Legal and financial aspects

1. OBLIGATIONS RELATED TO MINE CLEARANCE IN PEACE-TIME

PROTECTION OF THE ENVIRONMENT

In war time, the objective of mine clearance is often to guarantee the success of some military manoeuvre rather than preserve human lives. Detected mines must be disarmed, moved out of the field and stored for further military use. In such a context, casualties are considered «acceptable»

In peacetime however, the occurrence of casualties, usually in the course of humanitarian operations, is no longer tolerable. Mines must be detected and then destroyed so as to render any further use impossible. The objective here is quite simple, it consists in saving a maximum of lives, in limiting the number of injured and disabled individuals, in giving the local populations one more chance for development. The various measures involved should be implemented with great consideration for the environment and the safety of the individuals, whether inhabitants or deminers. In fact, mine clearance should not contribute any further problems for the villagers such as extensive pollution (destroying explosives generates emissions of toxic fumes) or disabling of equipment, houses, roads, bridges...

In all cases, it is essential that the deminers take care of the damage caused by the destruction of explosives, particularly on roads and paths.

Finally, considering the fact that thorough mine clearance can not be achieved in any region, there will remain some prohibited areas where humans will have no access and that are bound to revert to the wild state, thus making it even tougher to clear them when the time comes.

OBLIGATIONS AND QUALITY CONTROL

Obligation in terms of achievements. Mine action programs impose on the project managers some obligations in terms of achievement. The efficacy of the measures taken should translate into the absence of casualties in so-called safe areas. This is all the more important that the villagers' confidence usually means a weaker watchfulness on their part. «Approximate» mine clearance then becomes a trap in itself, due to a **false sense of safety.**

The difficulty inherent to mine detection and the random characteristic of their scattering makes it impossible to guarantee full success.

Moreover, the awkward or evil-meant interventions of the individuals should also be taken into account

- a villager might want to save some overlooked mines so as to protect himself and his cattle. Dangerous daily handling will cause an accident sooner or later which will be attributed to lousy conduction of mine clearance operation.
- a combatant, in a country such as Cambodia where peace is still frail, might lay more mines after completion of mine clearance operations, so as to maintain an insecure atmosphere, and to call into question the quality of mine clearance and, as a consequence, the quality of foreign assistance.

In such conditions, it appears as quite difficult to implicate the deminer when casualties do occur. Quality control, usually imposed by the sponsors, does not provide any guarantee. DHA (United Nations) defines and demands a very high quality level in its contracts 99.6 %. This figure is arbitrary and it sets the tolerance threshold for properly completed mine clearance

In actuality, this high threshold renders control impossible, as in theory, to achieve this level, the controller would need to inspect a sample zone where 1000 metal objects had been detected and removed, and he would still need to find four of them at the most.

As regards mine clearance, there cannot be any contractual obligation in terms of achievement, as is the case in transportation contracts for example. In fact, in order to meet the requirement for zero casualty after completion of mine clearance, three conditions should be met:

- **maintain a high level of prevention consciousness** within the populations who were informed about the danger and sometimes even, which might be advisable, make them participate in mine clearance operations
- **guarantee appropriate sign posting** around areas which have not yet been cleared
- ensure that the mine clearance operators perform their work with **professionalism**, competence and efficacy.

From this point of view, it seems more satisfactory to substitute the notion of obligation of means for the obligation of results.

Obligations in terms of means: in medical practice as a rule, the responsibility of the physician is not implicated as non-observance of some obligation of achievement. The physician is not required to achieve recovery but only to implement all the means he has available, in accordance with the most up-to-date scientific data. One justification for this principle that medicine is not considered an «exact science», and its successes and failures are both due for a great part to factors not accessible to the physician.

