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THE PROMOTION OF RISK MANAGEMENT IN DEVELOPING COUNTRIES

Study prepared at the request of the UNCTAD secretariat by
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*/ The views expressed in this document are those of the authors and do not necessarily reflect those of the UNCTAD secretariat.

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*/ For the annexes, see TD/B/C.3/218/Add.1 (English only).

Chapter I

INTRODUCTION

1. In December 1984 the most tragic industrial accident in recorded history occurred in Bhopal, India. The release of a highly toxic chemical killed more than 2,000 individuals. Thousands of others were blinded and otherwise permanently disabled.

2. It was against this tragic backdrop that the UNCTAD Committee on Invisibles and Financing related to Trade held its eleventh session in February 1985. The Bhopal disaster crystallized the Committee's concern regarding disaster prevention and mitigation, compelling it to request the UNCTAD secretariat "... to undertake a study on the applicability of modern risk management techniques ... to the commercial and industrial enterprises, located in developing countries." 1/ This study has been prepared in response to this request. 2/

A. Nature of risk management

3. The key words in the CIFT resolution are risk management. The term is relatively new, dating from the early 1960s in the United States. However, the elements of risk management - risk assessment, risk control, and risk financing - are as old as man. Since time immemorial, man has sought to identify, assess, and, if possible, prevent those perils that cause harm to him, his family, and his property. In this sense, the practice of risk management is not new. Every culture has practised and does practise the elements of risk management.

4. However, modern risk management - if applied appropriately - provides a new approach and structure to these ancient practices. Modern risk management would have individuals, commercial and industrial enterprises, and governments play a forward-looking (rather than a reactive) role in loss assessment, control, and financing. Sound risk management practice insists on an integrated, systematic approach to risk analysis and treatment.

5. Risk management involves contingency planning. It involves continually asking "what if" questions. "What if" a fire occurred in assembly plant number two? "What if" boiler number six exploded? "What if" a typhoon struck from the south-east? "What if" the chief engineer was totally disabled and unable to work?

6. Risk management is not insurance management or a subtle way of promoting insurance sales; nor is it anti-insurance. The predictability of loss to business enterprises will never be certain, and insurance is clearly indicated where losses are unpredictable and have a high severity potential. Insurance is and will remain the most important way of financing losses for commercial and industrial enterprises in developing countries. Sound risk management permits a more effective and cost efficient use of insurance so that the limited financial resources of the enterprises and insurance companies of developing countries can be used in an optimum way. The entire national economy benefits from this approach.

7. Risk management is still in its infancy. As such, its potential to contribute to economic prosperity through minimization of loss to property and

of human injuries and suffering is relatively untapped. Even where the risk management process is understood, it is rarely followed in an organized and professional manner. This, and other obstacles to professional risk management, along with proposed solutions, are discussed more fully throughout this study.

B. Why risk management is more important today

8. Effective, appropriate risk management is more important today than in past times. Several reasons support this view.

1. The trend towards concentration

9. All undertakings involve risks of loss through aberrations of nature, the economy, technology, and society, as well as through the conventional perils of fire, explosion, flood, etc. Implicit in the evolution of economies and societies is the clear trend toward risk, value, and resource concentration, the results of which could leave a national economy (and even existing political structures) hostage to poor risk management practices. 3/

10. As industrialization has proceeded, concentration and specialization have increased with size. Local, purely national firms have grown to considerable size in many developing countries. Multinational enterprises occupy an increasingly important part in world trade, with interlinked and interdependent world-wide operations. 4/

11. Concentration has increased, not only in terms of value, with a consequent heightened risk of catastrophic loss, but also in terms of dependencies on suppliers of raw materials, equipment, or technology. This carries with it the possibility of a disastrous business interruption, not only for the producing company, but for its customers and often its suppliers.

12. Developing countries have witnessed a trend toward large-scale construction projects with associated high values that loom large as a proportion of the country's total exposures to loss. For example, the destruction of a large-scale industrial complex in France would not have nearly as much economic impact on France's economy as would the destruction of a similar complex in Sudan on its economy. A previous UNCTAD study has addressed many of the insurance issues associated with large risks, and the reader is referred to that document for further information. 5/

13. Complex and highly integrated industrial operations, using the latest technology in handling hazardous materials and products, are becoming increasingly common in developing countries. The attendant exposures often exceed the experience of local specialists and State authorities in managing these risks. Developed countries have sometimes been more successful in transferring technology to developing countries than they have been in providing the means of coping with the risks associated with these technologies.

