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WTO - Standards and Trade Development Facility - FAO

PROJECT FOR TECHNICAL ASSISTANCE TO CAMEROON: MEASURES TO STRENGTHEN FOOD SAFETY AND QUALITY

By J. Claude Cheftel, Professor Emeritus, University of Montpellier

Activity No. 1

Reactivating the "Ad hoc Committee on Food Safety" and transforming it into a National Food Safety and Quality Committee

1. Current situation

This 12-member committee was created by Order No. 001/CAB/PM of 2 March 2004 (PM = Prime Minister) for 1 year. It has hardly met, it has produced none of the projected quarterly reports, and has not played the key role that had been assigned to it, which was to identify risks, formulate a strategy and set action priorities, coordinate the quality control activities of the various ministries and ensure that the control system as a whole becomes fully operational. The reason for this failure is a seemingly simple one - the total lack of funding (per diems, travel allowances, documentation, secretariat services, classroom rental, surveys, etc). This belies scant political commitment at the highest level with respect to problems affecting the security of food and drinking water, in other words, public health.

Many Cameroonian leaders consider it essential to revive this committee, with the Government providing it with the requisite resources. If the Committee were **opened up more to the industrial and community-based sectors**, it could well become a permanent inter-ministerial secretariat, called the **National Food Safety and Quality Committee**, for instance. The STDF could help fund that National Committee over two years so as to speed up its revival, but it is the Government of Cameroon that must bear the brunt of the responsibility for its operation and above all its survival over time. Under the STDF project, Cameroon's mandatory counterpart funding should be earmarked for this Committee from the start of the project.

2. Objectives

The National Food Safety and Quality Committee should be responsible for identifying and setting its own tasks. Nevertheless, three major tasks suggest themselves immediately:

2.1 Coordination and simplification of the inspections performed on food, drinks and the establishments where they are prepared, sold or consumed. At present, these controls are being done out with varying degrees of efficiency and regularity by some 10 ministries, as well as local authorities (mayor's offices and municipal councils). Regulations would need to be harmonized and above all implementing degrees and orders drafted to ensure proper implementation of such regulations.

Precise intervention procedures should be developed, drafted and disseminated to all interested parties (inspectors, and economic operators subject to inspection). A schedule of inspections should be prepared in order to ensure their regularity and avoid overlapping or clashes between inspections being carried out by different ministries or municipalities. Mixed inspection teams could be set up. Precise data sheets should be drawn up covering procedure for the selection, transportation, conservation and analysis of samples. The government should provide a budget to pay for those tests in the event of default by the enterprises or other operators inspected. The keywords in this reorganization should be coordination and simplification. It would be so much more preferable to

have a small number of effective controls rather than establishments being visited by several demotivated inspectors who are oblivious of one another.

If this endeavour is to succeed, the National Committee would need to include representatives from different ministries who are given sufficient authority and are motivated by a real desire to cooperate amongst themselves.

2.2 Setting a food safety strategy and incentives for improved quality. This second task seems fundamental and should be carried out in parallel with the first. What is the present situation? What are the strong and weak points? What are the dangers and opportunities? The risks must be identified, studied and categorised, then addressed by order of priority (risk management). This should then be communicated to all the operators concerned, from farmers to consumers (with food chains of varying lengths between rural and urban areas). The activities to be carried out could aim to support operators in one or several specific sectors (e.g. those engaged in street catering).

The policy of drafting standards and certifying products that comply with them also falls under this strategy. It should lead to better food quality, provided that it goes hand-in-hand with incentives as well as dissuasive measures. The National Food Safety and Quality Committee **should also act as National Codex Committee and its members should include the Codex Contact Point**. The National Committee should therefore coordinate the activities for Cameroon's participation in the Codex. That participation is crucial to ensuring that Cameroon's concerns are taken into account when international standards are being drawn up to govern exports and imports, and involves the following tasks: (1) confirming the Codex Contact Point and accordingly informing the Codex secretariat in Rome; the Codex Contact Point should act as secretariat to the National Codex Committee, which would mean receiving information and invitations to participate in Codex meetings, photocopying and circulating them to the persons concerned, including Cameroon's representatives to the FAO (attaché at the Embassy of Cameroon in Rome), who regularly attends the Codex meetings in Rome; (2) meeting in Yaoundé before each Codex meeting to discuss the matters to be dealt with at the meeting, take positions, and submit proposals or comments to Codex before the said meeting and within the set time frame; (3) deciding on the possible sending of a Cameroonian representative to some Codex commission meetings; (4) studying applications to the Codex Trust Fund for financial aid and prepare the annual submissions in order to obtain such aid.

2.3 A third series of tasks is needed to support those mentioned above. The National Committee should itself be able to conduct or at times commission **studies or surveys** to be done in cooperation with the various ministries, universities, research and analytical laboratories, and some private companies (research facilities, training entities) or enterprises. Amongst the matters that should be addressed by these studies or surveys, we may mention the following, on a non-exclusive basis: identifying **which are** the foodstuffs in question (imported or local); the agricultural or agri-food industries; types of domestic, small-scale or industrial food processing; transportation, places of warehousing and sale; microorganisms, toxins, pesticides, heavy metals or other pollutants; consumer practices; **those creating the greatest risks** to the largest numbers of consumers, to specific categories of consumers, or in particular regions.

Some of these questions already have answers, which is why this task was not placed head the list. In other instances, studies or surveys as well as analyses would need to be done, and a scientific interpretation made.

This task of oversight should make it possible to **pinpoint PRIORITIES for the MANAGEMENT and COMMUNICATION of RISKS**. The National Committee should not be made responsible for crisis management, however. Its action should focus on long-term prevention.

Funding should be assured for these three tasks, including the conduct of certain studies or surveys, analyses and interpretations. Once the priorities are identified, funding should also be provided for the management and communication of priority risks.

The National Committee will no doubt have to create more specialised teams from time to time, and retain other experts or consultants in some cases. We think that universities and researchers should play a leading role in the surveys and studies, making use of trainees or doctoral students supervised by research professors or members of the National Committee. The Committee should nevertheless keep overall control of the situation.

It would also be desirable for the professional bodies in specific sectors or industries, employers' organizations, chambers of commerce, etc, to be invited to some National Committee meetings as part of the public- private dialogue.

Naturally, the Ad Hoc National Committee on Food Safety, would already have tackled these tasks had there been the genuine political will concerning the pressing public health problems associated with deficiencies in food security and policy as outlined below.

Cameroon is a large country with ample agricultural and industrial potential as well as human resources. Despite this:

- 40 per cent of the population lived below the poverty line in 2001:

- the proportion of households facing food insecurity (i.e. not eating enough) was reportedly almost 25 per cent;

- protein-energy malnutrition amongst children aged 0-5 years has worsened, moving from 24 per cent of children in 1978 to 32 per cent in 2004. The incidence of anaemia (caused by iron deficiency) was reportedly almost 68 per cent amongst the same children, and 45 per cent of women of reproductive each (2004 figures). The incidence of vitamin A deficiency amongst this same group of children is reportedly close to 39 per cent (2002 figure);

- Access to drinking water for the country as a whole is reportedly about 50 per cent (31 per cent in rural areas, 86 pour cent in urban areas). The figure seems somewhat optimistic for the cities, given the somewhat limited coverage and the age of the distribution network, and the pollution of wells and shallow boreholes. The virtual absence of any decontamination of liquid wastes, including industrial waste, and the unauthorized dumping of garbage pose a very serious public health problem;

- although not systematically documented, food poisoning does sometimes attract much media attention, and is no doubt very frequent and at times serious (including in schools);

- other dangers arise from the excessive and uncontrolled use of various phytosanitary products (including highly toxic, prohibited substances) and of antibiotics for cattle rearing, in particular pesticide pollution of vegetable products and of some water tables in peri-urban farming areas. Fruit and vegetable exports to the European Union are being jeopardised by excessive pesticide residue content;

- the obvious lack of hygiene in slaughterhouses, markets and street vendors' food stands combine with the heat and dust to render many foods and drinks unhealthy and non-compliant with elementary standards of hygiene and cleanliness;

- many imported foods are of poor nutritional and sensory quality and often contaminated. Checks at the border are notoriously inadequate. Imports are meant to make up for local shortages, but often severely hamper the development of domestic production;

- the official food control system falls under 10 ministries and some municipalities. It is not co-ordinated, and often lacks implementing decrees and precise procedures, it has scant analytical resources, and the system is more administrative than operational. Work is proceeding on the formulation of quality and hygiene standards, but their impact on food safety and quality is still quite limited.

