done to:

- Sustain and regulate the exploitation of national fisheries resources
- Improve Ghana's access to international markets within the domain on the international fish trade

- Obtain optimum benefits for Ghanaians as owners of fish-related enterprises, as employers of the fishing industry, as consumers of fish products and as beneficiaries of foreign exchange earnings from fish trade
- Enhance investment in private sector-driven industry
- Improve the fishery management system

Currently, the fisheries laws in Ghana have been consolidated into the Fisheries Act of 2002 (Act 652). The current fisheries act conforms to the FAO Code of Conduct for Responsible Fisheries with particular emphasis on gear selectivity and an effective institutional framework. The Fisheries Act also gives legislative backing to the recently established Monitoring, Control and Surveillance (MCS) Division of the Fisheries Directorate, with clearly defined legal powers to regulate fishing operations. The MCS collaborates with the Ghana Navy in its surveillance operations. The fisheries law requires that at least 10% of the landings of commercial tuna vessels be sold on the local market and not exported.

The Directorate of Fisheries has also elaborated fishery management plans for marine and Lake Volta Fisheries. A new set of Fisheries Regulations to give effect to the Fisheries Act 625 (2002) is under preparation.

Institutional Issues

The Minister of State for Fisheries within the Ministry of Food and Agriculture conducts the administration of fisheries. The Fisheries Commission, under the Minister, comprises the Directorate of Fisheries and the Secretariat of the Fisheries Commission. The Commission advises the Minister on all matters pertaining to the fisheries industry.

The Directorate's operational divisions are:

- The Marine Fisheries Management Division)
- The Inland Fisheries Management (and Aquaculture) Division
- The Marine Fisheries Research Division
- The Monitoring, Control and Surveillance Division
- The Finance and Administration Division

The various fishermen associations both inland and marine, local government authorities and fishing communities collaborate in the enforcement of the fisheries laws and regulations. For this reason, the Fisheries Directorate is continuously engaged in education of the fishing communities and fisheries associations to more actively participate in the management of the fisheries resources.

Human Resource

Ghana boasts of qualified and experienced personnel in the fishing industry throughout West Africa. The Regional Maritime Academy, located near Nungua, trains seagoing personnel for both inshore and marine industrial fishing fleets. The Academy also trains deck, bridge and engineering personnel. There are also fisheries schools in Kpando and Yeji. The Directorate has adequate human resource at national and regional levels. However, at district levels, field staff numbers appear inadequate, where statistical staff at all landing points within the country take records of fish landed, species and number of fleet.

Fish and Seafood Disease Risk Analysis

The Ghana Standards Board inspects and issues health certificates for both export and imports. They have adequate laboratory equipment for this activity. The GSB organizes training to seafood processors in HCCP and other health management practices in disease risk management.

Fish and Seafood Export Inspection and Certification Systems

Certification systems in place follow the OIE international standards and formats.

International and Regional Cooperation

Collaboration is through harmonization (not clear) of fisheries statistics, fishing gear and fisheries regulations for Code of Conduct for Responsible Fisheries, as well as through FAO and DFID.

Summary of Capacity Building Needs

Legal Framework

Generally, the existing fishery laws and regulations in Ghana allow for the satisfactory implementation of Good Fishery Practices. It is important to note that the law leaves quality standards to the Ghana Standards Board. However, the following areas need to be addressed in any future revisions of the law.

- Standardization of field volumes in domestic trade to improve measurement of volumes and weights in statistical data provision
- Need for improvement in monitoring rejection of fish and seafood products from importing countries
- Need for evaluation of causes for that rejection

Training

- Further training is required in HACCP and seafood quality standards enforcement.

4.5 Evaluation of Animal Health And Food Safety

Introduction

Because Ghana is a net importer of meat and meat products, specialized services and institutions for the export of meat and meat products are not well-developed in Ghana. Consequently, enforcement of animal health and food safety standards for meat products focuses on domestic production and consumption of animals and meat products and measures to safeguard consumers of imported meat products.

Legislative and Regulatory Framework

Veterinary Services in Ghana fall under the management of the Ministry of Food and Agriculture. where a Directorate at the National Level is responsible for policy planning, monitoring and evaluation. and the Directorate also acts as liaison with international organizations. At the regional and district level, it operates as a service within the framework of the decentralized administrative local government system, guided by an old piece of legislation, *Diseases of Animals Act 83 of 1961*. The Act empowers the Minister of Food and Agriculture to declare infected areas and to suspend operation of provisions of this act in certain cases. The act also empowers the Chief Veterinary Officer (now Director of Veterinary Services) to inspect animals, restrict slaughter for purposes of preventing diseases, enter unto lands for purposes of inoculation and ascertaining whether any animal is suffering from any disease, and to adopt the necessary measures to deal with such diseases.

In 1992, a *Veterinary Surgeons Law P.N.D.C.L 305C* was promulgated to establish standards and code of ethics for veterinary practice in Ghana. The law established the Veterinary Council and provided eligibility criteria for the registration of Veterinary Surgeons and restrictions on private veterinary practice, offences and penalties.

Both laws, now outdated, are deficient in standards regarding contemporary international trade regulations and standards. The laws did not address regulations and standards for export and import of animals and meat products. The Veterinary Law is currently being reviewed and will be submitted to Parliament for their approval.

Institutional Capacity

National Level
The Veterinary Services in Ghana operates as a full Directorate at National level and reports directly through the Chief Director to the Minister of Food and Agriculture.

Animal disease control and animal health represents the core responsibility of the Veterinary Services. The mandate of the Veterinary Services includes applying veterinary skills, knowledge and resources to protect and improve human health by reducing exposures to hazards arising from interactions with animals and animal products. This mandate now extends to cover the inspection, examination, certification, exportation and importation of all products of animal origin.

Sub-National Structure
As a result of the decentralization of the Ministry of Food and Agriculture, the Regional Coordinating Council and District Assemblies directly controls the Regional and District Veterinary work, no longer the Directorate. However, the Directorate continues to hold the responsibility for disease surveillance and monitoring in the country.

Resource of Veterinary Services
The Veterinary Service employs a total of 733 people, comprising 139 veterinary doctors, 84 Graduate non-veterinarians, with the remaining 510 being technical grade. All 139 veterinarians in the public sector are full-time government veterinarians. There are no part time government veterinarians at national or sub-national levels.

The human resource position reflects a general shortage of staff within the public veterinary services. At the veterinary professional grade, the staffing adequacy is 73.5% of national requirements, while the graduate non-veterinary grade shows 65.6 % adequacy. The technical grade shows 58 % adequacy.

Sub-National Human Resource Distribution for Veterinary Services Ghana (2004)
Farmers in almost all regions of Ghana raise livestock especially cattle. This, therefore, requires adequate staffing of Veterinary Public Health at field level in all the 10 regions and 110 districts. Public Veterinary Officers work in all 10 regions of Ghana, as well as technical grade staff. The overall ratio is 1 Veterinary Officer supervising 6 technical staff. However, the ratio varies from one region to another depending on the concentration of livestock population in each region. In the Upper West and East Regions, where livestock thrives, the ratio is equally high at 1:8. (See Tables 13 and 14.)