Although the comparison should not be too deep, the deminer is in a somewhat similar situation: he is always **responsible for his actions**, but **not necessarily for their outcome.**

The efficacy of mine clearance is in direct relation to the quality of the human, material and organizational means used. Discipline, observance of the rules, professionalism of the participants, their conditions of work, of life and of rest, their financial and material satisfaction, the assurance that in case of a casualty, all possible means will be implemented to rescue them, are all the guaranties for the success of the program

To these should be added the **quality of integration** of the deminers into the population, which not only guarantees the establishment of a secure climate but also mutual understanding, a factor that will help **maintain safety and vigilance** after the departure of the mine clearance agents

The quality control therefore consists here in assessing the means implemented The permanent presence on the ground or even the unexpected visit of an **independent expert** will provide a more reliable evaluation than any control of the achievements, if it examines:

- the quality of the equipment
- the competence of the personnel
- the quality of the demining techniques
- the keeping of the various diaries (daily log, monthly report, end of operations report...)
- the organization of safety squads
- the quality of hierarchical relations and of supervision in the field
- operational and logistic organization
- .

An important point to underline is that the enterprises considered the **most successful in terms of results are those with the fewest casualties happening to deminers.** This concept should be taken into account as a selection criterion for a mine clearance NGO or company. In any case, the controller should be selected based on strict criteria such as competence and professional independence. His contract shall be contersigned by the representative of the beneficiary State (National Mine Action Coordinating Structure). The appreciation of these specialists will be of the utmost relevance upon acceptance of the work done, which sets the time at which the State takes over responsibility for the casualties occuring in the area.

Control indicators:

All mines are not equal in terms of damaging potency, and it is very difficult to estimate beforehand the quantitative result of mine clearance operations using destruction of mines and unexploded ammunitions (by definition, this figure is unknown). This is the reason why it does not seem appropriate to include quantitative concepts among the clauses of any contract. The progression of a mine clearance worksite may be badly delayed by the presence of many metal pieces which, although harmless, will systematically need to be handled with as much precaution as actual explosive ordnance. On the other hand, the access to a several-mile-long road might be prohibited due to only a few mines that give the impression of some extensive pollution. Removal and destruction of those mines may present some economic benefit not comparable to the cost of the work performed by the deminers.

Discussed above were the criteria used as a basis for quality control, depending on whether you are most concerned with achievements or with means. Although quality control remains a essential tool to assess the efficacy of a mine clearance program, the quantitative aspects should not be overlooked, even though the detection of a mere 100 000 mines appears as negligible as compared to the number of mines laid within the same period of time, well over 2 millions. The assessment of the productivity of mine action and especially of mine-clearing operations should solely be based on the number of lives saved, the number of casualties avoided and the total areas returned to normal conditions.

THE OBLIGATION OF RESERVE

In peacetime, a mine clearance worksite is similar to a humanitarian operation, or even a humanitarian public health operation. The true purpose of mine action is not, per se, to remove mines, but to save human lives. From an ethical point of view, peacetime mine clearance is therefore bound to the same rules in terms of neutrality, impartiality and reserve as those ruling humanitarian enterprises with the sole purpose to keep them from being manipulated by such or such faction. The populations should be the main beneficiaries of mine clearing operations, particularly in more remote and underprivileged areas. Mine clearance is a tool for peace, an essential preliminary condition for the implementation of development policies. The future of the whole country is concerned and therefore mine clearance should not be at stake in terms of power

Therefore, the deminers are bound by obligations of absolute political reserve. Their only relationships with the delegates of public authorities and with local chiefs, either institutional or not, should be strictly limited to the technical and humanitarian aspects inherent to their mission. Their behavior should no be the expression of any partial preference or give rise to interpretations, rumors or manipulation. Most frequently, this problem arises when indigenous deminers or assistants are being recruited. As the providers of well-paid local employment, mine clearance operators are extensively called upon.

These appeals however should not significantly alter the criteria for selection which are.

- how representative of the former combatants are the candidates
- the technical competence of the candidates
- their ability to acquire initial or complementary professional qualifications
- their sense of discipline and rigour

The presence of medical staff in the field should be utilized to take on voluntary assistance and health care missions for the benefit of the populations, possibly recruiting local health care assistants in some cases, while still being careful not to display any derogatory attitude.