These major problems are well known and improvements have already been attempted, though with varying degrees of success. Solving them will call for prolonged efforts and considerable human and financial resources, as well as communication. Only a National Committee that is representative of the active segments of society, technically skilled, having sufficient moral authority, and acting in solidarity can hope to impose their recommendations on political decision-makers.

3. Foreseeable stages

3.1 Transforming the Ad Hoc Committee into a National Food Safety and Quality Committee; drafting and approving the statutes (3 months)

Once reactivated, the Ad hoc Committee will meet with its present members and will no doubt decide to increase its numbers somewhat by opening up further to the private sector and civil society. It would be desirable for the representatives to include not just the roughly six ministries largely concerned in food control, but also researchers and researcher professors, heads of analytical laboratories, industrialists and heads of professional organizations, members of research entities or quality bureaux, as well as representatives of NGOs and civil associations. The presence of a lawyer would be desirable. The overall number of members should not become too high (15 persons?)

Once constituted, the future National Committee would draw up simplified statutes with the help of a lawyer. It would then be necessary to decide on the Committee's missions, composition, the duration of its mandate and the procedures for renewing its members, the appointment and powers of the director, the frequency of meetings, the duty of attendance, other obligations of members, conditions for reimbursing out-of-pocket expenses incurred by members attending meetings or conducting studies and actions, voting procedures for decision-making, budget and finances, including an entity for managing and verifying accounts and activities, human resources, allocated premises and equipment, procedures for amending the statutes, as well as by-laws. It is crucial for the National Committee to enjoy a high degree of decision-making autonomy regarding its studies and actions. This will probably require the annual budget to be determined in advance and in a manner independent of any contract or outside requests. It is also essential for the States to invest the National Committee with sufficient authority to impose at least some of its decisions on ministries.

Once drafted, the statutes would be sent to the Prime Minister for approval. A copy will be sent to the STDF and FAO.

3.2 Taking possession of the allocated premises; providing or recruiting permanent and/or temporary staff; purchasing and installing office material; providing the operating budget; budget estimates for the current year; launch of the National Committee's activities (3 months)

The premises are likely to be made available through a rent contract between the entity managing the National Committee's accounts and the State. Needs in terms of office space are bound

up with the personnel endowment (see following paragraph), the permanent availability of a small meeting room (20 persons at the most), and perhaps a room serving as an information unit with three or four computers for consulting computer databases.

It would be a good thing if for the entire duration of the National Committee's mandate, the State could assign a university-trained person (Bac+5 or +8 graduate level or higher) already experienced in the field of food sciences and technology, for the post of Secretary-General. Similarly desirable would be the assignment of temporary staff at graduate level to provide regular secretariat services.

During this period, the National Committee members could draw up a reasoned list of food safety and quality problems that they consider to be of concern. To that list, they could attach proposals for possible studies or surveys (three proposals per person, for instance), together with an evaluation of the duration, cost and the conditions for implementing those proposals. Members of the National Committee could meet at the end of this period to compare the proposals and select (or reformulate) two or three study topics, and two or three activities for execution in the ensuing six months as priorities.

To facilitate this preparatory work, it would be desirable for the National Committee members to consult the reference document jointly published by FAO and WHO in 2003 entitled: "Garantir la sécurité sanitaire et la qualité des aliments: Directives pour le renforcement des systèmes nationaux de contrôle alimentaire" (80 pages) . Another document prepared by the FAO in 2005 but not yet published would be particularly useful: Guidelines to assess capacity building needs in official food control systems" (144 pages).

3.3 Developing priority studies and actions: formation of teams, determining phases, members and budget; approval by the National Committee; launch of operations; follow-up of operations; initial assessment; submission to the National Committee; decision to proceed with or without changes, or to discontinue and select new studies and actions (six months)

As of this stage, the National Committee will have reached cruising speed. In principle, typical operations at that stage should be renewable for successive six-month periods. The plenary meetings of the National Committee could be held every three months.

Once the full Committee has chosen the topics for the studies and actions by consensus (or by majority vote), it could set up small **teams (two or three persons) amongst its members, which would undertake to see through and personally follow-up studies and actions over a six-month period**. These teams would need to draw up a work plan (possibly calling on persons from outside the National Committee such as trainee students or doctoral students), and submit their programme, along with its estimated cost to the National Committee as a whole. To ease approval of such programmes, the National Committee could determine beforehand the range of admissible expenses for priority studies or actions (based on the annual budget), as well as the limits to participation and funding by outside persons.

A **written report** should be made on each study or action at the end of the six-month period. A model report would be prepared beforehand and approved by the Committee. The report would be distributed to all National Committee members, who would decide whether to continue or discontinue those projects, as well as choose new proposed studies and actions.

3.4 Continuation of activities

These six-month activity periods could be renewed two more times under the framework of the two-year STDF technical assistance project, though the success of the National Committee would only be assured by programming its activities well beyond the end of STDF assistance.

4. Types of priority studies and actions that could be dealt with by the National Committee members

Only the National Committee may decide on the topic of priority studies (or surveys) and actions to be carried out. Its decisions may be influenced by requests from ministerial, industrial or other bodies, but the State must guarantee the National Committee genuine autonomy of decision-making and avoid adjusting the annual budget to suit outside requests. For the sake of its independence, the National Committee should not be able to accept contracts for studies or activities paid for by any outside entity. It would be also desirable for the members of the National Committee engaged for six months in a study or activity not to accept any other personal contracts during this period (unless they derive their professional income mainly from the execution of contracts).

The types of studies and actions that the National Committee may decide to carry out could cover, *inter alia*, identifying and assessing risks and hazards, and managing those risks by taking steps to diminish or eliminate them. Still others could address risk communication amongst the persons responsible or endangered. Awareness building, promotion, information or training activities could be carried out. Some of these actions would nevertheless call for funding additional to the Committee's annual operating budget.

In some instances, the National Committee may need to search for information on computerised databases (against payment), or request microbiological food analyses (also against payment) from the Pasteur Centre. In many instances, the National Committee's activities will be more a task of reflection, leading to recommendations to one or another ministry or industrialist concerning proposed amendments to the regulations or the reorganization of food control procedures. The teams responsible for such actions must strive to have them taken into account by the competent outside bodies. The State would therefore need to invest National Committee with sufficient authority.

While not wishing to interfere in the choice of priority actions, we would nevertheless like to mention some problems that need to be solved: (1) Why has Hydrac in Duoala made no headway since 2001 in setting up a pesticide residue analysis laboratory, when that project seems to have met with universal approval? Could the own-funds announced by Hydrac not come from a source other than debt cancellation (HIPC credits, which are still uncertain)? Could oil revenue not be used at least to help start work on the hangar that should house that particular facility? Could Hydrac not cut back the estimated budget for the creation of this laboratory, making provision for annual tranches and postponing the pesticide formulation control laboratory (which calls for separate premises and analytical equipment)? (2) What should be done to ensure that the inspection department in the Ministry of Health has the requisite resources to implement its policy, and in particular, to be itself able to pay for the microbiological food analyses (done at the Pasteur Centre) that it may consider essential? (3) Should a laboratory be created or reinforced for physico-chemical and biochemical analyses of foodstuffs (apart from pesticides) and where? (Pasteur Centre, ENSAI, Hydrac, MINEPIA laboratory?) Should there be rational and co-ordinated distribution of the work at hand and equipment to be bought, or should the focus be on supporting just one reference laboratory? The substances it would seem essential to analyse in connection with exports include microtoxins and certain heavy metals (mercury in marine products); (4) Should we be addressing problems of certification and accreditation of laboratories in accordance with the ISO 17025 standard before

having satisfactory resolved the three problems mentioned above? (5) In what specialised Codex Commissions should Cameroon participate effectively (i.e., preparing and following up dossiers).