Table 13 Human Resource Position By Grade of Veterinary Services

POSITIONS/ GRADE	PLAN	NUMBER AT POST	% STAFFING	VACANCIES
Professional Grade				
Director of Vet Services	1	1	100.0	0
Deputy Director, Vet Services	15	13	86.7	2
Principal Veterinary Officers	30	28	93.3	2
Senior Vet Officers	60	58	96.7	2
Vet Officers	83	39	47.0	44
Sub-total	**189**	**139**	73.5	**50**
Graduate Non-Veterinary Grade				
Chief Animal Health Officers	10	9	90.0	1
Assistant Chief Animal Health Officers	10	7	70.0	3
Principal Animal Health Officers	20	15	75.0	5
Senior Animal Health Officers	29	25	86.2	4
Animal Health Officers	59	28	47.5	31
Sub-total	**128**	**84**	65.6	**44**
Technical Grade				
Chief Technical Officers	10	3	30.0	7
Assistant Chief technical Officers	20	13	65.0	7
Principal Technical Officers	100	92	92.0	8
Senior Technical Officers	250	207	82.8	43
Technical Officers Grade I and II	500	195	39.0	305
Sub-total	**880**	**510**	58.0	**370**
GRAND TOTAL	**1,197**	**733**	61.2	**464**

Table 14 Regional Distribution of Veterinary Officers and Technical Staff in Ghana

REGION	NO. OF VETERINARIANS	NO. OF TECHNICIANS	RATIO VET:TECH
Upper East	9	76	1:8
Upper West	5	42	1:8
Northern	23	114	1:5
Brong Ahafo	14	62	1:4
Ashanti	16	52	1:3
Eastern	12	56	1:5
Volta	8	50	1:6
Greater Accra	20	61	1:3
Central	9	88	1:10
Western	9	99	1:11
TOTAL	**125**	**700**	**1:56**

Other Public Sector Veterinary Service Providers
Apart from the Veterinary Services of Ghana, no other public or quasi-public veterinary service providers exist.

Private Sector Veterinary Human Resource
A total of 200 Veterinarians are registered in the country as graduates from internationally recognized veterinary institutions according to WHO/FAO World Directory of Veterinary Schools.

Out of this number, 18 private veterinarians are authorized by the Veterinary Services to perform official veterinary functions, either as private veterinary officers or engaged as consultants in the agricultural sector. The remaining 41 veterinary doctors do not actively practice veterinary medicine and may be engaged in other sectors of the economy.

Number of Veterinarians Relative to National Indices
Of the total of 200 veterinarians, 139 public and 18 private veterinarians actively work in the animal health field. Analysis shows that the ratios fall short by international standards. (See following table.)

Table 15 Veterinary Doctor to Livestock Ratio

Livestock	Population (est. 2001)	Ratio of Vet to Livestock
Cattle	1,320,000	1:6055
Sheep	2,830,000	1:12,982
Goats	3,230,000	1: 14,816
Pigs	320,000	1: 1,467
Poultry	22,280,000	1:102,201

Veterinary Education and Training
No universities in Ghana offer Veterinary Science as a degree course. All veterinary doctors undertook their courses abroad. A Veterinary College at Pong Tamale in the Northern region, however, does train technical officers.

Veterinary Public Health
The Service employs staff to take charge of meat inspection in the abattoirs, dairy inspection and other meat products. Since little need exists for export function of veterinary services, the majority of staff work in field inspection of meat products for local consumption.

Table 16. Human Resource for Meat Inspection

Type of Establishment	Number of Staff Required	Number actual	Deficit (%)
Domestic meat establishment	Not provided	150	NA
Dairy inspection	Not provided	150	NA
Other foods	Not provided	8	NA
Export meat establishment	Not provided	0	NA
Import/Export Inspection	Not provided	10	NA

Financial Management
The Government of the Republic of Ghana provides the majority of funds to the Veterinary Services Division. Other sources include the World Bank, **IFAD?**, the EU and the ADB for the PAN African Control of Epizootics (PACE) and Agricultural sub-Sector Investment Program (AgSSIP) projects.

The Veterinary Service itself generates funds internally from livestock movement permits, slaughter permits and treatment of livestock. These funds are paid into the government treasury and are not available for use by the Service. No revenue sharing mechanism between the service and government exists at the moment. On the whole, when budgets are compared to actual releases, funding of the service falls short.

Accommodation

The offices at the national, regional and sub-regional level provide adequate accommodation. (See Table 17.)

Table 17. Veterinary Office Accommodation at all Levels in Ghana

LEVEL	NUMBER
National Directorate	1
Regional Veterinary Offices	10
District Veterinary Services/ Clinics	110
Regional Veterinary laboratories	5
Veterinary Disease Investigation Farms	3
Tsetse Control Unit (Pong Tamale)	1

Communications

Forms of communication available to the Veterinary Services on a nation-wide and local area basis are shown in Table 18.

Table 18. Availability of Communication Facilities to Veterinary Services, Ghana

TYPE OF COMMUNICATION	LEVEL AVAILABLE
Telephone and or Radio Phone	• National Office • All 10 Regional Veterinary Offices • 75% of district offices • All 10 Regional Veterinary Laboratories
Fax	National headquarters only
E-mail	National headquarters only

Transport

Availability of transport is fair and available on full-time basis. The Directorate can, however, mobilize transport from the general pool of the Ministry during disease outbreaks and emergencies. Transport in the regions falls under the Regional and District Administrative Systems.

Table 19. Available Transportation at the Veterinary Services Head Office, Ghana

TYPE OF TRANSPORT	NUMBER AVAILABLE	REMARK /ADEQUACY
Double Cabin Pick Ups (5 seater)	8	FAIR
Cross Country Station Wagon	2	FAIR
Trucks	7	FAIR
Saloon	1	FAIR

Pest and Disease Diagnosis Capability

The government operates 10 laboratories in the country. There are, however, no private laboratories accredited by government for the purpose of supporting official or officially-endorsed animal health control, public health testing, monitoring programs, import and export testing. See Table 20.

Table 20 Disease Diagnostic Methods

DISEASE	DIAGNOSTIC METHOD AVAILABLE
Rinderpest	C-ELISA
African Swine Fever	HA/HI DIF
Rabies	CELLARS STAIN FLUORESCENT TEST MICROSCOPY
Anthrax	POLYCHROME METHYLENE BLUE

The government collaborates with the following external laboratories and International Reference Laboratories:

- World Reference Laboratory for Foot and Mouth Disease (FMD); Institute of Animal Viral Research in Pirbright UK.10
- Regional Reference Laboratory in Bingerville, Ivory Coast

Pest and Pathogen Risk Analysis

Two staff are being trained in PRA, but a strong operational team is lacking. Information systems need to be improvement to enable PRAs to become operational.