However, the obligation of reserve has its limits, both for the deminers and for the volunteers of the humanitarian action and the doctors. The deminer often embodies (actually, always does in the case of a peace keeping program) a political will towards international safety. His obligation to testify may then , in some circumstances, stand against his obligation of reserve when he becomes aware of acts that jeopardise the safety of individuals, the Law and Human Rights. Finally, it is quite obvious that the project managers should consider the safety of their personnel in the field as their first priority, even though this should mean delaying or interrupting the course of a program.

A SPECIFIC MEDICAL STRUCTURE

On an average, one mine action casualty occurs every 1000 mines, one serious casualty every 2000 mines, and one fatality every 4 to 5000 mines. This highlights the necessity of medical support of mine clearing operations. This support was long overlooked, as if casualties were unavoidable and health care ineffective. It is true that in war, the victim of a mine is most of the time doomed, due to the other risks of war, to the insufficiency or late arrival of health care on the front, of the slowness of evacuation to the civilian zone. In peace time, the situation is different and appropriate medical support can be established and implemented

Medical support. It consists of one physician, and several nurses more or less numerous depending on the number of worksites and on the means of evacuation

One nurse is assigned to each section or each worksite, and he is in charge of emergency health care. There should be as many nurses as operating worksites. The physician has the power over the whole plan of action related to the location of the worksite. He must be present throughout the working periods and possess a good experience in surgery. His main mission consists in sustaining the vital functions of the victim and getting him / her ready for evacuation. When the worksites are operating, he should always have a fast mean of evacuation available (ambulance, helicopter, aircraft...).

Chances of survival depend for a great part on the time it takes to reach the hospital: the maximum chances are guaranteed for interventions completed within less than 6 hours. The hospital should be equipped with the necessary surgical means and material to permit effective intervention within the shortest possible time.

The task of the physician then consists in considering the various local alternatives to combine **swiftness of evacuation with quality of medical care.**

Several hospitals should have been examined in advance with regards to their intervention capacity. They should be reachable by radio. Administrative procedures should be set beforehand in the form of conventions to avoid administrative issues delaying admission of the patients to the hospital. In some cases, sanitary evacuations will be necessary on long distances (ex.: Johannesburg in Angola).

Evolution of the number of mine clearance casualties since 1990 (in Afghanistan).

YEAR	1990	1991	1992	1993	1994	1995 (6 mths)
Total number of operators	500	1 500	1 800	2 100	2 800	2 800
Number of operators killed	2	10	11	6	10	2
Number of blind or amputated operators	6	6	27	31	25	9
Number of operators slightly injured	15	2	15	20	16	18

(From. UNOCHA Mine Clearance Programme)

LIABILITIES AND INSURANCE

Insurance coverage for mine clearing operations in peace time is a specific legal domain not provided for by the industrial legislation or the Jurisprudence. Three types of risks are to be considered: casualties concerning the deminers, casualties concerning outsiders on a worksite, and finally casualties that could occur due to unexploded mines and other ordnance on a site that had been depolluted and classified as «safe».

Legal international principles impose the project manager with the obligation, whichever his status might be, to take on the responsibility of the damage caused by his activity, with regards to both work-rela-

ted accidents and to accidents to outsiders (civil liability) By no means could a sponsor (such as the European Commission) be implicated. As for accidents that could occur in so-called cleared zones, the beneficiary State will have to take on the legal repair of the accident as soon as they have acknowledged completion of the work in compliance with the national mine action program.

INSURANCE AND SOCIAL SECURITY COVER OF THE DEMINERS

The company or NGO executing a mine clearance contract should then be particularly cautious about properly insuring their operators and their activity. Mine clearance is not a common job, and industrial injuries, when they are not fatal, are usually very seriously disabling. In Kuwait, where 7 million mines had been laid during Gulf War, 84 experts from the mine clearance squads were killed or injured. At least 41 persons died in the course of mine clearing operations performed by the UN in Afghanistan between 1990 and 1995.