At the end of each year's work, the National Committee could organise a press conference or workshop to disclose the outcome of its work, as well as its recommendations to the ministries or to the Government.

5. Forms of STDF financial aid

STDF financial aid could be forthcoming as soon as the Cameroon Government has assigned to the National Committee premises, staff (for example a secretary-general and a "secrétaire ordinaire") and an annual operating budget. It would be highly desirable for the Government to remunerate National Committee members not only for their travel expenses but also for some studies and actions they will personally commit to carrying out over renewable six-month periods.

The project's Implementing and Management Agency will be the FAO Representation in Yaoundé, which will manage STDF assistance as well as periodically verify the National Committee activities being funded by that assistance. It is proposed that STDF aid should cover the following fields:

Purchase of 4 microcomputers and 4 printers to be installed at the National Committee offices, **with** a two-year subscription for a high-speed Internet connection. Approximate cost: **12,000 €**. One of these computers will be reserved for the National Codex Committee.

Purchase of an efficient photocopier, mainly for the use of the National Codex Committee. Approximate cost: **2,000 €**.

A two-year subscription to the Elsevier "Sciencedirect" computer database (giving access to articles in several hundred scientific, technical and economic journals, including a number of food-related ones. Approximate cost: **5,000 €**.

Credit for 500 microbiological food tests at the Pasteur Centre in Yaoundé (to which the credits would be paid over in advance every three months, when the preceding credits are used up). Cost per 100 pathogens tests: 100 x 50,000 CFA francs. Cost of 400 total flora counts: 400 x 20,000 CFA francs. Total = 5 000 000 + 8 000 000 = 13 000 000 CFA francs or **19 818 €**.

Credits to pay for 20 renewable six-month scholarships for trainee engineering students at ENSAI (food sciences) and doctoral students. Scholarships will be paid directly to the engineering and doctoral students, if they commit themselves to conducting a full-time study or survey approved by the National Food Safety and Quality Committee, and if each of them agrees in writing to be supervised by a member of this National Committee (who would guide and monitor the work). The scholarships include a lump sum intended to defray the cost of travel, telephone communications and documentation. Approximate cost: 10 six-month scholarships for trainee engineering students, at 800,000 CFA francs per scholarship. 10 six-month scholarships for doctoral students at 1,000,000 CFA francs per scholarship. This amounts to 8 000 000 + 10 000 000 = 18 000 000 CFA francs or **27 441 €**.

Credits to cover allowances to be paid to 10 members of the National Food Safety and Quality Committee who will have carried out a study (or survey or action) over six months, decided and approved by the full Committee (as stated in section 3.3 above). The amount of an allowance for a six-month study or action (full-time over six months) will be 2,400,000 CFA francs. It would be distributed equally between the two or three National Committee members who would commit to conducting the study or action in collaboration over six months. The allowance would be

paid only after the action is completed and a written report submitted, and in turn verified by the Project Implementing Agency.

10 allowances of 2,400,000 CFA francs = 24,000,000 CFA francs or € 36,588.

Total cost of Activity No°1: 12 000 + 2 000 + 5 000 + 19 818 + 27 441 + 36 588 = 102,847 €, or approx. US$125.470.

Activity No. 2

Training of trainers in good hygiene and manufacturing practices, HACCP, and quality standards, with a view to providing "secondary" training for agri-food SMEs

1. Current situation

The agri-food processing sector is still relatively underdeveloped by comparison with the market for fresh products, but holds considerable potential: it could improve and strengthen agricultural enterprises; create jobs, especially in the cities; increase trade between cities and towns and outlying farming areas; diversify the urban diet; meet the demand for processed or ready-to-use products that is now only being partly satisfied by imports, prolong the shelf-life of certain foodstuffs and improve their health, nutritional and/or sensory quality; and pave the way for food exports to African countries and to Europe.

Food processing is currently being undertaken by a handful of large companies, generally subsidiaries of multinationals or companies involving foreign capital, and by a larger number of SMEs and VSEs, often cottage and/or family-type enterprises. Hardly any SMEs have banded together as professional groups capable providing aid and advice. Most SMEs and VSEs lead a highly precarious existence, often surviving just a few short years. Many still remain in the informal sector so as to avoid taxes and other controls, which effectively excludes them from eligibility for bank loans or any effective assistance in hygiene or processing. These small enterprises are nonetheless created by motivated and dynamic people, often small groups of women. The products are sold in markets and by street vendors, which means that they reach a huge swathe of the poor urban population, and can therefore significantly influence the nutrition and health of that population.

While major enterprises (Nestlé Cameroon, Grandes Brasseries du Cameroun, Chococam, Société Camerounaise de Raffinage Maya (palm oil)) have all set up quality teams, some being already certified under ISO Standard 9001, others are opting for the HACCP system. The situation is much less acceptable, however, in medium-size and small enterprises in particular (including some that nonetheless export dried fruit to Europe under the organic label).

The official system for controlling food (and beverages) and the establishments where they are produced, distributed and sold falls under 10 ministries as well as some municipalities. The system is generally considered only partially functional, mostly because implementing decrees have not been drawn up for all laws, inspection procedures are not precise, there is no coordination amongst the various services, and microbiological or chemical analyses are rarely possible. In collaboration with industrialists, the Standards Unit of the Ministry of Industry has in fact drawn up some 180 food quality and safety standards similar to those of the Codex, but only eight are currently in force and actually give rise to product certification audits (to verify compliance), whilst all the other standards are largely ignored by producers and processors.

2. Objectives

Against that backdrop, it seems crucial to do the utmost to encourage food producers and processors to improve the quality of their operations and products. Government incentives such as tax rebates, investment aids, training and employment subsidies would be much more useful than penalties. A structure by industry, corresponding to the various food sectors (horticulture, poultry, dairy, etc.) would also undoubtedly help boost enterprises and secure their markets. This activity is designed for the training of trainers, who would then undertake to contact heads of SMEs and VSEs so as to make them aware of the advantages of hygiene, quality standards, preventive measures and

self-inspections, not only for the sake of consumer health, but also for the profitability and durability of their enterprises.

3. Stages of implementation

The two main stages are the training of trainers and "secondary" training subsequently imparted by the trainers to SMEs and VSEs. Each of these main phases in turn breaks down into several phases.

3.1 Creation of an Organizing and Follow-up Team for the training programme.

There could be a four-person team comprising Professor R. Ndjouenkeu, Head of the Department of Food Sciences ENSAI, Ngaoundéré; Mr J.M. Etoundi, Quality Inspector No.1 of the Inspection and Fraud Squad at the Ministry of Trade; Mr N. Monkam, Director of the AGRO-PME research facility (bureau d'études), Yaoundé; Mrs. Sambou Debana, Head of Administration and Finance, Kaligénie group, Douala. The team would be led by Professor R. Ndjouenkeu (rndjouenkeu@yahoo.fr).

It is essential for these persons to receive some monthly remuneration over the two years of the project, as they will be committing themselves to carrying out the tasks described below, and will therefore be devoting some portion of their time to that purpose. That portion is still to be determined, but must be at least 20 per cent.

3.2 Content and duration of the training of trainers courses

The content of the training for trainers will depend on what the latter will in turn have to pass on to the heads of SMEs, VSEs and other selected establishments. The entry level of future trainers (university, at least postgraduate level [Bac+5]) must also be considered.