Rating of Pest and Pathogen Risk Analysis

ACTIVITY	PRA CAPACITY
Hazard identification	Fair
Risk Assessment	Fair
Risk Management	Fair
Risk Communication	Fair

[10] Eight samples of FMD submitted in 2004

Diseases Surveillance and Exotic Pest Response

Surveillance is carried out to varying degrees of capacity and effectiveness. (See following table.)

Table 21 Diseases Surveillance

Regulation	Enforcement Capacity
Animal Health and Veterinary Public Health Controls and National Frontiers	Fair
Control of endemic diseases including zoonoses	Capacity of Veterinary Service to control endemic diseases is adequate
Emergency powers for control of exotic disease outbreaks, including zoonoses	Adequate legislative powers for Veterinary Service to control exotic diseases
Inspection and registration of facilities	Capacity is average
Veterinary public health controls of the production, processing, storage and marketing of meat for domestic consumption	Adequate capacity to enforce regulations on production and processing Poor capacity to enforce regulations on processing, transport and marketing of meat products
Veterinary public health controls for production processing, storage and marketing of fish, dairy products and other foods of animal origin for domestic consumption	Regulations on fish are done by separate Ministry of Fisheries
Registration and use of veterinary pharmaceutical products including vaccines	The Service has adequate capacity

Epidemiological Surveillance or Monitoring Programs

Ghana Veterinary Services carries out active and passive epidemio-surveillance for the following prioritized animal diseases:

- Rinderpest
- Contagious Bovine Pleuro-pneumonia
- Peste des Petit Ruminant
- African Swine Fever
- Newcastle Disease
- Activities comprise clinical surveillance, sero-surveillance, oriented surveillance and wildlife epidemio-surveillance

Livestock Census:

Veterinary Services originally collected livestock census data , this function is no more carried out due to structural and functional changes brought about by decentralization. Data on livestock are now estimates, rather than actual census data.

Emergency Preparedness

Ghana Veterinary Services has an emergency preparedness unit operating in the department. Emergency preparedness details are based on OIE standards.

Recent History of Animal Disease Status (See following table.)

Table 22 Recent History of Animal Disease Status

CATEGORY OF DISEASE	HISTORY
Animal Diseases Eradicated nationally or from defined sub-national zones	Ghana has been declared disease free from Rinderpest since 2003
Animal Diseases of which prevalence has been controlled to a low level in the last ten years	Not provided
Animal Diseases introduced into the country or to previously free sub-national regions in the last ten years	African Swine Fever was introduced into Ghana in 1998
Emerging Disease in the last ten years	The Monkey pox virus has emerged in wild life over the last ten years
Animal Diseases of which the prevalence has increased in the last ten years	• Rabies • Newcastle Disease • Mange • Pestes de Petit Ruminant • Contagious Bovine Pleuro-pneumonia • Foot and Mouth Disease. • Bovine Tuberculosis

Veterinary Public Health Food Hygiene

Table 23 Annual National Slaughter Statistics

YEAR	BOVINE	OVINE	CAPRINE	PIGS	OTHERS[11]
2001	123,357	55,317	78,339	17,359	334
2002	79,700	28,164	39,893	7,246	425
2003	131,669	58,427	84,783	14,123	596

Estimate of total annual slaughtering not officially recorded
Such unofficial slaughtering occurs, especially of goats and sheep in households. Also, cattle is commonly slaughtered at funerals in most parts of Ghana. However, these are not officially recorded, and no estimates are available. Generally, this livestock which is not slaughtered goes to the local commercial market and then sent to abattoirs.

Proportion of national slaughter that occurs in registered export establishments Ghana does not undertake any official export of meat and meat products; hence there are no data for this activity. However, please consult following table for commercial establishments that are registered for export.

[11] Others include equine, donkeys, dogs

Table 24 Number of Commercial Fresh Meat Establishments Registered for Export by National Veterinary Services

TYPE	NUMBER
Slaughter House (indicate species)	NIL
Cutting/ Packing Plants (indicate meat type)	NIL
Meat Processing establishments (indicate meat type)	NIL
Cold Stores for export meat products	NIL

N.B. No export establishments of such nature operate in Ghana.

Number of Commercial fresh meat establishments in the country approved by other importing countries that operate international assessment inspection programs
NIL

Numbers of commercial fresh meat establishments under direct public health control of the Veterinary Services (including details of category and numbers of inspection staff associated with these premises).
NIL

Description of the veterinary public health program related to production and processing of animal products for human consumption (including fresh meat, poultry meat, meat products, game meat, dairy products, fish, fishery products, mollusks and crustaceans and other foods of animal origin) especially including details applying to exports of these commodities.
NIL – There are no specific programs

Descriptive summary of the roles and relationships of other official organizations in public health programs for the products listed above, if the national Veterinary Services do not have responsibility for those programs, which apply to national production destined to domestic consumption and/or exports of the commodities concerned.
These are responsibilities of the Food and Drugs Board, Ghana Standards Board and Ministry of Health.

Zoonoses
Prevention of zoonoses is done during pre-slaughter and post-mortem examinations when diseased parts are removed or animals condemned and therefore not to be used for food purposes.

Descriptive summary of the role and relationships of other official organizations involved in monitoring and control of zoonoses to be provided if the national Veterinary Services do not have these responsibilities.
Public Health Officers from Ministry of Health are also involved in meat inspection at the abattoirs. However, the review of the legislation currently in progress seeks to clarify these roles.

Inspection Systems at Entry and Exit Points

Inspection systems at entry/exit points, conducted by the Ghana Standards Board, meet the current need for inspection of both live animals and carcass. The Service maintains five livestock quarantine stations in the north of the country, bordering the Sahel, where livestock are crossed into Ghana. Current legislation empowers the veterinary service to enforce quarantine regulations at national frontiers, including inspection, seizure and quarantine. A list of frontier crossings follows.

- Upper East and West Region
  Paga
  Mognori
  Pusiga
  Hamile

- Volta Region
  Aflao

- Western Region
  NIL

- Brong Ahafo
  NIL

- Northern Region
  NIL

Need exists to extend checkpoints to the three regions, namely Northern, Brong Ahafo and Western Regions for the control of trade and traffic in small ruminants across borders.

Chemical Residue Testing Programs

The Veterinary Services does not conduct any chemical residue testing, however, the Ghana Standards Board and the EPA do.

Role and function in these programs of the national Veterinary Services and other Veterinary Services to be described in summary form.
NIL

Descriptive summary of the analytical methodologies used and their consistency with internationally recognized standards.
NIL

Export Certification Systems

See Table 24 below.

Table 24 Export Certification Systems[12]

Regulation	Enforcement Capacity
VPH controls on the production, processing, storage and transportation of meat for export	No control. Export of meat products is minimal in Ghana.
VPH controls on the production, processing, storage and marketing of fish, dairy products and other foods of animal origin for export	No control by Veterinary Service. This is undertaken by Ghana Standards Board
VPH controls on the export and import of animal, genetic material, animal products, animal feedstuffs and other products subject to veterinary inspection	Fair control, but requires capacity building and facilities
Animal health controls of the importation, use and bio-containment of organisms which are aetiological agents of animal diseases and of pathological material	No full control, requires capacity building and facilities
Animal health controls on importation of veterinary biological products including vaccines	No full control.