This underlines the necessity to draw all attention to the social security cover of a demining operator. **Expatriates** face even higher risks of death or injury during the course of their missions. It would be unfair to expose them to such risks without appropriate insurance or to send them back to the care of the social institutions of their home countries. Generally this problem is solved by specific contracts offered by the main western insurance companies. However the problem is not always taken care of for expatriates from countries outside of the western world, and whose situation is similar to that of **mercenaries**.
This is the case of professional demining operators from India or Pakistan Furthermore, the policies offered to demining personnels remain very uncertain. It is quite common to see companies or NGO's «skip over» these specific risks and restrict their coverage to civil liability for damage caused to third parties. Some hiring contracts for **local demining agents** provide for compensations in case of casualties resulting in total or partial disabilities, either temporary or permanent. Evaluation of these guaranties and therefore, of the allowances, is left to the care of local laws and is sometimes «phoney».

MINIMAL DUE GUARANTIES:

The insurance should cover:
• **all health- and surgery-related expenses,** evacuations towards the hospital agreed upon in the safety plan of action, evacuations towards more distant structures and if necessary, repatriation towards the home country.

• **death- and disability-capitals** (loss of the eyes, of a limb...), determined according to the criteria in use in western countries for the expatriates and those of the beneficiary State for local operators.

• **a disability pension** for total temporary disabilities, equal to 75 % of the gross weekly wages, for a duration of up to 104 weeks.

TOTAL AMOUNT OF THE PREMIUMS

• for an expatriated demining operator actually working in the field in mine and ammunition detection and destruction, a specialized insurance offers a guarantee in the form of a 150,000 ECUs allowance, a medical-surgical-evacuation guaranty of 250,000 ECUs as well as a 280 ECUs weekly pension for 104 weeks, for an annual premium of 7,500 ECUs.

• for the same level of guaranty, the annual cost of the premium for an expert supervising mine clearing operations with no personal risk goes down to 4,500 ECUs. This example was provided by a British company who employs many mine clearance specialists of Indian origin. Obviously, the amount of the allowances and pensions may be higher or lower, with the annual premium varying in proportion It also varies depending on the number of insured people, as it is relatively more costly to insure one single person, for example an expert-controller, than a full team.

• another European commercial company offers a 5,000 ECUs premium for a one-year guaranty for demining experts working in the field in a treacherous situation.

Insurance of mine clearance operations should be subjected to a specific codification which does not exist yet and which could derive from the positions taken by the most reliable intervenors. In this kind of activity, all different aspects of the fight should be taken into consideration, each presenting a specific level of danger Before this normalization is achieved, it appears as necessary to make sure that the sponsors, as they have a moral responsibility, request by contract that the demining organizations provide the best possible insurance to the operators, no matter what their origin might be.
The amount of the premium in this insurance will be clearly indicated in the contract proposal The ideal would be for the International Industrial Bureau to consider this issue and give recommendations with regards to working conditions, insurance and social security cover.

2. ORIGINS AND STRUCTURE OF FINANCING

THE COSTS

The cost of mine clearance is huge. According to international experts, the cost for identification and destruction of one mine is between $ 300 and $ 1,000 The **United Nations Organization** estimates the destruction of all mines strewn on the face of the Earth to be close to $ 33 billions. Moreover, a program this ambitious would take ages to be completed.
Removal of 84,000 mines, which is the total of all mine clearing operations in 1994 cost the International Community $ 80 million. The estimates of the United Nations for mine clearance is $ 70 million per year, to maintain approximately 5 000 demining operators in the field. If new projects are taken into account, the total could reach up to $ 100 million. With regards to the Angola program itself, $ 12 million will be necessary for the creation of the mine clearance school and execution of mine clearing operations by local operators for a period of 18 months. Obviously this will not be sufficient to provide support to the country until it reaches its full autonomy