The main topics to be taught could be the following: good hygiene and manufacturing practices (as laid out in the Codex Aliamentarius, SPS standards, Cameroonian standards, European Regulation EC/852/2004 of 29 April 2004 regarding Food Hygiene; the HACCP Approach (using and simplifying the FAO 2001 Training Manual, Food Quality and Safety Systems); the principles of traceability (knowledge and registration by each link in the chain - from the seller from which the food came to the buyer to which it has been sold); rules for the labelling of pre-packaged foods; ISO 9001-2000 Standards (Quality systems - model for quality assurance in conception/development, production, installation and after-sales services).

In addition, more succinct information should be provided concerning ISO 14001 standard on the environment, some Regulations and Directives of the European Union (for example concerning the organic labels, protected geographical designations, GMOs, etc), and the standards covering mass distribution in Europe (EUREPGAP, IFS, BRC) trade labels, (SAI, Max Haavelar, etc). It would undoubtedly be just as useful to discuss the principles of good corporate governance and to provide advice in pedagogics and teaching.

The question may be asked whether the training of trainers should involve options (for example addressing problems specific products of animal origin, with a view to "secondary" training geared specifically toward SME and VSEs utilising and processing such products). Options could also be considered to match the level of development of the SMEs or VSEs or of other establishments targeted by these "secondary" training programmes. Given the additional cost of such options and the complexity of subsequently getting SME and VSEs together for the "secondary" training programmes, it would seem preferable not to implement such options.

The content of the training of trainers course would also determine its duration. Two weeks could well be required, with alternating courses, guided work (company or product case studies, presentations by "multidisciplinary" groups of future of trainers, an account of personal experience by an industrialist, debates) and practical work (in technical workshops, demonstrations in companies). It is necessary to alternate activities in this way to reduce fatigue and weariness on the part of trainees and teachers.

The Organizing and Follow-up Team will complete and formalise the course content.

3.3 Choice of teachers for the training of trainers

As the FAO (ESNS, Rome) has already organised similar courses in sub-Saharan Africa, and in Burkina Faso in particular, it is suggested that it should call on three (3) teachers whose performance it has already been able to judge, and that it should participate automatically in determining the content of the teaching programme and in the general organization of the project, should it so wish. Some Cameroonian teachers could also be involved, more specifically, one or two senior figures from the ENSAI's Diploma of Higher Studies (DESS) programme in quality control and management. Lastly, it would be ideal if one or two senior figures from the country's major food enterprises could come and make presentations on their experience in training and quality.

The project will defray the travel and living expenses of teachers, and remunerate them for their services based on the usual FAO rates and procedures.

3.4 Preparing the teaching materials

The teachers on the training of trainers programme must prepare their own teaching documents and materials, preferably in the form of PowerPoint files that can be circulated to the Organizing team by e-mail (or on CD-ROM). This should be done at least one month before the actual courses, so that documents can be printed and photocopied (with four slides per page, for instance) and distributed to prospective trainers just before oral presentations.

It is important for these teaching documents prepared by the teachers to be also conceived in a manner suitable for use by the trainers during the secondary training to be dispensed later to SMEs and VSEs.

The FAO may even be able to supply the video documents on GHP, GMP and HACCP.

3.5 Choosing the future trainers

As already indicated, these persons must have completed graduate (Bac+5) studies in sciences (engineering) or higher, and must have at least short professional experience. The completed studies or professional experience must be in the field of food sciences (food biochemistry, applied microbiology, nutrition and/or food technology). The future trainers should preferably be aged between 25 and 35 years.

We strongly suggest that the recruits should be persons already working (1) in a food industry, (2) in university education, and (3) in a research facility (or "quality bureau"). A total of 25 future trainers should be recruited, if possible in equal proportions. It would be advisable to limit to four (4) the number of ministry officials (involved in food-related activities, e.g., vet, nutritionist, and agronomist, microbiologist), as they are unlikely to be able or willing to carry out "secondary" training. School teachers and members of NGO associations are indeed authorized to teach and/or transmit information, but generally not at the level or in the field concerned by this activity.

The future trainers must undertake in writing to dispense at least two secondary training courses in the 18 months following their own training. Naturally, trainers from industry will be able to give their training in their own enterprises, whilst those from universities or research and quality bureaux will have to give their training mainly to heads of other SMEs and VSEs.

The Organizing and Follow-up Team will choose the potential trainers in keeping with the following guidelines while doing the utmost to further the end objective, which is "secondary" training. It is important for the country's leading "quality bureaux" (AGRO-PME, Kaligénie, Cabinet Conforme Qualité, Paness Conseil) to be able to propose a prospective trainer. It would also be useful for the potential trainers from industry who meet the stated criteria to be put forward by professional bodies (GICAM, Syndustricam, AGROCOM…), for they would then be authorized to conduct secondary training programmes in several enterprises (and not just their own). The future trainers will receive a stipend (calculated on the basis of accommodation) for the two weeks of the training of trainers programme. Their travel expenses will also be covered.

3.6 Organization of the training for trainers

The Organizing and Follow-up Team will be required to arrange for all the material needed for this two-week training programme, including reserving, renting or purchasing the meeting room, workshops for practicals, teaching materials, hotel accommodation, meals and coffee breaks. It will prepare the photocopies of the teacher-training materials for circulation to the future trainers.

It would be a very good idea for this training to be organised at the ENSAI in Ngaoundéré (as there are specialised teachers on hand and demonstrations will be possible in pilot plants). If the preference goes to Yaoundé for reasons of proximity, the Polytechnic School could be contacted. Such a location would allow access to suitable teaching facilities at a modest cost. It would be ideal to choose a university vacation period so that the premises could be available for two weeks of courses. The Organizing and Follow-up Team will endeavour to arrange for a demonstration or first-hand account pertaining to "hygiene and quality" in one or two nearby food companies (confidentiality allowing).

The training of trainers should take place within six months of the project launch

3.7 Content and duration of "secondary" training courses

In very close conjunction with the trainers, the Organizing and Follow-up Team would organise some 50 (25 x 2) secondary training courses to take place during the 18 months following the training of trainers.

The Organizing and Follow-up Team, again in coordination with trainers, should first determine the duration, the exact content and the educational tools or documents for a typical "secondary" training course. The duration is likely to be limited to three or four days, as each trainer will in principle be giving the courses alone. There will no doubt be limits to trainees' physical availability and the time they are able to spend in class. Each trainer will therefore be able to pass on only a part of the lessons learned in the training of trainers programme. The trainees could also talk about what they perceive as their shortcomings in the realm of food safety and quality and how they expect to implement the lessons they learn. Such question and answer exercises should make training more convivial and effective, and encourage trainees to speak in public.

The choice of subjects to be taught would be discussed in advance with one or several members of the Organizing and Follow-up Team, perhaps depending on the trainees' professional affiliation (see the next two paragraphs). Incentives to improve food safety and quality must remain a

priority. The (simplified) HACCP approach must underline the importance of precautionary measures and self-inspection.

3.8 Planning, execution and follow up of "secondary" training courses

It would be desirable to organise the roughly 50 training courses at Douala, Yaoundé and Ngaoundéré, and possibly in other major towns as well, depending on the existing SMEs and VSEs, as well as the availability of a classroom and computer hardware (PowerPoint projections).

Again in conjunction with the trainers, the Organizing and Follow-up Team should identify a large number of agri-food SMEs and VSEs (including the informal sector) located in the environs of the major towns, contact their directors or heads, and offer them a course, trainer, as well as a course location and date. It would be necessary for the heads of several SMEs and VSEs the (10-15 at the most) to be able to come together in the same room on the same days to follow a course together. That would have a much more significant multiplier effect than courses given separately within enterprises. The members of the Organizing and Follow-up Team must be aware of the importance of their role of assembling people to the success of the activity, since 50 "secondary" training courses involving 15 enterprises each means that in theory, 750 sites will benefit from a training course. Yet this approach will not affect all the "secondary" training courses, for some trainers from "industry" will only be able to provide training in their own enterprises.