2. Natural calamities

14. Volumes have been written about the exposures of developing countries to the full range of natural calamities. Floods, hurricanes, typhoons, drought, tidal waves, earthquakes and a host of other natural calamities seem regularly

to hinder efforts of developing countries to overcome their many other human and financial obstacles. Many so-called natural calamities result from - or, at the very least, their adverse effects are aggravated severely by - man's activities. The commercial/industrial enterprises of developing countries are exposed to these same disaster-causing perils. Again, in the interest of the stability of these enterprises, of the national economy, and of political systems, risk management should be used for the assessment and treatment of these tremendous loss causes.

3. Other reasons

15. Other reasons are sometimes used to explain why risk management has become such an important topic internationally. The public at large has developed a sense of risk consciousness and has become sensitive to the potential dangers resulting from highly complex technologies. The Chernobyl disaster riveted world attention to the fact that not only natural calamities but also modern technology can have adverse consequences far beyond a country's national boundaries.

16. Moreover, there has been a realization that consumerism, including the demand by consumers for safe, reliable products, and the changing legal environment in developed countries can lead to problems for developing countries. Their manufactured exports to developed countries will be subjected to these influences and therefore must meet these new conditions. Again, risk management can assist both in recognizing the need for product liability insurance limits for such exports to be compatible with the exposure in the market where the product is used and in minimizing loss potential through appropriate product design and manufacture.

17. Out of the various social, legal, economic and technological pressures has come the realization that today's risks must be identified and dealt with in a far more effective manner. Living in an age of increasing uncertainty requires the development of new services, new planning procedures, new risk-funding capacity, and above all, a new form of management organization to respond to loss potential and financing. The mandate of the 1990s will be the conservation of those resources that have been entrusted to the managers of commercial enterprises. The financial and organizational restructuring that is being developed to conserve these resources is risk management.

C. Possible contributions of risk management to developing countries

18. A key objective of developing countries is the achievement of economic and political self-sufficiency. Risk management has a role to play in accomplishing this objective. Its benefits are multi-faceted for developing countries including directing attention to "what must not happen".

19. The actual extent of benefit that each country might realize will vary depending on its particular characteristics, including its level of development. The benefits presented below are those that could be attained. The magnitude of the benefits would also depend on both the ability and the will to make risk management work.

1. Benefits to domestic enterprises

20. By reducing long-term production costs, risk management might be able to assist domestic firms in competing with imported goods. It can facilitate more adequate and efficient risk financing (including insurance) and may reduce a firm's insurance costs. An effective risk management programme can make a firm a more desirable credit risk in some countries.

21. Risk management techniques can reduce the number of commercial and industrial enterprises that become insolvent as the result of fire, windstorm, and other causes of losses. This reduction in uncertainty can facilitate the expansion of domestic credit and capital markets to aid in the development of domestic commerce and enterprise.

2. Benefits to the economy

22. By reducing costs, risk management may facilitate the development of new industry and can make domestic industries in developing countries better able to compete successfully with industries in other countries. Also, the reduction in risk can make it easier for exporters to obtain the financing and insurance required for successful export marketing.

23. Losses to local manufacturing, servicing, or mining facilities may occur and related products, services, or materials may not be available in the local market. This unavailability may lead to a need to import the needed items. This implies an increased foreign exchange drain. Sound risk management practices can help minimize such damage and destruction, thus improving a country's balance of payments. It should be equally obvious that products, services, or materials not available for export because of damage to or destruction of local facilities, also can have negative effects on a country's balance of payments.

24. Finally, risk management can contribute to the growth and strength of the domestic insurance industry by, among other things, directing national capacity to the potentially large losses rather than using available, limited capacity to pay smaller losses.

3. Benefits to individuals

25. The most apparent benefit to individuals in society will result from the loss control phase of the risk management process. Effective measures can reduce the frequency and severity of work-related injuries and illnesses and reduce work interruption, a cause of wage loss. The number of off-job injuries and illnesses from industrial accidents (such as through the discharge of injurious chemicals), pollution, flood, and motor accidents also should be reduced.

26. Risk management offers some less apparent benefits to individuals. It can reduce production costs, which in turn can make goods and services available to consumers at lower cost. Also, a reduction in the number and severity of injuries should reduce the drain on the supporting family; the need for welfare programmes for injured persons and their families; and the amount of taxes needed for their support.

4. Benefits to governments

27. Risk management techniques can help the governments of developing countries to achieve their development goals. Government should benefit because of having more efficient commercial and industrial enterprises, with resulting benefits for foreign trade balances, tax revenues collected, employment, employee safety, etc.