The cost of mine clearance includes the expenses related to supervision, training, equipment, communication, medical support and insurance. Today we have sufficient experience to look back onto and estimate the cost of some operations.
- clearing one square meter of roadway costs approximately $ 1
- clearing one km of electric line costs approximately $ 1,000
- clearing one hectare of ground costs approximately $ 2,000
- a single program such as the Afghan program requires 3,000 operators and costs approximately $ 25 million per year
- training of a demining operator costs approximately $ 6,000
- as for damages, the average cost of an amputated individual (care plus prostheses) ranges from $ 3,000 to $ 5,000, depending on the country, to which should be added the loss of productivity of the disabled individual, as well as the cost for his reintegration or assistance

Cost of the various components of the worksite:
The contracts of the E.C. set the amounts of the compensations for the various types of personnel.
- for a three-month mission, an expatriated explosive expert and co-ordinator is compensated on the basis of 6,000 ECUs per month; for an expatriated project manager. 5,500 ECUs; for an expatriated operator. 4,500 ECUs.
- The budget allocated to land transportation (rental and maintenance of vehicles) is calculated based on rental rates ranging from 3,000 and 4,000 ECUs per month (Mozambique).
- The air transportation service for EVASAN amounts to 7,000 ECUs per month and corresponds to an aircraft remaining on duty during periods of operations of the worksites.
- To these budget items should be added all the means of detection, of mine clearance, of telecommunication and logistics, estimated overall to 12,000 ECUs per month and per team.

The cost of mechanical mine clearance:
The following example was provided by Colonel Focsaneanu (CMAC) in order to compare the economic advantages of mechanical mine clearance. He compares the costs incurred for clearance of 100 sq. Km.
- if performed by 40 squads of 30 operators each:
$ 70 million, duration: 10 years
- if performed by 40 squads and 4 flail machines·
$ 26.5 million, duration: 3 years.

SOURCES OF FINANCING

THE UNITED NATIONS

Whether humanitarian operations, peacekeeping operations or restoration of the infrastructures of a country, the mine action programs financed by the UN are executed either by NGO's, or by private commercial in response to offers to tender. A number of organizations linked to the UN participate directly in mine clearing operations and related activities. UNICEF, UNHCR, PAM, PNUD and WHO have been active in emergency mine action, particularly with regards to the critical area of public information
Funds usually stem from appeals to donor countries. In the past, UNO arranged programs in Mozambique, in Afghanistan, in Cambodia, and in Angola. Besides, the Organization will provide assistance to Ruanda, Georgia, Chad and former Yugoslavia within the next 12 months.
Implementation of these programs will require financial means in excess of $ 65-70 million.
In July 1995, an international conference organized by the UNO in Geneva was dedicated to the issue of mine action. The secretary-general estimated the immediate needs corresponding to the commitment of member states to amount to $ 87 million. He requested that they gathered the necessary resources to replenish the Voluntary Trust Fund for Assistance in Mine Clearance created in 1994 This fund, with a current balance of $ 21.6 million, includes a $ 7 million fund allocated to emergency operations and thus immediately available.

THE EUROPEAN COMMUNITY

The European Community became involved as soon as 1992 in financing emergency mine clearing operations, then from 1994 on, into depollution operations related to rehabilitation and development programs. The EC was the main donor in the Afghan program which concerns priority zones vital to the economic rehabilitation of the country. Most of the time, European financings are the ones that permit implementation of the UN programs. Since 1992, the EC has made huge sums available for mine clearance programs, for a total of approximately 30 million ECUs (approximately $ 42 million).

FINANCING OF MINE CLEARING OPERATIONS BY THE EUROPEAN COMMUNITY SINCE 1992

COUNTRY	PERIOD	AMOUNT IN ECUs	INTERVENOR
Afghanistan	92 to 95	15 million	HALO.DASA. ATC OMA. MCPA
Cambodia	92 to 94	4.8 million	HALO MAG COFRAS*
Iraq	92 to 95	4.9 million	HI MAG
Mozambique	92 to 94	1.9 million	LONRHO
Somalia	92 to 93	0.87 million	MSF (NL)
TOTAL 92 to 95		**27.5 million**	

