SUCCESSFUL CAPACITY-BUILDING
IN FISH SAFETY / QUALITY FOR TRADE FACILITATION

BACKGROUND

Uganda has the second biggest share in Lake Victoria (43%). Between 1992 and 1998 the fish industry sector greatly developed and revenues from fish exports increased from 12 to more than 60 million US dollars per year. Beginning 1999 11 industrial factories were processing fish for export, more than 300 thousand people were earning their living directly from the fisheries sector and thousands of others were working in related industries like the packaging, fishnet, transport industry or benefiting from the fish industry.

In April 1999, after suspected fish poisoning in Lake Victoria, Uganda imposed a self-ban on its fish exports to the EU and started implementing appropriate corrective measures. The first EU field inspection mission identified the unreliability of Uganda’s fish safety system and confirmed the ban. The ban was later on extended to the entire Lake Victoria fish and affected also Tanzania and Kenya.

CRISIS IN THE FISH INDUSTRY

The ban resulted in heavy losses in terms of jobs and foreign income.

Out of 100,000 people involved in various fishing activities 32,000 lost their jobs, the others earned less than one third of their normal income. Families and other dependants (around 300,000) of these directly employed people were also affected.

Uganda suffered a tremendous loss in terms of reduced returns for the whole duration of the ban from April to August 1999. Until July 1999 losses were estimated at US$ 36.9 million (Ush 54,243 million). Losses to the fishermen community due to reduced prices and less fishing activity amounted to US$ 4.25 million (Ush 1.250 million) per month.

Three out of 11 fish factories had to be closed and the remaining ones were working at 20% capacity. Therefore, most of the factories had to lay off 60% to 70% of their labor force. 2,000 directly employed people had already been laid off.
Other related industries like the packaging, fishnet, transport industry and Uganda’s economy in general were directly affected and all the people involved also suffered direct consequences of the EU ban on fish exports.

<table>
<thead>
<tr>
<th>Losses</th>
<th>Figures</th>
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<tbody>
<tr>
<td>Export earnings</td>
<td>US$ 36,900,000</td>
</tr>
<tr>
<td>Income of fishermen community (US$ 850,000 per month) due to reduced prices and fishing activities</td>
<td>US$ 4,250,000</td>
</tr>
<tr>
<td>Factories that closed down</td>
<td>3 out of 11</td>
</tr>
<tr>
<td>Factories that reduced their labor force by 2/3</td>
<td>8 out of 11</td>
</tr>
<tr>
<td>Jobs lost in fish factories (1/3)</td>
<td>2,000</td>
</tr>
<tr>
<td>Jobs lost in fishing activities (1/3)</td>
<td>32,000</td>
</tr>
<tr>
<td>Persons that lost 2/3 of their income</td>
<td>68,000</td>
</tr>
<tr>
<td>Affected family members and relatives living on the same income.</td>
<td>300,000</td>
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MAIN CAUSE - UNRELIABLE FISH SAFETY ASSURANCE SYSTEM

- Deficient organizational fish inspection framework. There was a problem with the structure of the competent authority and the lack of a clear line of command and accountability due to the involvement of two bodies, the UNBS (the Uganda Bureau of Standards designated as the competent authority) and the DFR (the Department of Fisheries Resources responsible and implementing the fish inspection). The District Fisheries Offices (DFO) were not reporting to the DFR and hence not following the instructions regarding hygiene and handling of fish as required by the EU regulations;

- Weak regulations. Regulations lacked updating/upgrading to meet the fish industry’s and international market’s requirements and were not fully enforced;

- Weak capacity of the fish inspectors. Fish inspectors could not perform their duties appropriately due to the lack of training in GHPs (Good Hygienic Practices) and HACCP (Hazard Analysis Critical Control Points), clear guidelines and appropriate operating practices in fish inspection, in particular with regard to inspection of fish batches being landed, GHPs at landing sites, sampling procedures, recording and documentation for traceability, etc. as well as auditing of GHPs and HACCP food safety assurance systems in the fish factories;
• **Lack of laboratories with adequate capacity.** No laboratory was accredited and none was applying GLPs (Good Laboratory Practices);

• **Deficient fishing and fish transportation boats as well as landing sites.** Design/operation/maintenance did not permit appropriate fish handling in accordance with GHP requirements;

• **Fish handling** throughout the chain was not in accordance with GHPs. The ice used to preserve fish was a source of fish contamination and its production and preservation were not in accordance with GHP requirements.

### INTEGRATED REMEDIAL APPROACH AND STRATEGY

The strategy adopted aimed at two objectives: In the short term to lift the ban as soon as possible and in the medium and long term to establish the necessary foundations for a reliable fish safety assurance system. To be efficient and reliable fish safety assurance has to function as a system with the effective participation of all the actors involved at all levels of the fish production chain: Regulatory and fish inspection authority, technical support institutions (in particular R&D and training institutions, standardization bodies and laboratory facilities) and the private sector (fishermen, fish processors and traders, consumers/clients) have an important role to play in its establishment and operation. A deficiency at any of these levels makes the whole system weak and unreliable. Thus the approach and strategy adopted were of an integrated nature. Activities aiming at improving the organizational and regulative frameworks were carried out parallel to the strengthening of the capacity of the fish inspection services, the technical support institutions and the private sector from the fishing to the factory level. A particular focus was put on the establishment of working tools, guidelines and methodologies (fish inspection manual, code of practice, inspection guides and records, etc.). Working relationships were established at the operational level with partners such as FAO and DFID to bring synergies and combine efforts for more impact.