28. The loss control measures that are a necessary part of risk management should reduce the accidental loss of capital goods. Since most developing countries must import a large share of their capital goods, risk management can assist in reducing the outflow of foreign currency. Also, a reduction of losses and improved financial stability resulting from risk management can make it easier for domestic firms to attract foreign capital and credit for expansion purposes, thus stabilizing and increasing national employment.

29. Risk management can assist in meeting domestic goals. Effective loss control - especially in relation to employees, customers, and others - may have been less important in the past than today. In the past, an individual's chief source of financial security was his or her extended family. With increased urbanization and industrialization, such extended family security has dwindled, placing the financial burden on government and employers instead. Effective loss control can slow or even reverse the rate of increase of this employer- or State-shouldered burden by reducing injuries and diseases and corresponding expenditures.

Chapter II

THE RISK MANAGEMENT PROCESS

30. The following examination of the risk management process will clarify the means by which the potential benefits of sound risk management can be realized.

A. The objectives of risk management

31. The financial objective of risk management is the continuity and stability of the organization so that it can deliver its products or services efficiently. More specifically, the goal of risk management may be considered the preservation of the human, physical, natural, and financial resources that organizations use to accomplish their goals. This resource-preservation goal has long been recognized. The French management scholar, Henri Fayol, wrote in 1916 of "security management" as being one of the corner-stones of effective management. Fayol stated that the objective of security management was:

> To safeguard property and persons against theft, fire and flood, to ward off strike and felonies and broadly all society disturbances or natural disturbances liable to endanger the progress and even the life of the business ... It is generally speaking all measures conferring security upon the undertaking and requisite peace of mind upon the personnel. 6/

32. Fayol's ideas are not well implemented in most organizations even today. The main functional areas of risk (security) management often are in place but typically are widely dispersed and ill-co-ordinated. While dispersion itself may not be wrong, lack of co-ordination of responsibilities can present inconsistent and even conflicting treatment. New social, legal, economic, and technological pressures require the re-evaluation of procedures and practices.

33. Less than optimum use of resources occurs when risk is not managed properly. In some situations, organizations may avoid risky activities altogether even though these activities may be desirable for society. Uncontrolled risks reduce the incentive for investment. Commercial and industrial enterprises may not produce goods and services, or produce them only at higher margins, if the non-controlled risk is perceived to be great. Additionally, it will influence firms to plan for the short term only. Such short-term planning usually results in higher costs.

34. If a country's physical, natural, human, and financial resources are protected and preserved, these national assets will continue to contribute to the economy. Risk management helps promote use of resources while preserving their existence. It helps obtain the greatest long-term return from economic resources by loss control and efficient risk financing including insurance. Through this technique, a developing country can be assisted in its move up the ladder of economic development.

B. Elements of the risk management process

35. Risk management is the process by which any unexpected loss contingency is managed. The process involves four elements: risk assessment, risk control, risk finance, and administration, each of which is discussed below.

1. Risk assessment

36. Risk assessment involves the identification and evaluation of loss exposures. Losses may be direct or indirect. Direct losses involve the direct costs of (1) replacing or repairing damaged or destroyed properties; (2) providing for the expenses of injured employees; and/or (3) responding to adverse liability judgements. Commercial and industrial enterprises in developing countries routinely purchase insurance to protect against many direct losses.

37. Indirect losses are those that arise as a consequence of direct losses. These include lost profits, continuing expenses, possible loss of market share, etc. Surveys in some developed countries have indicated that indirect costs average from three to nine times as much as direct costs for losses. In other words, if a fire did $US 10,000 in damage (direct loss) to a plant, the typical indirect costs associated with the loss may be an additional $US 30,000-$90,000. Results for most developing countries probably would be less severe but still are estimated conservatively to fall within the one to three times range. In most developing countries, too little attention is paid to indirect losses. Insurance for indirect losses is not available in some markets and, where available, often is not purchased.

38. Exposures to loss can be further categorized as (1) property, (2) liability, and (3) personnel. For property exposures, the risk assessment process involves identifying the various types of property the organization owns and uses, and determining the types of losses that can result to that property and the possible causes of these losses.

39. Liability exposures result from the operation of laws regarding responsibility to others for injuries and damages the organization or its employees have caused. Motor vehicle and product liability are examples. Legal systems vary greatly from country to country and, therefore, so too does the relative importance of liability exposures. For example, in most developing countries, product liability lawsuits are relatively rare, whereas in some developed countries, the potential for such losses is enormous. Note should be made of the emerging tendency for the liability standards applicable in some developed countries to be adopted by some developing countries. A proper assessment as to the likely loss trends in this area will help guide management decision-making.