** whose mine clearance activities were taken over in 1996 by CIDEV.*

Within the scope of the Foreign Policy on Common Security, the European Union adopted on May 12th, 1995 a common decision of action related to antipersonnel mines. This decision provides for a moratorium on the exportation of antipersonnel mines, a common approach for the conferences dedicated to revision of the 1980 Convention (in Vienna in 1995, then in Geneva in 1996), and finally the reinforcement of the action of the Union and its member states in the area of mine clearance. On July 6th, during the Geneva Conference on mine clearance, the (Spanish) Chairman of the Union announced the participation of the Union to the aid funds in excess of 3 million ECU's, as a complement to the participation of the Member States. This sum will be allocated to assistance in the form of «information within the countries concerned, training of mine clearance specialists and instructors (...) or direct participation in mine clearing operations The decision to carry out such specific action shall be subjected, for each **operation**, to approval by the European Union Board.»

The common decision of action adopted on May 12, 1995 enables the Western Europe Union to be called upon as military expert of the European Union in regard to mine clearance.

THE ORGANIZATION OF THE AMERICAN STATES (OAS)

Since the May 23, 1992 resolution regarding various aspects of peace return in the countries of Latin America, many mine clearing operations have been organized in Nicaragua, Honduras, Costa-Rica, Guatemala and El Salvador. These operations were financed by the OAS with direct support form the United States in the training area. During the July 1995 conference on mine clearance held in Geneva, OAS estimated that pursuing the operations in those countries requires financing up to $ 14 million for an ultimate period of time of between 6 months and 2 years, depending on the country.

BILATERAL INTERVENTIONS

Among all bilateral interventions, that of the United States is the most significant. It has been constantly increasing since 1992 via the mine-clearance assistance program and the inter-agency working group for mine and mine clearance control. In 1992, $ 8.4 million were allocated to that purpose via USAID. This allowance almost doubled in 1993, and in 1994 it amounted to $ 17.9 million. It should reach $ 25 million in 1995, among which 20 % allocated to research. The main beneficiaries of this aid were Mozambique, Erithrea, Afghanistan, Namibia, Nicaragua and Cambodia.

The overall effort of the international Community has been estimated to $ 150 million per year on an average for 5 years. This figure is to be compared to the $ 33 billion necessary to definitively solve the problem.

THE POSITION OF THE WORLD BANK

To date, the World Bank has refused to commit financing to mine clearance, because they argued this was a strictly military issue the Bank had nothing to do with. This position has recently changed, especially with the process of peace restoration in Angola and because of the evidence that mine pollution inhibited the execution of any development program. Mine clearance is now considered a phase of ground preparation. Mine clearance also appears as a useful economic activity which offers an opportunity for demobilised soldiers to turn to new types of employment, for the benefit of civilian populations. This kind of demobilization-reconversion operations benefited from financing by the World Bank in the past, in various African countries and in Argentina. However, despite their good will, the World Bank wishes to maintain their freedom of decision so that financing for mine clearance programs will be debated upon for each case independently.

Strategy of the European commission

The role of the **European commission** in the huge humanitarian operation which is the fight against mines on a world-wide basis should be in accordance with the terms of a very clear strategy For this purpose, it is necessary to draw lessons from past experience and use the data at hand to the best. The current strategy, which favours mine clearance per se, leads to a dead end.

1. THE FUTURE

NEW THEATRES OF OPERATION

Besides the ageing worksites that were formerly mentioned in the present document, it will become necessary to consider the emergence of new theatres of operations for mine action. This is currently the case in Angola under the supervision of the UN, and it will soon be in Namibia, Liberia, Erithrea, Sudan... Countries from former USSR where civil war is raging will also need to be subjected to massive depollution programs, in Tchechenia, Georgia, Tadjikistan, Armenia...
However, ex-Yugoslavia will be the main focus of international attention. Indeed, it is expected that depollution of Croatia and the new Croato-Bosnian federation, which is ready to start just now, will mobilise over $ 150 million.