[12] These follow the OIE and WHO certification requirements for livestock.

Regulation	Enforcement Capacity
Administrative powers available to Veterinary Services for inspection and registration of facilities for veterinary control purposes	Available in *Animal Diseases Act 81 of 1961*
Documentation and compliance	Adequately enforced

Documentation and Information Communication

The Service provides an information system for animal health data. However, it is not networked and lacks the appropriate software to link other international data systems.

Quality Control and Assessment/Validation Programs operating within Veterinary Laboratory Service
The International Atomic Energy Agency in Seibardorf instituted an Internal Quality Control program and External Quality Control Program.

Recently Published Reports of the Official Veterinary Laboratory
There are no recently published report that include details of specimens received and foreign animal disease investigations made.

Details of Procedures for Storage and Retrieval of Information on Specimen submission and Results.
An attempt is being made to computerize this information.

Reports of independent reviews of the laboratory service conducted by government or private organizations (if available)
NIL

Strategic and operational plans for the official veterinary laboratory service
NIL

Quality Systems

- OIE, FAO, WHO, AU/IBAR and International Atomic Energy Agency accredits the Veterinary Services.
- Quality Manuals
  NIL

Details of independent (and internal) audit reports that have been undertaken of the *Veterinary Services* of components thereof.
NIL

PERFORMANCE ASSESSMENT AND AUDIT PROGRAMS

The Ministry of Food and Agriculture Strategic Plan 2003 contains a strategic operational plan which is in place and is reviewed annually. Annual reports of the National Veterinary Services are prepared at the end of every year.

Training Needs

Training programs in Ghana include both under- and post-Graduate programs. Table 25 details the courses and their duration.

Table 25 Summary Descriptions of Training Courses and Duration

Training Course	Duration
Doctor of Veterinary Medicine	5 – 6 years
Veterinary Assistant	3 years
Masters Degree	1 year
Post Graduate Certificate	6 months
Diploma in Animal Health (University of Ghana – Legon)	3 –6 months
Diploma for Para-medics (Overseas course)	18 months
In Service Training Programs (Local)	6 months

Table 26 Participants in Training Courses in the Last Three Years

2001 Training

Staff Grade	Number.	Course	Duration	Sponsor
Veterinarian	1	Veterinary Public Health	12 months	
Veterinary Technicians	15	Tsetse & Trypanosomiasis Control	4 Weeks	
Veterinary Technicians	394	Application of 1-2 Newscastle Disease Vaccine		

2002 Training

Staff Grade	Number.	Course	Duration	Sponsor
Veterinary Technicians	10	Meat Inspection	6 months	
Veterinary Technicians	15	Tsetse & Trypanosomiasis Control	4 Weeks	
Veterinarians	1	Veterinary Technology for farm Animals	4 months	JICA
Veterinarians	1	OIE Diagnostics	6 weeks	USAID
Veterinary Technician	1	Advanced Studies on Protozoan Diseases	10 months	JICA
Veterinarian	1	Cattle production	2 months	JICA/ Egyptian Government
Veterinarian	1	Meat & Poultry Inspection Seminar	2 weeks	Cochran Fellowship
Veterinarian	1	Epidemiology	2 Years	Netherlands Government
Vet Technicians		Trainer of trainers for CAHWS	2 weeks	PACE
Veterinarians	140	Epidemio-Surveillance	3 days/zone (3 zones)	PACE

Bibliographical List of Scientific Publications by Staff Members of Veterinary Services in the past three years
NIL

Veterinary Services has consultation or advisory mechanisms in place at the following local and international universities, scientific institutions and recognized veterinary organizations.

- All Universities in Ghana
- Animal Research Institute
- Ghana Atomic Energy Commission
- African Union / Inter-African Bureau for Animal Resources
- Food and Agricultural Organization
- Office International des Epizooties
- World Health Organization

Membership of OIE - Ghana belongs to the OIE.

Official Delegate to the OIE
Dr. Mensah Agyen-Frempong
Acting Director
Veterinary Services Department
Ministry of Food and Agriculture
P.O. Box M161
Accra, Ghana.

Directorate of Veterinary Services in Accra houses the Notification Point which also serves as the Enquiry Point, but no website exists and no email address was provided.

Capacity Building Needs

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

Legislative

- Draft and enact new Veterinary Service Laws focusing on measures that address international trade in meat products and live animals

Institutional

- Better enforce animal health laws through the local government District Assembly system
- Improve staffing of district clinics with veterinary doctors and laboratory technicians
- Revive and improve livestock census and related statistical data gathered from districts up to national level for purposes of planning
- Ensure regular veterinary public health training for control of prevalent diseases

Facilities and Equipment

- Improve facilities and equipment at national and divisional laboratories
- Improve facilities and equipment at entry points
- Provide adequate quarantine and disposal facilities

Documentation and Communication

- Reassign livestock census to Animal Husbandry Directorate and Districts with collaboration from Veterinary Services

- Need to improve information base and communication of animal health information through the Enquiry Point

International and Regional Cooperation

- Cooperate with neighboring countries on measures to control transhumance nature of livestock production, especially cattle
- Seek increased funding for participation and organization of sub-regional harmonization workshops
- Establish increased collaboration with neighboring countries to control emerging diseases

5.0 RESULTS OF EVALUATION STUDY ON SPS INSTITUTIONS IN NIGERIA

5.1 Country Background

An Anglophone country like Ghana, Nigeria covers a land area of 923,773 square kilometers and has a population of 116.9 million (FAO 2001 estimates). The ambient temperature in this tropical climate generally falls between 21°C and 32°C. The southern half of the country has a two-peak rainfall season, starting in April or May and ending in July. The Southeast has more rainfall than the southwest. The northern half of the country has one peak rainfall season, starting from July and ending in September. The amount and distribution of rainfall determine the difference in climatic conditions throughout the year. Tropical food crops and the rearing of livestock form the base of Nigerian agriculture, and its tropical environment predisposes it to prevalence of tropical insect pests and diseases, for which it must have adequate disease control systems. Due to its extensive southern border with the Gulf of Guinea, and its immense Niger delta network, fisheries represents an important activity to Nigerians. Food crops include groundnuts, yams, cassava, maize, rice and palm oil and nuts, and cashews. Though livestock rearing is an important agricultural activity, it is carried out largely for local consumption and very little for exports.

Agriculture accounts for about 40 percent of the GDP and provides employment to the majority of the population, in both formal and informal sector. From a position of a large net exporter of agricultural products at independence, Nigeria has become a net importer of agricultural products. Farms average 1 hectare under traditional farming systems with low yields, due to poor soil management and husbandry practices. Higher rainfalls in the eastern areas of Port Harcourt and Calabar allow for plantation farming, which is common in the area. Agriculture is now receiving much-needed attention under the present government.