40. Personnel exposures arise from the human activities of the organization. Death, disability, and sickness of employees can destroy or impair the effectiveness of an organization. The risk manager should estimate the financial impact on the firm if such losses were to occur.

41. Identification of loss exposures requires knowledge of the organization, its assets and liabilities, and its relationship to its environment. Many techniques are available for discovering the loss exposures of an organization including physical/engineering inspections and financial statement analysis.

42. A distinction should be made between identification of insurable loss exposures and true loss exposure identification. True loss exposure identification is concerned with a comprehensive audit and assessment of an organization's exposures irrespective of whether they are insurable. When

only insurable exposures are identified, uninsured exposures may remain that could cause serious loss if not managed properly. Too many enterprises in developing countries - often guided by their insurers or brokers - concern themselves only with insurable loss exposure identification.

43. Once the loss exposures have been identified, an evaluation of the exposures in terms of long-term frequency, severity and variability should be made. The economic importance of the potential loss must be assessed. How likely is the potential loss? What would be its economic impact if it did occur? How well can the loss be predicted?

44. Quantitative techniques properly applied in risk assessment permit future losses to become more predictable, particularly for large organizations. This will require the collection and interpretation of appropriate data. This process, difficult in developed countries, may be extremely difficult in many developing countries. Even so, organizing and collecting loss and exposure-related data are desirable objectives to the extent that they can be used to project future losses.

2. Risk control

45. The noted insurance expert, Dr. A.R.B. Amerasinghe of Sri Lanka, recently observed:

> Both in the areas of loss identification and potential loss measurement, the prevailing practices in most developing countries leave much to be desired. The area of control, it is submitted, is equally deficient ... Most concerns in developing countries lack an adequate, cohesive systematic strategy in risk reduction and loss prevention. In some of them, many of the basic loss prevention methods are overlooked ... 7/

46. Dr. Amerasinghe's deep concern about the quality of the loss control management function in developing countries is fundamental. Risk control is the most important aspect of the risk management process. Given the demand in all societies for increased control of risk, this area will present the most challenges and the greatest opportunity for growth in the future.

47. Risk control involves (1) avoidance of the loss exposure, (2) prevention of the loss, and (3) reduction of the loss. Avoidance is elimination of the possibility of loss by not engaging in the activity (e.g., not building the manufacturing plant), by stopping activity previously begun, or by transferring the risk-causing activity to another party (e.g., use of a subcontractor). Loss prevention activities aim to reduce the likelihood of a loss occurring (e.g., masonry construction is less likely to burn than wood construction). Loss reduction efforts concentrate on reducing loss severity (e.g., fire-alarms aid in earlier discovery and minimize resulting losses).

48. Risk control involves the identification and elimination (where possible) of the pre-conditions (hazards) for losses. Whenever these pre-conditions can be identified and eliminated, loss potential is reduced. Improper handling and storage of flammable materials, locating potentially hazardous plants in populated centres (or allowing populated centres to build around existing hazardous plants), improper training of workers, failure to maintain clean working areas, etc., are all pre-conditions for losses.

49. Many persons in developing countries - because of a life with seemingly little control over their destinies - believe that accidents and disasters are natural and in the scheme of things. This che será será approach can result in inaction in terms of loss control activities. Benefits flowing to developing countries from better loss control are at least as great as those flowing to developed countries, and impressive improvements have been shown to exist in many commercial and industrial enterprises in developed countries. For example, consider the following actual results with respect to reductions in employee injury rates (per 1,000) after sound risk management practices were introduced: 8/

- Twenty mining companies - injury rate reduced from 5.2 to 3.8 in six months.

- Forest products corporation - injury rate reduced from 19.97 to 10.52 in two years.

- Paper products plant - injury rate reduced from 20.9 to 2.2 in three years.

- Stevedoring operation - injury rate reduced from 34 to 5.6 in two years.

- Steel division - injury rate reduced from 100.5 to 9.3 in five years.

50. Another common attitude that exists in many countries, developing and developed alike, is that insurance is a substitute for loss prevention activities. Management of a company that has survived a costly casualty commends itself for its foresight for having insured adequately. It would have been better to have prevented the casualty, for a loss is a waste of resources however complete the insurance cover. In many countries, managers would ridicule suggestions that they spend more on loss prevention than on insurance. A sound cost-benefit analysis will often refute the logic of this practice.

51. The social, political, economic, and legal climate in most developing countries today demands a more complete response to risk. Any programme of loss prevention and reduction, however, must be realistic. One cannot reasonably hope to put into effect all conceivable loss control measures. Capital remains scarce in developing countries, but the implementation of sound loss prevention and reduction techniques too often is relegated to a low priority, even though much could be done at little cost.