RESEARCH AND DEVELOPMENT

The future of mine action implies that the operators have moderns means available to replace the manual methods currently in use, which are slow, tedious and old. Modern means should enable them to perform fast and cost-effective mine clearance, in accordance with the financial requirements of huge worksites. Many studies are currently being carried out.
(The various areas of research are detailed in **appendix 8, page 81, «Research and Development»**)
The reader will also profitably refer to the outstanding study by the Joint Research Center of the European Commission published with the title : «Localization and Identification of Antipersonnel Mines», 1995, ISPRA n° 9501. **(See appendix 9, page 83).**

These technological approaches are not expected to replace the still prevailing manual method in the near future. Unfortunately, research in this area is not supported by the international institutions concerned, especially European ones. The **World Bank** is planning to allocate a budget line to this research activity. Interestingly, the Government of the **United States** is also planning to allocate 20 % to the research activities of the budget to mine action (bilateral actions, which represented $ 25 million in 1995).

2. A DEAD END

Current mine clearance methods, as discussed above, are not suited to the budgets available, and they do not permit a productivity achievement in proportion to the extent of the problem They do not even give a chance to reach an annual rate of destruction equivalent to the number of newly laid mines. In order to treat over 2,000,000 units, it is necessary to:

- Multiply fifty-fold the current demining capacities: With respect to technological level, this implies training between 250,000 and 300,000 new operators. Since the training cost for each demining operator is $ 6,000, a training budget of between $ 1.5 and 1.8 billion would be required, which is **twenty times as much** as the sums currently dedicated to humanitarian mine clearance.

- Accept the hazards linked to the growth of this activity. Indeed, one casualty is to be deplored every 1,000 mines, and **one fatality every 4,000 mines.** To achieve actual reduction in the number of mines, one should expect 2,000 operators to get seriously disabled and 500 to be killed each year. Obviously such figures are unacceptable in a peacetime activity, especially due to its humanitarian nature.

- Finally, accept as mere fate the fact that modern techniques and their application in this area are bound to fail We believe that such a «fatalistic» position, adopted by some experts, requires caution. In fact, some experts claim that the only efficacious techniques are the ones that have been extensively tested since 1918; others believe it is best to commit into as many mine clearing operations as possible, using the equipment

currently available, without waiting for some technological revolution to change the mine clearance market drastically. Actually, the only sensible position consists in conducting traditional mine clearing operations wherever depollution is badly critical, using all possible restrictions, while developing all preventive measures until a new generation of mine clearance techniques emerges is born.

We would like to make a comparison, if we may, with the area of Public Health. This is with respect to AIDS. The fight against this disease imposes two different strategies: the first one consists in searching the means to either destroy or neutralize the virus, the second one consists in educating the populations so as to limit the risks of contamination. When the time comes, the authorities will set up an overall policy for eradication of the disease which will resort to various modes of action, vaccinations, chemotherapy ..

The same holds true with respect to mines. Today our means of action are in a dead end because they are not suited to the needs. Therefore, it is essential that we simultaneously increase our effort in research and develop preventive strategies against this plague of the modern ages that will have to be eradicated eventually. We would like to add that if the 20,000 to 30,000 annual casualties caused by mines were all westerners, mobilization of research, imagination, energy and financial resources would possibly have led to faster implementation of effective means of effective new technologies.

3. THE GLOBAL APPROACH

The European community, in front of this situation, should become slightly less pragmatic and define the conditions for its intervention so as to achieve the best «humanitarian productivity».

For this purpose, we suggest that a number of technical, social and ethical measures be taken into consideration in all mine action contracts, and that each of the various operations identified within this document be the subject of a specific contract executable either individually or as part of a complementary association. Finally, it seems essential that these rules could translate into the global distribution of the European financing allocated to the fight against mines.

BASIC DATA COMMON TO ALL CONTRACTS

*Note. what is meant by «operation of **fight against mines**» are the four modes of intervention formerly defined. mapping and marking, information and training of the populations, training of local mine clearing operators and mine clearance itself.*

- get involved in mine action only in countries which have reached stability in terms of political situation and ended the conflict by a **peace treaty or cease-fire.**

- get involved in mine clearing operations only in order to face **ultimate humanitarian emergency situations** or to make possible the implementation of a **vital rehabilitation or development program,** with fast economic effects (agricultural crops, land transportation, opening up of some regions...)