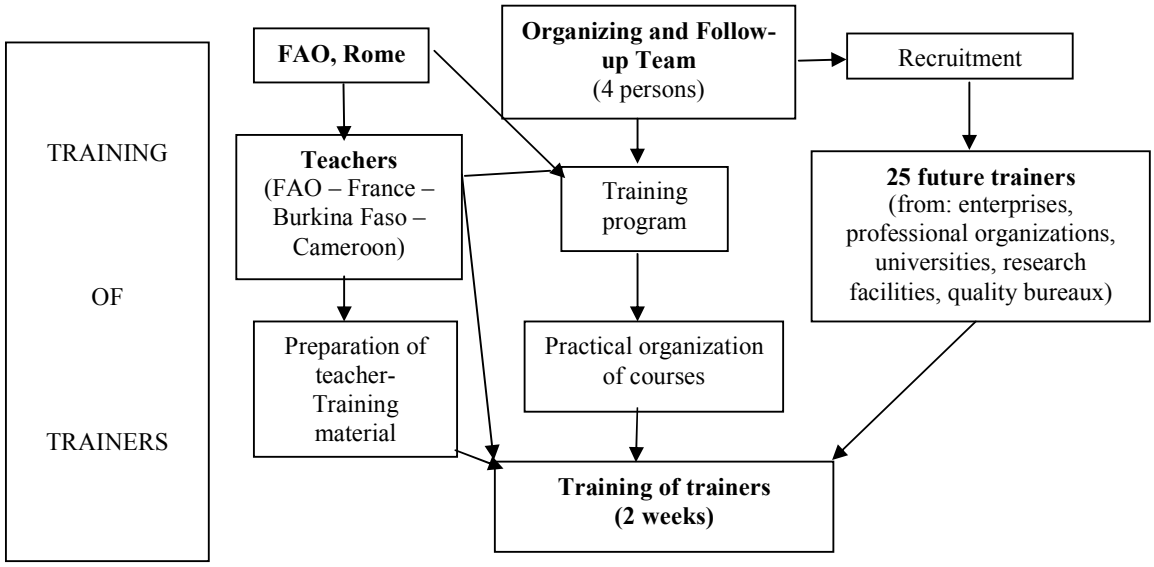
Those invited as trainees to these "secondary" courses, should include heads of school and university canteens, agents from the Customs Department, heads of supermarkets or distribution chains (such as Congelcam), and perhaps some heads of major hotels and restaurants. The Organizing and Follow-up Team must decide whether it is desirable for agents from the public inspection services (e.g. slaughterhouse inspectors, municipal officers responsible for organizing the major urban markets, etc., to be invited to these training courses. One important principle inspiring the choice of priority sectors, enterprises or entities for the training courses, should be the level of potential danger to food safety.

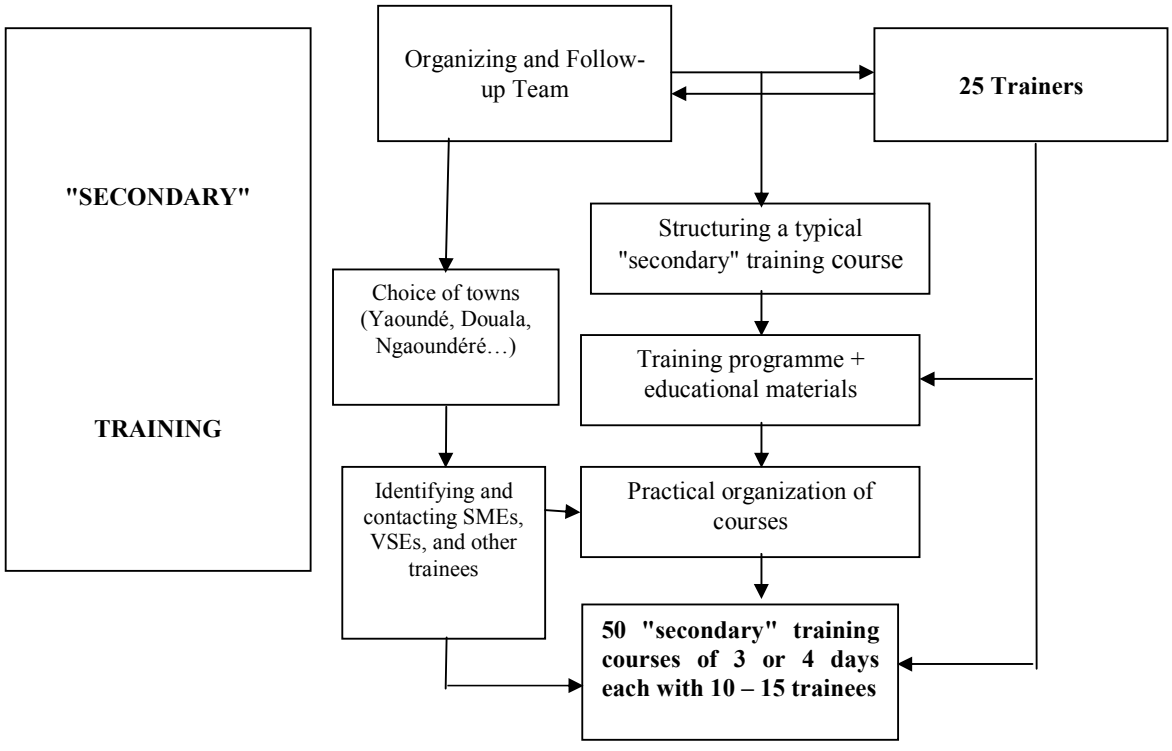
The project will finance these secondary training courses on a case-by-case basis. Any travel and accommodation expenses incurred by the trainer will be covered. Trainers will receive a lump sum corresponding to three or four days of teaching. Any expenses incurred for the rental of classrooms or computer hardware as well as the cost of meals or coffee breaks must be borne by the SMEs and VSEs receiving the "secondary training". When the trainers run courses at their own company, the latter will bear all expenses.

A member of the Organizing and Follow-up Team must verify in situ that each "secondary" training course is being run under proper conditions, make a list of trainees, and gather their opinions in writing concerning the quality of the course. Any travel and accommodation expenses incurred by that member of the Organizing and Follow-up Team will also be reimbursed.

It will nevertheless be required that to the extent possible, and to avoid unnecessary expenses, a secondary training course taking place in a given city is conducted by a trainer also resident in that same city, and under the supervision of a member of the Organizing and Follow-up Team also resident in that city.

Trainers or members of the Organizing and Follow-up Team, must not request additional payments (over and above the cost of renting a classroom and computer hardware) from the heads of SMEs or VSEs for the two "secondary" training courses that each trainer will undertake to carry out during the 18-month period following the training of trainers course.


TRAINING
OF
TRAINERS
FAO, Rome
Organizing and Follow-up Team
(4 persons)
Recruitment
Teachers
(FAO – France – Burkina Faso – Cameroon)
Training program
25 future trainers
(from: enterprises, professional organizations, universities, research facilities, quality bureaux)
Preparation of teacher-Training material
Practical organization of courses
Training of trainers
(2 weeks)


"SECONDARY"
TRAINING
Organizing and Follow-up Team
25 Trainers
Structuring a typical "secondary" training course
Choice of towns (Yaoundé, Douala, Ngaoundéré…)
Training programme + educational materials
Identifying and contacting SMEs, VSEs, and other trainees
Practical organization of courses
50 "secondary" training courses of 3 or 4 days each with 10 – 15 trainees

It is both desirable and certain that the experience gained and contacts made during the two types of training courses will help the trainers thereafter to obtain contracts for fee-paying courses or as consultants.