### CONCERTED MEASURES

**Review of the organizational aspects**

In Uganda the role of the competent authority was assigned to the UNBS that had an agreement with the DFR that was carrying out fish inspection. This system was not working well, since the responsibility was given to an institution
that was not carrying out the control work. The responsibility of “Competent Authority” was shifted from the UNBS to the DFR having the real regulatory authority for fish. The role of the DFR as the central authority and its direct linkages with the district Fish Inspectors (DFO) were streamlined and strengthened.

Review of the regulations

Regulations were updated and made to conform to the international requirements. Recommendations were made and actions taken to facilitate its enforcement.

Strengthening the institutional framework capacity

- **The capacity of the DFR (Regulatory and inspection authority) was reinforced.** Fish inspection services were streamlined and the capacity of the DFR - the competent authority for the EU - strengthened through:
  - training of fish inspectors in fish inspection, HACCP auditing and documentation and provision of fish inspection equipment;
  - preparation of inspection tools such as a fish inspection manual, inspection guides and records;
  - establishment of a documentation system at the central, district and landing site levels for better traceability; and
  - introduction of an IT software for fish inspection benchmarking and monitoring;

- **The technical support institutions were strengthened.** Training of GHP and HACCP specialists and auditors from the private sector, DFR, UNBS, Makerere University in Kampala, Industrial Research Institute etc., was carried out and as a result a critical mass of national HACCP specialists/auditors was established and is operational.

- **The capacity of the laboratories was upgraded.** Laboratories were provided with equipment and technical support. UNBS’ Microbiology Laboratory was fully equipped, its staff trained and a Quality Management System introduced. It will be internationally accredited by SANAS before June 2001. A private laboratory (Chemiphar (U) Ltd) was upgraded and EU inspectors approved it for pesticide residues analysis. The Government Chemist Analytical Laboratory is still under upgrading and assistance is provided to the DFR to establish an inspection laboratory.
Strengthening the capacity of the private sector including the fishing, landing and factory levels

- **Requirements for fishing and fish transportation boats** were identified and two pilot boats constructed. The pilot boats are being used through UFPEA to conduct trials for assessment of the socio-economic and technical impact. Based on the results, the most suitable designs will be disseminated to the 20 local boat builders already trained in boat building and design, the whole fishing fleet and the regulatory authorities to facilitate adoption.

- **Hundreds of fish handlers** were trained in open training and demonstrations in tailor-made Good Hygienic fish handling practices on the Lake and at the landing sites in conformity with EU quality/safety requirements;

- **Pilot operations to demonstrate appropriate fish handling** (fish icing and boxing) were carried out in cooperation with 5 factories;

- **Fish inspection services at the landing sites** were strengthened through training of inspectors in fish inspection, fish sampling, records keeping and documentation for appropriate traceability;

- **Capacity of the fish processing enterprises** was strengthened: Preparation of a Code of Practice adapted to the situation in Uganda, approved by the UFPEA and put in practice, training of plant staff in GHPs and HACCP and assistance to the plants to fully implement HACCP and in the utilization of an IT software for fish safety monitoring/benchmarking;

**ACHIEVEMENTS**

Although further upgrading is required and still going on, the fish safety and quality assurance system in Uganda has undergone major steps towards becoming reliable. Solid foundations have been established and are being made operational at all levels of the production chain.

- **Regulations have been updated** in conformity with the international requirements and are being enforced by more competent and better organized fish inspection services.

- **Technical support institutions have increased their capacity** and are now able to meet most of the services required by the fish industry in terms of fish safety/quality. The availability of internationally recognized
laboratory services locally in Uganda is greatly facilitating exports of products.

- **A critical mass of national experts** in fish inspection, GHPs/HACCP and quality management has been established (50 experts trained).

- **Fish handling practices at boat, landing site and fish factory levels** have much improved and are now in conformity with GHP principles (20 boat builders and 200 to 300 fish handlers trained).

- **Enterprises (Greenfields, Hwan Sung, Fish Packers, Ngege, etc.)** have been able to implement HACCP principles and ISO 9000 standards. One enterprise (Greenfields) was certified to ISO 9000 standards and out of the others 2 to 3 will be ready for certification by September 2001. In addition, all the enterprises have improved in quality management through introduction of the uniform “Code of Practice”.

As a result of the establishment of a more reliable fish safety assurance system and in particular the introduction of HACCP, the EU ban on Uganda’s fish exports was lifted and new markets (USA) were opened to Ugandan fish products.

**IMPACT ON UGANDA’s ECONOMY**

Since the resumption of Uganda’s fish exports to the EU revenues from exports are on the rise and the country’s currency is getting stronger. Factories resumed operations at full capacity. One of the factories that closed due to the lack of business is preparing for re-opening. Laid off staff during the ban was recruited again. The fisher folk are back to earn their livelihood. The fish industry has got access to the US market, this means more revenues from fish exports.

<table>
<thead>
<tr>
<th>Year</th>
<th>Income in US$</th>
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<tbody>
<tr>
<td>1992</td>
<td>12,000,000</td>
</tr>
<tr>
<td>1996</td>
<td>60,000,000</td>
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<tr>
<td>January to March 1999</td>
<td>17,000,000</td>
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<tr>
<td><strong>AFTER THE EU BAN WAS IMPOSED</strong></td>
<td></td>
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<tr>
<td>April to July 1999</td>
<td>2,500,000</td>
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<tr>
<td><strong>AFTER THE BAN WAS LIFTED</strong></td>
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<tr>
<td>September to December 2000</td>
<td>7,995,000</td>
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