- outside these two cases, get involved in mine action only if it is the outcome of a **global and detailed estimation of needs** expressed in order of priorities and of a **program planning** on both the middle and the long term, indicating the relative importance of all means of action.

- get involved in mine clearing operations only under the condition that the operation is clearly **integrated within a national program** co-ordinated either by the beneficiary government or by an international institution mandated for that purpose.

- get involved in mine clearing operations only under the condition that it could eventually be **taken over by the beneficiary country** itself.

- get involved in mine clearing operations only under the condition that the grant allocation or contract could be accompanied by an **estimation** during the course of execution, and by an **expert appraisal mission independent** from the contracting NGO or company, conducted upon expiration of the contract.

THE VARIOUS TYPES OF CONTRACTS

There are seven of them and they correspond to the whole of the mine actions eligible for European financing.

- **The contract with the national authorities** is about the technical and administrative clauses ruling the operation, and the obligations of the beneficiary State.

- **The initial mine-action campaign feasibility contract.**

The objective of this extremely relevant contract is to estimate the cost and duration of a program, to set the **priority order** of the actions to undertake and consequently of the **techniques to implement.** This study will also permit to determine whether all social, economical and political conditions are met.

• **The mine clearance contract** as it is currently used. This contract can take three different forms depending on whether it is about **humanitarian mine clearance**, «**accompaniment mine clearance**» for an (intensive) development project, or a **large scale mine clearance** (either proximity or extensive).

• **The quality control contract.**
It serves to assure the beneficiary State and the donors that the operation was conducted for the right purpose.

• **The population warning, information and training contract.**
It will specify and standardise the objectives and **educational techniques.**
In fact, although keeping of great local adaptation capacity, it will obey strict principles and rules, as for a **public health campaign.**

• **The research, identification and prohibition contract.**
It will impose the implementation of safe and reliable **modern techniques** for **map making, stake marking** and **location.**
Many conspicuous gaps still remain in this area, which the modern techniques should help fill up.

• **The contract for appraising the social and economic outcome.**
This contract is complementary to the former ones. Indeed, the sponsor must not only be informed of the **quality of the work** performed by the main contracting party, but also have access to an **estimation of the benefit generated** by the operation with respect to the populations.
Economic evaluations carried out years after the end of a mine action program should be provided for.

These six contracts are complementary and they can be fulfilled by **commercial or community operators.**

Their standardization and diversity will give rise to more specific offers to tender concerning one or several items. In the latter case, the tenderers will be obliged to form a consortium, which can only have beneficial consequences in terms of prices and final outcome of the operations.

The Research & Development contract.
The clauses for this last contract will have to be specified with great care, because this contract is of a totally new type, and its purpose is to enhance research in the area of demining techniques.

In the interest of the populations affected by mines, it is necessary that financial and political supports be provided to the companies which are seeking a technological and industrial solution to this humanitarian issue.

BUDGET DISTRIBUTION

As an example, and without any commitment on the part of the European Commission, the authors propose the following distribution of the budget which could be used for planning the fight against mines for the next five years. Besides, they suggest that the total amount of the financing allocated to this purpose be significantly increased from the current 10 million ECUs to 30 million ECUs from the next fiscal year on.

Distribution by areas:

Training & mine clearance	55 %
Map making, Surveying	20 %
Warning, Information	10 %
Research and Development	15 %

Mine clearance itself is divided up into:

Emergency humanitarian operations	10 %
Intensive mine clearance, rehabilitation and development operations	15 %
(Extensive) proximity mine clearance operations	25 %
training	5 %

Geographical distribution:

Croatia and Bosnia-Herzegovina	1/3 (5 years)
Africa	1/3 (10 years)
Far East, Latine Am , Ex-USSR	1/3 (10 years)

With this global approach for the fight against mines and unexploded ammunitions, aftermaths of recent regional wars, the European Community gathers an array of means of action and therefore has the possibility to adapt its endeavours to the actual needs of the populations at risk.