3.9 Assessment of the effectiveness of the activity by an outside consultant

A Cameroonian, a consultant to the FAO in Yaoudé, in no way linked to the participants in the training courses described above (including the Organizing and Follow-up Team, trainers and SMEs) will be retained for one-month to evaluate the impact of the activity on the basis of objective indicators (number of secondary training courses; number and list of persons having followed the secondary training courses; dispatch of questionnaires to these people and analysis of the replies; on-the-spot training tests at some SMes, etc.). The Consultant will have the benefit of information supplied by the Organizing and Follow-up Team, but must verify them. For that purpose, he will receive a lump-sum payment for one-month of full-time work, as well as travel and accommodation allowances.

3.10 Continuing the activities after the two-year period

After the two-year period of STDF-funded training courses, it would be up to the Government of Cameroon, in conjunction with the National Food Safety and Quality Committee to continue activities to encourage quality improvements. Such activities could take various forms such as: tax incentives for setting up or legalising enterprises, subsidies for some investments, training assistance (through the apprenticeship tax); helping to set up and operate technical centres for food sectors (with a view to structuring those sectors), assisting enterprises in quality assurance initiatives; furnishing information on developments in international food safety and quality standards; encouraging the quality labelling of products; securing procurement contracts for those products; improving the food safety and quality control system; setting up a reference laboratory for food analyses; strengthening consumer protection and information associations.

The enterprises themselves must follow a quality approach, inter alia, by appointing an officer responsible or a team to be responsible for quality, human resource training, risk analysis, precautionary measures, self inspection, implementing the HACCP, traceability, ISO 9001 certification, and so on.

4. Estimated costs, credit management and verification of their use

A Project Implementing and Management Agency will be the FAO Representation in Yaoundé. It will disburse the credits as implementation proceeds, and upon submission of estimates or invoices as well as written proof of implementation of the planned actions.

<u>Cost of the Organizing and Follow-up Team</u>

It is suggested that this team should comprise four Cameroonians who are paid 200,000 CFA francs each per month for 24 months, provided they commit to devoting an average 20 per cent of their working hours to this activity. Their tasks are set out in sections 3.1 to 3.8 above. They could be required to give some classes on the training of trainers programme, and possibly during "secondary" training. Their monthly remuneration must be regarded as a lump-sum to cover all their expenses related to this activity, not including their travel and lodging expenses incurred in connection with the training courses (provided for elsewhere).

200,000 x 4 persons x 24 month = 19,200,000 CFA francs = 29,270 €

Since two members of this team based in Ngaoundéré or Douala are required to attend meetings in Yaoundé, provision must be made for an additional lump-sum of **1,050,000 CFA** francs to cover travel and lodging (15 days).

Cost of the Organization & Follow-up Team = 19,200,000 + 1,050,000 = 20,250,000 CFA francs or 30,871 €.

Cost of the training of trainers course

For a training of trainers course at the ENSAI in Ngaoundéré, the provision of a classroom for 2 weeks (11 days), a room for practicals (in microbiology for example) and food technology workshops for 3 or 4 half-days would cost a maximum of **2,000,000 CFA francs** (technicians and video projection and retro-projection equipment included). The estimated cost of secretariat services and photocopying (to be done at ENSAI) of the teacher-training materials to be delivered to the 25 future trainers at the start of the course could be **300,000 CFA francs**. Purchases of supplies (paper, pencils, transparencies, markers, blackboards…) for the training course are estimated at **500,000 CFA francs**. The total for the ENSAI is therefore **2,800,000 CFA francs = 4269 €.**

The current cost of a round trip for participants from Douala or Yaoundé to Ngaoundéré by coach and/or train is 64,000 to 56,000 CFA francs per person, (sleeping car between Y and N). An average of 60,000 CFA francs x 30 persons (not including foreign teachers) amounts to 1,800,000 CFA francs = 2,744 €.

The estimated cost of hotel accommodation in Ngaoundéré could be 20,000 CFA francs per night x 32 persons x 12 days, **or 7,680,000 CFA francs = 11,708 €.**

With meals costing 13,000 CFA francs per day and per person (breakfast = 3,000; Lunch = 5,000; dinner = 5,000), the figures are 13,000 x 35 persons x 12 days, or **5,460,000 CFA francs = € 8324.**

Two coffee breaks per day (10 h and 16 h) and per person could amount to 1000 CFA francs x 35 persons x 12 days, or **420,000 CFA francs = 640 €.**

The University's coaster bus could be used to transport participants around the city during the course in Ngaoundéré, with gasoline being provided (15litres/100 km at 516 CFA francs a litre), and a wage for the driver (maximum 100,000 CFA francs for the 2 weeks). 20 km per day, as well as a 250 km outing during a week end, or roughly 500 km, would call for some 40,000 CFA francs of gasoline, or a total of **140,000 CFA francs = 213 €**.

Per diem for the 25 future trainers will be 15,000 CFA francs per day and per person, as lodging and meals are already provided for. That is 15,000 x 25 persons x 14 days = **5,250,000 CFA francs = 8004 €**.

The subtotal at this stage is 23,550,000 CFA francs, or 35,902 €.

The cost of foreign teachers must be added, i.e. three persons coming from Europe for example. That cost breaks down as follows:

Paris-Yaoundé round-trip (including Rome–Paris round-trip or Montpellier-Paris round-trip): 1,200 € per person, or **3,600 €**.

Yaoundé – Ngaoundéré round-trip by train (sleeping car): 60,000 CFA francs per person, or 180,000 CFA francs or **274 €**.

The cost of accommodation and food in Ngaoundéré are already covered, but 4 hotel nights must be added per person in Paris and Yaoundé, or roughly 40,000 CFA francs x 4 x 3 = 480,000 CFA francs or **732 €**.

Remuneration for teachers (fees and preparation of educational materials) in the form of a 100 € lump sum per teacher and per day for 14 days, or 100 x 3 persons x 14 days = **4,200 €**. It should be noted that this lump sum is payable to retired European experts, or to co-operating technical experts from developing countries.

The same lump sum may be added for 2 teachers from ENSAI in Ngaoundéré (other than Professor Ndjouenkeu): 100 x 2 persons x 12 days = **2,400 €**.

The subtotal for the participation of 3 foreign teachers + 2 Cameroonians is therefore11,206 €.

The total for the training of trainers is thus 35,902 + 11,206 = 47,108 € (not including Organizing and Follow-up Team).

Cost of "secondary" training

Account must be taken of the fees payable to the 25 trainers for the 2 "secondary" training courses of 3 or 4 days that each one has undertaken to conduct. Making allowance for the time required to prepare the lessons, a lump sum of 300,000 or 400,000 CFA francs could be offered per trainer and per "secondary" training course of 3 or 4 days (i.e. 100,000 CFA francs per day).

This would bring the subtotal to an average of 50 x 350,000 CFA francs, which is 17,500,000 CFA francs or 26,679 €.

To this must be added the cost of the photocopies of the teaching materials that each teacher must make for circulation to the 10-15 trainees in each of his/her 2 "secondary" training courses: 30 000 CFA francs x 45 courses = **1 350 000 CFA francs = 2 058 €.**

In principle, these "secondary" training courses would generate no travel accommodation costs (since the trainers and the members of the Organizing and Follow-up Team will be generally from the same town where each course is held. It is likely however that about one-third of the courses will nevertheless generate such expenses (an average of 150,000 CFA francs per "secondary" training course of 4 days and per person. Applicable to the trainer and the member of the Organizing and Follow-up Team). This yields an additional cost of 150,000 x 2 persons x 17 courses = **5,100,000 CFA francs or 7,775 €**.

The total for "secondary" training courses given by the trainers would thus be close to 26,679 + 2,058 + 7,775 = 36,512 €.