3. Risk finance

52. The objective of risk finance, the third element in the risk management process, is to have sufficient resources available following a loss so that the continuity of the organization as a producer of products or services can be preserved. 9/ Basically, the finance alternatives include (1) retention - which relies upon internal funds to pay for losses - and (2) insurance. Insurance is an extremely important source of funds to pay for losses, especially in developing countries and especially for smaller-to-medium-size firms. In most cases, the most efficient way to finance possible losses will involve the use of both retention and insurance.

53. Loss retention, ideally, involves the conscious decision to retain a portion or all of a future loss, although in many instances commercial and industrial enterprises retain loss exposures out of lack of knowledge or inadvertence, as where a risk has failed to be identified or it is underinsured because of inflation or lack of available cover. Retention can be used successfully when losses are predictable and within the funding capability of the organization. The organization's own resources may be used to fund acceptable loss levels. This involves a close examination of the financial strength of the enterprise to ensure that retained losses do not act as a de-stabilizing factor.

54. The temptation to make the facile inference that risk retention is advisable because insurance premiums for some years may have been in excess of claims can be myopic and dangerous. Moreover, loss handling services, loss prevention advice, and similar ancillary services provided by insurers deserve consideration.

55. The rationale for retention is that self-funding of losses that are well within the capabilities of the organization is generally more economical than transferring the risk to an insurer. While small losses may be fully retained, larger losses typically must be insured. Deductibles, co-insurance, and excess insurance are all devices that permit the retention of lower-level losses and the transfer of larger loss potentials to an insurer. These methods will reduce claims administration costs and will provide the insured an incentive to minimize loss. In many developing countries, the custom often is to insure on a first-dollar basis. First-dollar coverage can prove to be a costly risk financing approach and an inefficient use of the insurance mechanism. 10/

56. Insurance is the most important loss financing tool and is critical to the successful management of an organization's loss exposures. If insurance is purchased from a financially sound insurance company at fair prices, the uncertainty associated with potential losses has been significantly reduced. The policyholder has substituted a small known cost - in the form of a premium - for a larger unknown potential loss cost. Insurance may be the only way that an organization can protect itself from catastrophic loss. Insurance is and will remain an essential element in economic development.

4. Administration

57. Administration, the final element of the risk management process, involves the effective implementation, monitoring, and control of the overall risk management plan. An organized system to provide needed feedback about plan effectiveness is essential. Circumstances change and plans must be capable of both detecting these changes and reacting quickly to them.

C. The need for compatibility

58. If sound risk management is to be successfully used in developing countries, it must not be a mere copy of risk management practices of developed countries. Risk management practices should be compatible with a country's cultural and physical environment, its level of infrastructural and other development, and its financial and human resources.

59. In developed countries, capital is relatively less expensive than labour, and solutions to safety and loss control matters tend to be capital intensive rather than labour intensive. The emphasis is on safety design in equipment, buildings, construction methods, and on physical ways of preventing or controlling losses and accidents.

60. In developing countries, the opposite occurs. Capital is relatively scarce and labour is plentiful. And because capital goods are expensive and difficult to repair and replace, risk management practices are vital. Thus, safety and other loss control activities should emphasize the "human" aspect and rely less on the "capital" aspect. Individuals should assume a relatively greater role in loss control in developing countries. This, in turn, connotes an increasing need for training of specialists and for encouraging employee safety awareness. This is one of the chief differences that underscores the need for risk management practices of developing countries not to be mere clones of those of developed countries.

61. The importance of the culture within a country is too often ignored. For example, the logic pattern of individuals varies by culture and can influence greatly the success of certain loss control measures. Strong interpersonal and family ties must always be respected. Such intangibles as the cultural expectation as to duty, obligation, and loyalty can have a great impact on the success of a risk management programme. Religion is especially important in many societies and can play a key role in helping to deal with risks and minimizing their adverse impacts.

Chapter III

STRATEGIES TO IMPROVE RISK MANAGEMENT IN DEVELOPING COUNTRIES

62. It is the contention of this study that risk management in developing countries can be greatly improved at little short-term net cost to the national economy. Over a period of years, these improvements will result in benefits - both financial and otherwise - that far outweigh costs.

63. This chapter presents a discussion of the role that can be played in risk management promotion by several entities, including government, insurance enterprises, commercial and industrial organizations, lending institutions, educational and training institutions, religious and cultural organizations, unions and regional and international organizations.