Nigeria imports large quantities of agricultural food products, mainly from the United States and the EU. Its increasing trade with the multilateral trading system in agricultural products requires that it improve its phyto-sanitary capabilities, in order to protect consumers and its agricultural system from foreign pests and diseases and to ensure safe food for its population.

Generally, all goods (raw materials or finished) are exportable from Nigeria except the following:

- Raw hides and skins
- Timber (whether processed or not) and wood in the rough, excluding furniture components, melina, railway slippers, floor and ceiling tiles, doors, windows and pallets
- Raw palm kernels
- Unprocessed rubber and rubber lumps
- Beans
- Rice
- Cassava
- Maize
- Yam

5.2 Food Safety And Public Health Systems

In Nigeria, as in Ghana, several MDAs, share responsibility for Food Control, including food hygiene, food safety, food standards and food trade. However, the overall control and oversight rests with the Ministry of Health, the National Agency for Food and Drugs Administration and Control (NAFDAC), and Standards Organization of Nigerian (SON).

The Legislative Framework

The Legislative Framework for NAFDAC

The Ministry of Health heads the hierarchy and is followed by the NAFDAC and its Chief Executive, who is in direct control of the two main Departments - Food and Drugs.

NAFDAC, established by the *Decree No. 15 of 1993* with wide ranging responsibilities for food safety and drug administration, formulates policies and issues guidelines. These policies and guidelines address product specification and quality control for all foods and drugs, including those used in production processes, manufactured, exported out of or imported into Nigeria.

The Food Department deals with water, beverages (alcoholic and non-alcoholic), confectionery, processed foods, etc. Within the Food Department are the :

- Food Safety and Nutrition Inspectorate
- Product Registration and Advertisement Unit
- Quality Control Laboratory and Research Unit
- Adverse Product Reaction Center

NAFDAC also inspects and tests products to ensure compliance with its stipulated standards and guidelines, as well as the raw materials and production processes in factories and other establishments. All foods, drugs, cosmetics, etc. produced or distributed in Nigeria must be registered with NAFDAC.[13]

The Legislative Framework for Standards Board of Nigeria

The Standards Organization of Nigeria was established by an *Act No. 56 of 1971 "The Standards Organization of Nigeria Act CAP 412"* of the laws of the Federal Republic of Nigeria. The Act has three amendments; *Act No. 20 of 1976, Act No. 32 of 1984* and *Act No. 18 of 1990*. These regulations have been subject to regular revision every three years and, are, therefore, up-to-date with the 1997 Codex Revisions.

Institutional Capacity

The SON constitutes the national statutory body responsible for Standardization and Quality Assurance of Goods and Services for both local and export market. Standards provide critical tools in quality assurance, safety assurance, waste management and cost reduction. Standards also serve as a guide for meeting minimum specifications in the production of goods and services which provide the basis for trade transactions.

As part of its functions, the SON:

- Prepares, modifies or amends specifications and promulgates standards, specifications and technical regulations
- Collects and disseminates information on standardization and related issues

[13] Since NAFDC was established after SON in 1971, the mandates of the two organizations overlap with respect to factory inspection, seizure, registration and certification.

- Verifies weights and measures used in trade and commerce, and calibrates industrial machines
- Operates an Information and National Enquiry Point to provide answers to standards-related trade questions

SON works under the Ministry of Trade and Commerce. Its governing body, known as the Nigerian Standards Council, creates policy and supervises the administration and financial management of the organization. The Director General of the Organization (the Chief Executive) administrates the day-to-day workings of the organization, within the broad guidelines formulated by the Council.

The organization serves as a secretariat for a number of technical committees made up of experts representing various interests, such as producers, consumers, technologists, research institutions and testing organizations, both private and public. The technical committees form the Nigerian Industrial Standards (NIS) and its experts work in an honorary capacity to develop the NIS through consensus of opinion, based on scientific and technical data. SON's Directorates are described in further detail below.

Food Quality Risk Analysis

SON has a trained team for PRA and has access to the required information.

Food Quality Surveillance and Food Borne Disease & Allergy Response

To ensure continuous compliance with NIS, SON undertakes regular inspection of production lines in factories and takes samples from factories and the open market for testing. The awarded license is renewable annually and requires continued good performance of the manufacturer and the producer's willingness to continue with the scheme. Certification is given for ISO 9000, ISO 14000 Quality Management and Environmental Management System, respectively, as well as quality inspection of locally manufactured goods.

SON is decentralizing its operations in order to ensure a meaningful relationship with state authorities. It has begun establishing offices in 15 zones spread throughout the country, out of which 11 are fully operational. SON plans to open one fully operational office in every state in Nigeria in the near future.

Laboratory testing represents the core activity of the Directorate of Laboratory Services of the SON. These services conform to the requirements of the International Standards, (ISO 17025) and international laboratory manuals. SON offers instrument calibration facilities to industries, government agencies, research institutions and accredited centers in various areas of metrology.

The Directorate also provides testing facilities to enable effective performance of quality assurance activities during the implementation of standards. The tests are mainly third party conformity assessment of products which use the relevant NIS or any other applicable international standards.

SON operates the following laboratories:

- Food and Chemical Laboratory – Lagos
- Engineering Laboratory – Emene Enugu
- Textile and Leather Laboratory - Kaduna

Inspection Systems at Entry/Exit Points

NAFDAC maintains offices and staff at all entry and exit points in Nigeria. Food items are inspected and referred to SON for verification of quality standards. Results are then sent back to NAFDAC for approval or rejection of products.

Export Certification Systems

Certification follows CAC, OIE and IPPC standards. SON operates a certification scheme to bring the advantages of standardization within the reach of all consumers. Manufacturers whose products meet the requirements of the NIS are issued permits to use the Nigerian "Mark of Quality". The use of this certification mark conveys to the consumer an assurance that the goods bearing it have been tested and certified by the SON and may be purchased with reasonable assurance of quality.

Documentation and Information Communication

Responsibility lies with the directorate for all matters related to the planning and evaluation of programs and projects. The directorate also collects and processes all vital data and information relating to SON's activities in the following areas:

- Development of database of industries and factories in Nigeria
- Management Information Systems
- Analysis of performance targets, data for the various directorates, sections and units of the organization
- Management of e-mail, Internet facilities and website
- Management and maintenance of computers and accessories, including desk-top publishing facilities
- Provision of in-house information management training of SON staff

SON maintains a library collection of over 500 Nigerian Industrial Standards and over 30,000 volumes of foreign and international standards, as well as a number of search tools to assist in determining requirements. The library serves as a research and reference point on standards for staff, government agencies, business entrepreneurs and consumers, including the international community.