Cost of evaluation the activity by an outside consultant

One month's full time work by a Cameroonian consultant, which is **1,500,000 CFA francs or 2,287 €** plus accommodation expenses (including meals): 10 days at CFA francs/day, i.e. 40,000 CFA francs or 610 € plus cost of travel to Ngaoundéré, Douala and two other cities: **75,000 CFA francs or 115 €.**

The total for this evaluation is therefore 2,287 + 610 + 115 = **3,012 €.**

Total cost of Activity No. 2: 30 871 + 47 108 + 36 512 + 3 012 = 117 503 € or approx. US$143.355.

COST OF ACTIVITIES Nos. 1 + 2

= 102 847 + 117 503 = 220 350 € or approx. US$268.827

Provisions for contingencies(10 pour cent) = 22,035 € or roughly US$26.883

Subtotal = 220 350 + 22 035 = 242 385 € or about US$295,710

Management costs (13 pour cent) = 31 510 € or about US$ 38,442

The management costs would be distributed as follows: 4.5 pour cent for the STDF and 8.5 pour cent for the FAO Representation in Yaoundé, which will be the project's Implementing and Management Agency

Total = 242 385 + 31 510 = 273 895 € or roughly US$334,152.

Activity No. 3

Conditional assistance to the Hydrac Laboratory in Douala for partially equipping a laboratory for the analysis of pesticide residues in food

1. Current situation

1.1 Risks associated with the use of pesticides

As in many other developing countries, the use of phytosanitary products in the cultivation of mainly fruit and vegetables is causing critical problems in Cameroon, both to public health (direct exposure of some population groups, contamination of food products), as well as to surface water and shallow water tables. The problems are also impacting exports to the European Union, which since 2001 has set maximum residue limits (MRLs), at times equal to the detection threshold for some products, with full application of those limits as of 2005.

The large banana plantations have been able to resolve their export problems, since pesticides used before harvesting hardly make their way into the fruit, and the fungicide used after harvesting is easy to control. Pineapple exporters have also managed to bring together small producers and to educate them about replacing some prohibited pesticides with others, and respecting the MRLs. The requisite testing is done in Europe, generally paid for by the producers and exporters. Yet some problems persist, affecting other fruit and vegetables. We may mention imports of fraudulent formulations of prohibited and dangerous pesticides (often from Nigeria or Ghana), the use (if we are not mistaken) of organophosphates and carbamates that are cheaper than organochlorine compounds, application during the rainy season, failure to observe prescribed time frames between application and harvest, (especially on cultivations where tomatoes are alternated with vegetables), the use of obsolete equipment with damaged nozzles that result in the application of excessive amounts of pesticides, the deplorable conditions under which pesticides are stored - at times in punctured containers, the re-use of some containers for storing palm oil, etc. Campaigns have been run to impart training (mostly to trainers), build awareness, and improve the equipment used, but amongst the 9 million rural farmers (60 per cent being small farmers), few are aware of the problem of pesticides. And yet it is highly likely that the environment has already been affected (impacts on rivers, fish, spring water, etc), in addition to the direct impact on farmers and consumers. Yet because of the lack of analytical facilities and some indifference on the part of the authorities (except with respect to exports, when whole batches are rejected in Europe, and lost), these effects have not been properly gauged.

These problems do not affect all crops, and tubers in particular. Pesticides are much less used in remote rural areas. In contrast, farmers located in peri-urban areas often misuse them, thereby also polluting drinking water.

1.2 Setting up a pesticide analysis laboratory.

Creating a laboratory to analyse pesticide residues in food products of plant origin and in water is therefore of the highest priority. It would also be useful to create another laboratory dedicated to (analytical) control of the quality of pesticide formulations, but its level of priority is perhaps lower. These two laboratories should be at some distance from one another so that the second does not contaminate the first. In practice, the analytical equipment required from these two laboratories should be different. There are currently no facilities for pesticide analysis in Cameroon or in any other CEMAC country. This Activity concerns only the analysis of pesticide residues in food (and water).

Many existing laboratories have been considered as the possible venue for a pesticide analysis laboratory. The Pasteur Centre in Yaounde, which is very active in microbiological testing (including food), wishes to conduct a study, in conjunction with WHO in Geneva, into the exposure of the population to pesticides (via the "overall diet"). A report drafted by a German consultant (R. Thiel, commissioned by GTZ) in December 2001 suggested that the Lanacome Laboratory (attached to the Ministry of Health in Yaounde and responsible for analysing medicines before they are released onto the market) could be fitted out supplementary equipment for quality controls of pesticide formulations so as to approve them. The Djombé-based CARBAP, the inter-African centre for genetic, agronomic and phytosanitary research on the banana and plantain, supported by CIRAD, has a good laboratory and staff specialist in phytopathology, but is not authorized to set up a pesticide analysis laboratory.

1.3 The Hydrac Laboratory

It is the Hydrac Laboratory in Douala - a para-state structure specialising in petroleum product analysis and technical controls for the past 10 years - that has been selected by the Ministry of Agriculture as the preferred location for the pesticide analysis laboratory. Apart from physico-chemical analyses of petroleum products and various technical controls and inspections (including non-destructive inspections using radio isotopes, ultrasound, magnet and foucault currents), Hydrac currently analyses water: SNEC water; mineral and spring water; borehole water (as requested). This water testing is microbiological only, though physico-chemical is done on an ad hoc basis only. Yet Hydrac's microbiological equipment is currently rather rudimentary. At present the laboratory has no facilities for chemical, physico-chemical or biochemical food testing. Yet Hydrac is also submitting a project for physico-chemical and microbiological testing of products of animal origin (meat products, dairy products, fish) and of flours, which seems nowhere near realisation, and which is not being coordinated with an almost identical and hence competing project submitted by the laboratory of the Ministry of Livestock also in Douala!

Hydrac would seem a good candidate for chemical pesticides testing of fruit and vegetables destined principally for Europe, and incidentally of water. Indeed, as Hydra's manager and senior officials point out, it is located near to the places where horticultural products are grown and near to the port of Douala, which is the main point of departure for exports (from Cameroon and some CEMAC countries). Moreover, the Customs Department, as well as most of the country's agri-food industries are a located in Douala. Since 2004, Hydrac has been pursuing quality assurance with a view to ISO 9001-2000 certification at the end of 2005, and ISO 17025 accreditation by COFRAC at the end of 2006. Hydrac operates as a private company that is self-financed by its technical testing and controls. It currently has 98 employees, including 41 managerial and 27 supervisory staff. It is therefore a functional structure with a stable staff complement, and has managed to solve both its administrative and maintenance problems, is geared to industry and is able to service the demand.

1.4 Estimated cost of the pesticides laboratory and fund raising

Hydrac has worked out the estimated cost of setting up a laboratory to test for pesticide residues in food. The project has had the benefit of a study by a GTZ consultant already mentioned, as well as two evaluations by French experts. It is being coordinated with an application from the Inter-African Phytosanitary Council (IPC), which is in turn supported by the CEMAC countries. CPI and CEMAC agree on locating the pesticide analysis laboratory at Hydrac, with sub-agencies in the other CEMAC countries to collect and perhaps extract samples for analysis (as the transportation of fresh samples is a major challenge).

Cost of creating this laboratory is 2-3 million euros. **This covers (1) installing suitable premises in an existing hangar, (2) purchasing analytical equipment and other necessary equipment and chemicals, and (3) personnel training (in part to be recruited)**. The cost of equipment varies between € 200,000 (in 2003) and € 260,000 (in 2002) depending on the consultant,

and € 600,000 according to Hydrac! However, Hydrac has made provision for two sets of analytical equipment with a view to setting up another laboratory for monitoring the quality of commercial pesticide formulations (the German consultant suggested that such a laboratory should be installed at LANACOME in Yaounde, as the transportation of formulations poses no particular problem).

The other possible venues for a pesticide analysis laboratory themselves lack the premises, equipment and specialised staff required.