64. It must be noted that none of these entities alone can cause the successful integration of risk management into a country's economic activities. Rather, each will have its role to play and a co-ordination of activities is to be expected. Also, the role of each entity will vary depending on the particular country and not all will be applicable.

65. Each country is different and needed changes must be crafted to its peculiar needs and constraints. 11/ Further, each country's needs and contraints vary over time, so changes are to be expected.

A. The role of government

66. An important conclusion of this study is that governments in most developing countries, especially the least developed, must assume a major responsibility for promoting risk management within their countries. In most developed market-economy countries, the impetus for risk management has emanated primarily from the commercial and industrial enterprises of these countries, with governments enacting laws requiring loss control/safety/environmental protection activities where managers have not been sufficiently responsive to the well-being of people and the environment. In developing countries, however, governments often assume a more prominent role and can wield more influence over the economic activities within the country. In many cases, government actually controls or owns such activities.

67. This role is all the more important in view of the typical economic growth pattern of countries. It seems to be a headlong rush into development, irrespective of safety, followed by "retro-fitting" of safety measures after a certain level of development has been achieved. The costs of after-the-fact correction of environmental, safety, and other problems invariably prove to be far in excess of what it would have cost to have designed or implemented a sounder approach in the first place. Developed countries are today paying a dear price for this oversight, and developing countries are themselves increasingly following the same wasteful pattern, making their industries less competitive in the long run.

1. Governmental obligations

68. A government's first and most important obligation is the protection of its citizens. Risk management promotion would be no problem if amounts equivalent to the large sums spent on national defence were spent for

protection measures related to hazardous products, unsafe work environments, natural calamities, chemical and other forms of environmental pollution, fire and other causes of harm to citizens and damage to property.

69. A problem common to many developing countries is that their laws and regulations are often patterned too closely on American or European counterpart laws. In some cases, a country may have no laws at all relative to certain critically important risk management matters. Inappropriate laws complicate the enforcement task. Safety and security standards modelled after those of developed countries can result in needless complexity, non-acceptance by local employees and managers, and other hindrances to effective compliance.

70. Besides having laws and regulations that are appropriate for the country, governments should ensure that these laws are being followed. Adequate enforcement is a problem in many developing countries. Merely writing a law is not sufficient. This means that either government itself must be the enforcement vehicle or government must permit incentives to minimize non-compliance (e.g., through permitting insurance rates to be based more closely on actual hazard exposure and/or loss experience).

71. Government may find voluntary safety and other measures to be deficient in the light of its perceived responsibilities to protect its citizens. In such cases, government would be compelled to establish standards higher than those which the combination of social and financial responsibilities may dictate. Governments have been encouraged to take the long-term view and to remember that they are entrusted not only with the welfare and safety of the current generation of citizens, but also of generations of citizens yet unborn. In this connection, it may prove appropriate for a government to refuse to permit the establishment of highly hazardous or technologically complex enterprises where risks are judged to be too great, even though such actions may result in lost employment opportunities. The difficulties that governments face in this decision are myriad, not the least of which is in hazard assessment. To assist in this decision-making, governments could insist that all feasibility studies for new, large or complex projects contain a well-documented, sound, risk assessment component, including environmental impact information. Any additional costs associated with the enforcement of existing or new laws and regulations with respect to such projects also should be included.

72. The international implications of this argument are that disclosure of the actual danger or potential harm in the use of a technology or a product ought to be obligatory. The pressure to do so may be legal or moral. Disclosure in this way should act as a form of education with which both governments and individuals would be able to make informed decisions.

73. The fundamental motive for a multinational enterprise (MNE) to export a technology or a process is that the product will be marketed more economically. Production costs are most susceptible to influence by government and have the greatest effect upon both safety and the environment. It follows that a government should assume a high level of responsibility when considering proposals by MNEs for investments in their territory, since that responsibility bears directly upon the duty of any government to protect its citizens.

74. Ideally, no government would accept production processes, of standards any less stringent than those set by the home country of the MNE for similar processes. The degree of protection in relation to matters not directly connected with production will often be affected by purely national factors. Thus, siting may be determined by protection from natural hazards. It may be necessary to regulate residential development in the vicinity of the plant.

2. Designing insurance laws to foster risk management

75. Insurance laws and regulations of a country should be compatible with risk management promotion. This is not the situation in many countries. Areas where improvements can be made are discussed below.