Besides current Nigeria standards, it has standard collections for:

- International Standardization Organization (ISO)
- Codex Alimentarius Commission
- Germany
- Great Britain
- India
- Japan
- Malaysia
- South Africa
- Sri Lanka
- African Regional Organization for Standardization (ARSO)

Stakeholder Involvement and Law Enforcement

SON seeks views on implementing policy through consultative discussions with stakeholders in the food industry. Collaboration with stakeholders may prove difficult when their functions overlap. For example, the Plant Quarantine Service and Veterinary Services of the Ministry of Agriculture issue certificates for plant and animal products, both imports and exports. Despite the fact that SON is the certification authority, these departments issue certificates, because they pre-date the SON and were earlier mandated for certification by Parliament. A Parliamentary act would serve to harmonize the functions of these organizations. SON also needs to maintain desks for collaborating with Veterinary Services and Plant Quarantine on issues of product traceability over the entire food chain.

Training Needs and Capacity Building

Customs officials sometimes seize and destroy exports of food products from Nigeria are sometimes seized and destroyed, due to non-compliance with importing country regulations. Most exporters have inadequate knowledge of importing country regulations and do not take advantage of the certification opportunities of SON and Plant Quarantine Service.

SON has worked in collaboration with USDA-APHIS and provided technical assistance and training in HACCP. The organization's directorates offer training and technical advice to manufacturers, importers and interested parties in the following areas:

- Quality and Environmental Management Systems
- Formulation of Company Standards
- Calibration Services and Training in *ISO 17025*
- Health and Safety in Industry
- Technical assistance to customers on applicable standards of quality in exports/imports
- Training in quality control activities

SON also organizes training programs in the following:

- General concept of quality
- Elements of ISO 9000 and ISO 14000 standards
- Documentation of Quality Management System
- Registration requirements
- Internal Audit (Quality System management and Environment System management)
- Implementation and maintenance of the management system

Regional and International Cooperation

SON belongs to the following organization and commissions:

- International Organization for Standardization (ISO)
- International Electro-technical Commission
- CAC
- ARSO
- WTO

SON provides offices for a National Codex Secretariat, as well as the National Enquiry Point that provides information on food safety issues in Nigeria. Despite membership in these international organizations, lack of funds prevents SON's full participation in the deliberations of the WTO-Codex Committee meetings.

The SON Information Center WTO/TBT Enquiry Point was established to handle the technical regulations, Standards and Conformity Assessment Procedures. It represents the competent information point in Nigeria.

The NEP offers fax and e-mail notification services and gives advance notice of proposed changes to technical legislation in foreign countries and in Nigeria. The SON belongs to ISONET, and its library which is open to both private and public sector. ISONET provides a sales point for all documentation on standards. See the contact address on the following page.

Contact Address:

Standards Organization of Nigeria (SON)
Plot 13/14, Victoria Arobieke Street
Off Admiralty Way, Lekki Peninsula Scheme 1,
Lekki Peninsula Scheme 1, Lekki Lagos State
PMB 2102, Yaba
Tel +234 1 270 8230 5

E-mail info@sononline-ng.org
sonnis_ng@yahoo.com
sononline@21ctl.com

Website URL: www.sononline-ng.org.

Views on Regional Harmonization

SON views efforts at harmonizing Food Safety regulations in West Africa as laudable, because harmonization could accomplish the following:

- Standardize food safety regulatory systems across countries, thus increasing protection of the health of consumers of food items imported from across borders, further facilitating regional trade
- Ghana and Nigeria can become the nucleus of the West African Standards Authority and later incorporate other countries. Already Nigeria and Ghana have developed MRLs on specific standards of mutual interest to promote trade between the two countries, which could be expanded to include other countries as a basis for intra-regional trade.
- SON staff participated in the May 2004, West African Regional Food Safety course Michigan State University's Private-Public Partnership organized for participants from the sub-region in Ghana . Participants from Ghana, Nigeria and Benin gained knowledge about scientific technical capacity for the appropriate deployment of innovations, in particular food safety risk assessment and risk management. Participants also received trained in improved scientific based decision making, improved communications with the general public on food safety issues. The course organizers intend to extend the invitation to future training programs to participants in both Anglophone and Francophone West Africa. Plans were made to create a newsletter on standards, translated into English and French. This newsletter would be circulated among Standard Organizations in West Africa as a way of sharing experiences and information and encouraging West African harmonization.

Recommendations for Capacity Building Needs

Despite current efforts to improve food safety control and management, Nigeria must strive to improve their food safety regulatory system in the following areas:

Improvement of the Legal, Regulatory and Institutional Framework

- Ensure collaboration with other certifying organizations, such as Plant Quarantine and Veterinary Services, through the development of a legal framework
- Make provisions for increased inter-ministerial and inter-departmental coordination and meetings to improve law enforcement
- Seek sources of funds for improvement of the services of SON to the public
- Expand offices into other states in Nigeria

Infrastructure and Equipment

- Improve laboratory analysis capability, particularly for products meant for export

Capacity Building Needs

- New and emerging types of mycotoxins and their control measures
- Pesticides residues
- Cadmium level in rice
- Data collection of rejections and interceptions
- Identification of GMOs and LMOs and their labeling requirements and certification.
- Improvement of information network with USDA and FDA on topical issues such as Bio-terrorism Act and its effect on export and imports.

Plant Quarantine And Pest Control Systems (PQS)

The Plant Quarantine Service of Nigeria safeguards the agricultural system of the country from the entry of exotic plant pests and weeds and prevents the spread of indigenous pests and weeds across international boundaries. It was established in 1960 by the *Agriculture (Control of Importation) Act of 1959*.

Legislative Framework

The *Agriculture (Control of Importation) Act 1959* was fashioned after the Plant Protection Convention of 1951. Apart from an amendment made to the act under the authority granted the Minister in 1970, the act remained relatively unchanged and provided the broad legal framework within which the Plant Quarantine Service operated. Over the period, several changes took place regarding global trade rules of WTO and IPPC. The review of the IPPC 1997 edition of phyto-sanitary measures was the final blow that rendered the existing act in Nigeria totally outdated. It therefore became necessary to repeal the existing *Agriculture (Control of Importation) Act of 1959* and replace it with a new act hoping to improve market access of Nigerian agricultural products into global markets. The government obtained an FAO Technical Cooperation Program (*TCP/NIR/0165 A*) to strengthen the National Phyto-sanitary Service and bring it up to date with international standards of the WTO-IPPC. A draft law was prepared and submitted to the AG for comments.