The question of funding for the Hydrac project is still unclear. The Ministry of Agriculture is believed to have applied for HIPC funding (debt cancellation for highly indebted poor countries) worth 9 billion CFP francs (€ 14 million), approved by a technical committee. But the funds have not been allocated, and Cameroon is still far away from "concluding" negotiations on debt cancellation. It should be noted that requests from the various Ministries perhaps exceed HIPC resources, and that the donors could reallocate these credits (for which provision is made at the BEAC).

The GTZ has clearly stated that it will not be funding a pesticides analysis laboratory at Hydrac as part of its project for the reorientation of the phytosanitary strategy (though it could provide training for one person in Germany or elsewhere). It should be noted that GTZ does not approve extending the project to CEMAC, but believes that a small laboratory should be put into operation (at Hydrac) before administrative superstructures are built.

No specific information or precise figures have been given for the other types of assistance mentioned by various other dialogue partners (Austria for equipment, France, from CIRAD for training, CEMAC member States, companies producing phytosanitary products, and the International Atomic Energy Agency. Nor has any figure been put on Hydrac's commitment to contribute to construction and equipment costs from its own funds.

Lastly, a telephone consultation with the **EU-funded COLEACP/PIP (Pesticide Initiative Programme)**, on 30 June 2005 in Brussels confirmed the content of agreements in principle reached in January 2005 with the Directors of Hydrac and CPI, to the effect that: (1) **PIP could finance the training of staff for the future laboratory, provided that the buildings meet the standards set for that type of structure and that the equipment is in place**. PIP has asked that these pre-conditions be met within one year at the most; (2) PIP has also requested that Hydrac, in cooperation with CPI, should submit a request to the European Union Delegation in Yaounde for the funding of a feasibility mission on in the next three months that would help bring the required buildings and equipment into conformity as well as assist the PIP in identifying the type of human resources to be trained; (3) besides, the Hydrac General Manager of has made a commitment to PIP to arrange for some part of the cost of construction and laboratory equipment to be met from HIPC funds allocated to the Cameroonian Ministry of Industrial Development; (4) the European Union would provide complementary funding for the laboratory equipment (but this in no way binds PIP, which funds training only).

It should be noted that on 22 June 2005, the head of the Rural Development Division of the European Union Delegation in Yaounde was apparently unaware of the request mentioned in Section 2 above. The same was true of the PIP representative in Brussels on 30 June.

Neither has any precise figure been given for the operating budget future pesticides analysis laboratory, as it is difficult to assess future demand for testing.

1.5 Another Hydrac request

With these problems in mind, the Hydrac Director of laboratory analysis submitted a request to us on 24 June in Yaounde (at the end-of-mission meeting) for funding not directly related to the laboratory for pesticide analysis, confirming that request by e-mail on 27 June stating: "examine the possibility of **certifying Cameroonian laboratory auditors so that we can have experts capable of conducting the evaluations to accredit laboratories under the ISO 17025 standard**. This could be considered as a quality assurance incentive. Indeed, having experts capable of undertaking evaluations, invested with recognised authority and credibility to make the relevant recommendations about quality would give laboratories a critically important vehicle for aligning themselves with the standards, and so confirm their efficiency and competitiveness. Such certification is also a way of embracing and generalising accreditation, thereby opening up this niche that many laboratory heads still perceive as a utopia or a fad in the West. It would significantly reduce the cost of outside auditors (non-Cameroonian, generally European or American), which is regarded as prohibitive and a disincentive to engaging in the process of bringing laboratories into conformity)".

One may well wonder to what extent auditors certified for a laboratory for testing petroleum products could facilitate the subsequent accreditation of a facility for analysing pesticide residues. Besides, it would seem at an audit and accreditation body has already been created in Burkina Faso with PIP support (contact: Beer.Budoo@UEMOA.int <mailto:Beer.Budoo@UEMOA.int>), which would reduce the cost of an accreditation in Cameroon.

We requested **the opinion of the Quality Engineer at CIRAD in Montpellier** on this request. His reply was the following:

"Regarding this substance, the Hydrac Director is right, in that it is much wiser (in technical and economic terms) to call on local expertise rather than bring experts from North America or Europe. As to form, a distinction should perhaps be drawn between two groups: consultants, and accreditation auditors:

- in the case of **quality consultants**, who are persons capable of giving advice (as well as training, or conducting dry-run audits) on the implementation of ISO 17025, there is no best endeavour obligation. They may be persons who have learned in the field or may have completed five cycles of 2-week courses. Almost anyone can declare himself a consultant, and that is the real problem.

If a pool of Cameroonian quality consultants is to be set up with competence in ISO 17025 and therefore capable of effectively assisting laboratories wishing to launch such an endeavour, it would be necessary to determine the profile, initial skills and experience required, the methods of verification/validation of those skills, the type of training if necessary, and lastly, how to maintain those skills. Training in ISO 17025 would cost some € 1000 per day if it is given by facilities such as Apave or Bureau Veritas. CIRAD is capable of offering such training. An ISO 17025 training course could be completed in three days, but would that training make the identified candidates into good consultants?

- as far as **accreditation auditors** are concerned, in France (COFRAC), in Europe and within the member countries of the International Accreditation Forum (IAF), there are rules governing the qualification of auditors. Only auditors qualified under those rules may grant ISO 17025 accreditation to laboratories following an audit and an opinion by the accreditation committee.

The problem is that there is perhaps no accreditation committee in Cameroon, or if there is one, it is not currently recognised by IAF, which in terms of credibility, amounts to roughly the same

thing. If Cameroon does need such a structure (IAF-accredited Cameroonian accreditation committee), consideration could be give to training those auditors in France at COFRAC (which would have to be contacted regarding the feasibility and cost of such training). It should be noted that the training leads to a qualification. Information would have to be obtained concerning the success rate, but for certification auditors, that rate is no more than 20 per cent."

Despite European Union demands regarding accredited laboratories (with a view to exports), we believe that no funding should be granted in response to the request for the certification of laboratory auditors until after such laboratories have been set up. Many consultants have already given their opinion concerning the organization of the pesticide analysis laboratory. It should now be created.

2. Objectives

The preceding detailed survey shows that since 2001, the Hydrac Laboratory has spent none of its own funds on fitting out specific premises, in other words on the first indispensable step toward creating a laboratory for pesticide residues analysis. Neither has it reduced its estimated expenditure, for example by spacing out in time the creation of the second laboratory for monitoring pesticide formulations.

Obviously, any (necessarily modest) STDF aid would be premature for a project on this scale, since not even the walls of future laboratory have as yet been put up.

Yet, because the needs are so pressing, it is suggested that the STDF should provide for conditional assistance to be disbursed only **on condition that Hydrac uses its own funds to build appropriate premises within one year as of July 2005**.

The suitability of those premises for housing a laboratory to analyse pesticide residues in food would have to be verified by an independent expert. The power supply and the supply of purified water must be guaranteed at all times.

STDF aid would therefore go toward the partial funding of the laboratory equipment (e.g. gas chromatographs with appropriate detectors). However, the laboratory equipment calls for a minimum of € 300,000-400,000 according to various expert reports (revalued to allow for inflation) and will also require Hydrac to have counterpart funds to purchase all the equipment required (other analytical equipment, especially HPLC, hydrogen and nitrogen generators, material for preparing and extracting samples, scales, glassware, evaporators, refrigerators, freezers, basic chemicals, as well as reference chemicals).

The members of the National Commission for the Approval of Pesticides as well as the Inter-African Phytosanitary Council and the Pasteur Centre could become involved in this Activity No. 3. It will also be necessary to put in place a permanent watch to assure the maintenance of an up-to-date national and EU MRL (Maximum Residue Limits) database (prohibited pesticides, authorized pesticides and pesticides notified in the 25 EU Countries).

3. Amount of the conditional STDF aid to the Hydrac Laboratory

Subject to the conditions laid out in Chapter 2 above, aid could be provided for some of the analytical equipment needed for the pesticide analysis laboratory (Activity No. 3) **amounting to € 125,000, or some US$ 152,500.**

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