76. Localization of insurance requirements. Developing countries, for the most part, have complied with the UNCTAD position that they should "... take steps to enable their domestic insurance markets to cover in these markets - taking into account their national economic interests as well as the insured interests - the insurance operations generated by their economic activities, including their foreign trade, as far as is technically feasible." 12/ As a result, most developing countries routinely require that insurance on property or persons located within the country be insured by a domestic insurer. 13/ From the government's point of view, this requirement can make sound economic sense in that it permits not only the strengthening of the local insurance industry, by its procuring a larger volume of business, but also can serve to conserve scarce foreign exchange.

77. It is regrettably true that the insurance companies in many developing countries are unable to offer as broad a range of coverages as may be desired or needed by many industrial and commercial enterprises located there. Given that such local enterprises must insure in the local market, they arguably should be entitled to appropriate, quality insurance cover based on reasonable terms and conditions. Insurance companies in some markets are not able to provide such cover, with the result that the local enterprises may have either inadequate or inappropriate cover or, in some cases, no coverage at all.

78. By creating a requirement that local risks must be insured locally, government is understandably giving preference to the local insurance market. The local insurance market, for its part, has an obligation to the national economy to provide appropriate and reasonable cover. If the local insurance industry cannot or will not provide appropriate, quality cover, then government, for its part, may justifiably feel less compelled to provide the local insurance market with preferential treatment.

79. If local purchasers of insurance are dissatisfied with the quality, pricing, or scope of cover provided locally, governments might consider threatening to amend the localization requirement to force insurance companies in the market to update coverages and ratings and to provide higher quality service. In any event, where the law permits, the placing of insurance with foreign insurers to guarantee that the replacement costs of needed imported plant, machinery, or equipment would be available in the relevant currencies might be considered. Needless to say, a proper assessment should be made to avoid wasting valuable foreign exchange.

80. In any event, it would seem appropriate for local insurers to reinsure the risk in the relevant replacement currency, thereby paving the way for a case to be made to the monetary authorities, if and when a loss occurs, for the release of the foreign exchange that has become available from reinsurers to import replacements.

81. Control of insurance policy provisions. Regulatory authorities in all countries of the world exercise some control over the provisions of insurance policies. Exceedingly tight control is the rule in some countries while others are far less restrictive. This study takes no position as to the relative desirability of different approaches. It notes, however, that such laws should not be overly restrictive in terms of permitting commercial or industrial policyholders to negotiate with insurance companies for what they perceive to be needed policy provisions.

82. Generally, the principal reason that a government believes it must exercise some control over policy provisions is to protect the bargaining position of the insured. Such logic is particularly applicable to insurance policies that may be issued on a mass basis - e.g., motor insurance. Where the policyholder is in a stronger bargaining position with the insurance company, as with many commercial and industrial enterprises, there would appear to be less need for government concern about the insurance company taking unfair advantage of the policyholder.

83. Control of premiums. Most governments exercise some control over premiums charged by insurers. A common method of government rate control is the tariff. Government bureaux set premiums rates in some countries while in others, insurance companies may agree among themselves on price setting. In many countries, tariffs apply only to compulsory forms of insurance, such as motor and workers' compensation insurance. In still other countries, tariffs or inter-company agreements apply to all forms of insurance.

84. A reasonable tariff system can be defended on grounds of permitting market regularity and preventing what might otherwise be cutthroat competition. On the other hand, rigidly enforced tariffs that permit no or inadequate deviation because of the degree of hazard or quality of loss control, run counter to risk management promotion.

85. If a commercial or industrial enterprise works systematically and successfully to prevent and minimize losses, that enterprise should be entitled to pay lower premiums for its insurance. Failure of government laws and regulations to permit insurers to recognize appropriate hazard differences means that such commercial and industrial enterprises will be less likely to take necessary and desirable preventive action. Also, as pointed out in a previous UNCTAD study, unjustifiably high tariffs increase the tendency of insureds - especially foreign-owned firms - not to insure in the local market. 14/ They rely more heavily on retention and will insure only the minimum necessary in the local market. They then obtain their real insurance cover directly or indirectly (through world-wide cover at the headquarters of the MNE) from abroad. With respect to large MNEs, they may rely on fronting to their captive insurers, thereby provoking a higher outflow of foreign exchange. 15/

86. Enhancing market capacity. Insurance market-place capacity in many developing countries is inadequate or used in a less than optimum manner. This can mean that the insurance needed by commercial and industrial enterprises may not be available locally or not be available in the manner needed. In other-than-monopolistic markets, this inadequacy may be attributable to an inadequate flow of revenues caused by the presence of more insurers in a market than are truly needed or by low capitalization requirements. Poorly capitalized insurers or insurers writing small volumes of premiums cannot afford highly effective employees and cannot spend much on training, research, and experimentation, and hence must rely heavily on reinsurers.