The new act, which once passed would repeal the *Agriculture (Control of Importation) Act of 1959*, will establish the new Nigeria Plant Protection Service, Plant Protection Advisory Committee and will focus on import and export regulations. The new draft law focuses on the prevention of entry of regulated pests, including weeds not already present or under official control in the country, and to facilitate the safe importation of desirable plants and plant products. The law also provides for export inspection, treatment services and certification for plants and plant products to meet the phyto-sanitary requirements of importing countries within the framework of international agricultural trade. The amendments proposed fall into the following areas:

- Establish of the Nigeria Plant Protection Service
- Provide detail functions of the NPPOs in line with the IPPC
- Specify clear powers of the head of the NPPS
- Specify powers of authorized officers to inspect seaports, airports, general post offices, courier houses, land borders, fields, land premises and any kind of transport
- Strengthen the power of the Minister to make regulations for both imports and exports and internal quarantine aspects of plant protection
- Establishment of a Plant Protection Advisory Committee to increase transparency and participation of the private sector in policy making
- Establishment of a Plant Protection Fund into which user fees will be deposited for emergency pest control purposes and other uses through an approved budget
- Specify offences for both private and public officers as a deterrent.
- Specify liability of owners and importers were also clearly stated
- Provide for Exclusion of Liability of authorized officers and public officials pursuing their legitimate and official work

The drafted act is up-to-date with IPPC and WTO standards, and if passed by Parliament will raise the international image of the Plant Protection Services of Nigeria.

Institutional Issues

Plant Quarantine, a department under the Federal Ministry of Agriculture, Nigeria, controls and manages of the activities under a Deputy Director and Head of Plant Quarantine Unit. Oversight bodies comprise the Plant Quarantine Consultative Committee and the Plant Quarantine Technical Advisory Committee. The department has 5 main divisions.

Pest and Disease Diagnostic Capabilities

The Ministry of Agriculture staff the department well, particularly at the senior professional level with respect to virologists, mycologists, nematologists, bacteriologists and weed science experts. Some of these professionals are also available through the National Research Institutes, International Institute for Tropical Agriculture and local universities. Low stock and poor quality of laboratory equipment and materials for pest and disease diagnosis remains a problem and would require re-stocking and staff training in laboratory residue chemical analysis for pesticides, veterinary drugs and mycotoxins.

Various sections of the Plant Quarantine Department hold differing responsibilities, which are listed below.

Post-Entry Quarantine Section

- Glasshouse Management
- Tissue culture
- Plant Treatment
- Herbarium and Weed Science

Internal Quarantine Section

- Exotic Germplasm Conservation
- Import Regulation Permit
- Export Inspection and Certification

Pest Risk Analysis

The Department has yet to develop a trained team for PRA, and operational manuals are inadequate to deal with pest-free sites of production. This evaluation rates the overall capacity to undertake risk analysis as follows:

Hazard Identification	FAIR
Risk Assessment	FAIR
Risk Management	FAIR
Risk Communication	FAIR
Identification of pest-free areas. -	FAIR

However, several important activities are behind schedule. The Department has not yet produced any PRAs for any crops. Verification and demarcation identifying pest-free zones and zones of emerging diseases are not yet complete. A list of regulated quarantine pests is also lacking. Requisite equipment and facilities for information search, such as CLIMEX and GIS (MapInfo), are not available.

Surveillance and Exotic Pests/ Disease Response

The Department is able to undertake surveillance through its four zones, and procedures for exotic pest response are available.

Inspection Systems at Entry and Exit Points

Due the large size of Nigeria, it is divided into 4 zones for pre-entry inspection purposes. There are a total of 47 inspection stations comprising 7 international airports and 7 seaports. The zonal distribution of frontier stations is as follows:

- Southwest Zone with 15 frontier stations
- Southeast Zone with 9 frontier stations
- Northwest Zone with 11 frontier stations
- Northeast Zone with 12 frontier stations

These stations facilitate and oversee entry inspection, sampling and referrals to post-entry inspection station.

Entry/Exit and Post-entry inspection and diagnostic laboratories, equipment and facilities also need improvement. The distance of the post-entry center from the entry/exit points, as well as poor communication facilities and transport services, prevent efficient notification of laboratory sample analysis results to exporters and importers.

Inspection posts at the airport and seaport lack the appropriate furniture, inspection tables, lighting, lenses, etc. The new law must mandate the Civil Aviation and Port authorities to ensure that permanent offices be provided to the NPPO.

Export Certification

Generally, export certification systems follow formats and standards of IPPC (rated satisfactory by this study). Health certificates and export/import permits have been inspected and found to be in line with IPPC standards.

Documentation and Information Communication

After this evaluation, the author would suggest the following areas be addressed in order to improve documentation and overall communication.

- Lack of documented procedures and operational manuals on PRA to link import permit system
- Lack of documented procedures and operational manuals for export certification
- Lack of computerized information retrieval system for export/import inspection services.[14].
- Internet service is poor, and response to enquiries suffers from delays. The department functions without a website.
- Lack of information sources in the form of journals, , internet access, appropriate software, such as Palisade@Risk, Climex, CABI-Global Compendium and Microsoft Office XP
- Lack of knowledge about importing countries' phyto-sanitary requirements

[14] Headquarters compiles data from export and import permits from the 4 zones. However, these are typed manually without any database system with fields for retrieval

International and Regional Cooperation

Membership of International Organizations
The Nigeria PQS belongs to the FAO, Cartagena, CBD, WTO, OIE, Codex and IPPC. It also belongs to the Inter-African Phyto-Sanitary Council.

Notification and Enquiry Point
The Department directly notifies countries on diseases through the IPPC.

Contact Person for Notification and Enquiry is:
Mr. P.O Agboade,
NPPO Official, Federal Ministry of Agriculture and natural Resources
Plant Quarantine Service, PMB 5672, Ibadan Nigeria.
Telephone +234 2 231 4183
Fax +234 2 231 3842
E-mail npqs@skannet.com

No website exists for published information on plant health situation in Nigeria and neither are there regulations relating to plant health from an official sales point easily obtained.

Harmonization of Plant Health Measures in West Africa sub-Region
The ECOWAS Secretariat responsible for SPS harmonization has not contacted Nigeria, but Nigeria views the idea as laudable.

Among the benefits that are likely to accrue as a result of harmonization are:

- Presently, standards vary greatly from country to country. Through West African harmonization of SPS, there will be an opportunity for member countries to adopt standard protocols on pesticide lists, and standard regulations regarding emerging issues, such as GMOs and LMOs. ECOWAS must insist on labeling from exporting countries to enable importing countries to guarantee quality before products are released for public consumption. Equivalence measures will also be agreed upon for countries whose capacities and resources are low. West African harmonization will present ECOWAS as a trade block and will minimize dumping of inferior and dangerous plant products and pests into West Africa. Presently, those countries in West Africa where standards are weak have become entry points for GMOs and LMOs and dangerous pesticides into ECOWAS. Once these products gain entry into one country, they spread by land routes to neighbouring countries.
- Food safety regulations at the community level not only provide health protection, but also protect other consumer interests in relation to the prevention of deceptive practices, including the adulteration of food, and ensure that consumers are provided with accurate information.
- The proposed ECOWAS food safety regulations will establish the principles of risk analysis in relation to food safety regulation of Codex Alimentarius.
- It will further establish the structures and mechanisms in relation to the scientific and technical evaluation that will be primarily undertaken by a proposed ECOWAS Food Safety Authority.
- Harmonization will enable the establishment of region-wide pest-free areas and production areas across national boundaries, resulting in a more effective control and surveillance of plant health in West Africa.
- Regional control of phyto-sanitary measures will increase product sourcing by trading partners from any member country of the ECOWAS, since these would be guaranteed by the ECOWAS certification.
- It will also result into better use of regional facilities. Poorer countries may rely on facilities in richer countries for research and other post-entry quarantine. Regional facilities could also publish informational brochures for disease-free planting through tissue culture and distribute it to member countries.

- For this to be successful, an agreement must be reached on centers of production of key crops for each country or group of countries, based on their production capacity and facilities.
- Nigeria and its neighbours trade informally, proven by export-import data from the border posts. Apart from bulky products that are passed through most border points and recorded, smaller products are smuggled across without phyto-sanitary permits and are, therefore, not recorded. The danger to plant protection arises from these non-inspected items. Importer/exporters smuggle goods mainly to avoid paying certification fees, which could be remedied by massive public education and awareness creation on the part of ECOWAS members.
- West Africa needs an ECOWAS SPS Certification and a seal of standard, in addition to country certification of standards. This will enable importers to obtain the "critical mass" that would optimize their import operations from West Africa by sourcing the same product from more than one West African country.

Summary Of Capacity Building Needs

The PCE identified strengths and weaknesses of the Nigerian Plant Quarantine system and proposed a strategic plan for future improvement and development. This plan balances the external requirements imposed by the international agreements with the social and economic realities of Nigeria. The following areas need further action:

Improvement of the Regulatory Framework

- Through the Minister, the Plant Quarantine Service (PQS) should demand that the bill receives prompt attention of Parliament

Institutional Issues

- Need exists to implement the proposed national and zonal organizational structure in line with the proposed functional structures of the IPPC
- Review the position of the PQS in the structure of Federal Ministry of Agriculture and Rural Development (FMARD) to promote it to the rank of department, division or agency
- Provide for a specific unit in the organizational structure of the service, to be in charge of international liaison functions
- Review and rationalize the number of PQS border posts and develop the regional infrastructure of the service, in order to implement the surveillance and phyto-sanitary improvement programs (will also provide support to the export certification activities)

Equipment and facilities

- Improve stock of inspection equipment at entry and exit points
- Improve communication between stations and head office
- Improve transport at all levels

Documentation and Information Dissemination

- Set up a national PQ database management system and progressively computerize all the major activities of the service
- Develop a plant protection database that allows for the implementation of an information gathering and retrieval system
- Develop and improve manuals for surveillance, pest listing, PRA, pest diagnosis and pest-free areas
- Establish accreditation to local research institutions, international laboratories and universities

International and Regional Collaboration

- Establishment of websites to improve operation of Notification and Enquiry Points for exchange of SPS information with trading partners

- Collaborate with neighboring countries and ECOWAS SPS harmonization efforts, particularly in areas of regulated pesticides, fees levied for SPS services, and development of standard procedures dealing with newly emerging issues of GMOs and LMOs
- 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

- Implement the proposed strategic plan of the service
- Develop a PRA-based PQ system
- Institute a continuous training program in PRA, concepts of pest-free areas, pest-free places and sites of production

Priority Needs of the PQS

The FAO has already taken up the task of reviewing the legislative framework and providing training in some aspects of phyto-sanitary measures. The Service, however, requests assistance in the following areas:

- Set up a national PQ database management system and progressively computerize all the major activities of the service and
- Develop a plant protection database that allows for the implementation of an information gathering and retrieval system
- Establish websites to improve operation of Notification and Enquiry Points for exchange of SPS information with trading partners
- Train GMOs and LMOs to enable the PQS to control imports and their certification and also to undertake post-entry follow up

ANNEX 1 ENTRY POINTS AND STATIONS FOR GHANA PLANT PROTECTION & REGULATORY SERVICES

REGIONS	STATIONS
VOLTA	DENU, AFLAO, KPOGLO, AKANU, BATUME-JUNCTION,
	NYIVE, SHIA, HONUTA, DAFOR, AFEGAME, MENUSU, AHAMANSU, ABDULAIKROM
GREATER ACCRA	ACCRA, TEMA
CENTRAL REGION	
WESTERN REGION	YAKASE, OSEIKOJOKROM, ELUBU, JEWI-WHARF, TAKORADI
ASHANTI REGION	
BRONG AHAFO REGION	SAMPA, KWAMESEIKROM, GANNOKROM
NORTHERN REGION	TATALE, SABOBA, CHEREPONI, BUNKRUGU, CHACHE
UPPER EAST	PUSIGA, KULUNGUGU, MOGNORI, ZEBILA, PAGA
UPPER WEST	KUPULIMA, HANUILE
EASTERN REGION	

ANNEX 2 LEGISLATION NOT YET SPECIFIED IN THE GAMBIA

i. The current Act 1965, and its regulations do not comply with all the requirements of the revised texts of the IPPC (1997). In the current legislation the following have not been specifically stated:
ii. Responsibility of the NPPO for surveillance of plant pests on growing plants, including both areas under cultivation (e.g. fields, plantations, nurseries, gardens, greenhouses and laboratories), wild flora, and of plants and plant products in storage or in transport particularly with the object of reporting the occurrence, outbreak, spread and of control of pests.
iii. Responsibility of the NPPO for inspection of consignments of plants and plant products moving in international traffic.
iv. Responsibility of the NPPO for disinfestations of consignments of plants, plant products and other regulated articles moving in international traffic
v. Responsibility of the NPPO for the protection of endangered areas and the designation, maintenance and surveillance of pest-free areas of low pest prevalence.
vi. Responsibility of the NPPO for conducting Pest Risk Analysis
vii. Responsibility of the NPPO to ensuring, through appropriate procedures that the phyto-sanitary security of consignments after certification regarding composition, substitution and re-infestation is maintained prior to export
viii. Responsibility of the NPPO to train and develop staff and human resources
ix. Responsibility of the NPPO to established an Enquiry Point to provide information within the territory of the contracting party regarding regulated pests and the means of their prevention and control.
x. Responsibility of the NPPO to undertake research and investigation in the area of plant protection
xi. Responsibility of the NPPO to submit its official national plant protection organization and of changes in such organization to the Secretary of the IPPC
xii. Responsibility of the NPPO to provide a description of its organizational arrangements for plant protection to another contracting party upon request
xiii. Responsibility of the NPPO to arrange for phyto-sanitary certification with the objective of ensuring that exported plants, plant products and other regulated articles and consignments thereof are in conformity with the certifying statement to be made pursuant to paragraph 2(b) of Article V of the New Revised Text of the IPPC
xiv. It is not stated whether the Act takes precedence over provincial, state or other sub-national legislation in phyto-sanitary issues involving international trade.
xv. Responsibility of the NPPO for approving, registering post entry quarantine facilities for the holding of regulated articles for inspection/ testing of regulated articles
xvi. The legislation does not require a person to declare plants, plant products and other regulated articles for commercial or non-commercial purposes
xvii. Responsibility of the NPPO for determining details of import requirements/ protocols, including monitoring/ auditing phyto-sanitary functions performed by trading partners