87. Markets that are either excessively concentrated or excessively fragmented will not contribute their fair share in overall economic development. An appropriate government policy to ameliorate the prevailing market-place defects may be called for.

88. It is not uncommon in developing countries to find market-place capacity used inefficiently. The practice of insuring on a first-dollar basis and failure to provide any or adequate credit for deductibles are examples of inefficient use of capacity. By providing first-dollar cover, insurers' ability to provide upper levels of cover is diminished. This, in turn, causes greater reliance on reinsurance and, thereby, a higher net foreign exchange outflow over time than would be the situation otherwise. Thus, sound risk management can cause a more efficient use of insurance capacity, and government may judge it necessary to establish procedures to encourage this result.

89. Tax policy towards insurance. The tax treatment of insurers can influence risk management efforts. Some countries levy premium and other taxes on insurers at such a high level that they discourage the purchase of insurance. In general, if premium taxes are used, they should be at a modest level since they are levied against gross income.

90. However, tax policy often does not permit insurers to tax-defer earnings for purposes of building contingency reserves. If such reserves were maintained, they could both increase national retention capacity and protect against adverse results from large and/or complex risks. This would imply less reliance on foreign reinsurance and less foreign exchange outflow. While initially tax revenues may decline somewhat, this could be a reasonable sacrifice, with less need for importing reinsurance. Limits, of course, need to be established and safeguards instituted for such tax-deductible reserves to prevent their untaxed diversion to shareholders or others.

3. Designing workers' compensation rating to foster safety

91. Workers' compensation benefit laws exist in most countries. These laws typically provide that the expenses of work-related injuries and sometimes diseases will be paid through employer-funded arrangements. In most countries, workers' compensation plans are considered part of the social insurance system and employers pay taxes to a government plan in support of the benefits. In some countries, private insurers can provide the benefits. Workers' compensation costs represent significant expenditures for employers in most countries.

92. Workers' compensation costs assessed against employers in many countries bear little or no relationship to employers' safety records. Hence, employers who work diligently to maintain safe working conditions are forced to subsidize those who are less careful. A system of industry ratings supplemented by an individual employer reward (and penalty) mechanism that reflected equitably the employer's safety record could encourage employers to provide safer working conditions.

4. Reasonable environmental and worker safety laws

93. Government's role in the area of environmental and worker safety can be of crucial importance. One of the main problems with this area is that manufacturing and mining operations may have few natural financial incentives to protect the country's air, water and soil. The impact of environmental impairment may not be recognized for years, so the polluting enterprises may look for the short-term gain. Clearly, personal and national short-term advantages must be given second place in favour of the children, grandchildren, and general interest of the distant future. To ensure that this occurs, government must take an active, effective role.

94. The chemical, petrochemical, and agrochemical manufacturing industries have been (and continue to be in some areas of the world) major polluters. However, more stringent environmental control legislation enacted since the early 1970s has had a major impact on reducing pollutant emissions in many countries as well as providing for the safe disposal of hazardous industrial wastes. The tragedy at Bhopal has highlighted the need for legislation to control major hazard accidents resulting from acutely toxic chemical releases and reactive chemicals, while the Mexico City disaster emphasized the need for controlling flammable and explosive chemicals at industrial and storage sites, as well as during transportation.

95. In developing countries, the enactment and enforcement of environmental control regulations vary widely. Some form of laws, regulations, or guidelines is essential. The World Bank Environmental Guidelines could prove helpful. These guidelines emphasize pollutant reduction at source through process changes or improvements, rather than add-on pollution control technology. Add-on pollution control equipment often is not operated and maintained at a high level of operating efficiency, and its use may even be discontinued.

96. Occupational health and safety issues also need to be addressed in any operation involving the handling of toxic, reactive, flammable or explosive chemicals and in all industries where there are risks of accidents causing bodily injury. This area, to date, has received little attention in many developing countries but can have a major impact on productivity and efficiency as well as on the more important health effects on the individual worker. Greater attention to protecting operator health and safety has been found to pay excellent dividends to the enterprises and countries that promote such an approach.

97. In this regard, the International Labour Office, the World Bank, the United Kingdom Health and Safety Executive, the United States Occupational Safety and Health Administration, and the United States National Institute for Occupational Safety and Health all have drawn up occupational health and safety guidelines for a number of industries. These guidelines are readily

available from the institutions. Arguably, State-owned enterprises should take a lead role in these matters, as has been the case with the India Petrochemicals Ltd. operations at Vadodara.

98. Mining developments play an important role in the economies of many developing countries. Large-scale mining operations can have a major detrimental impact on the environment, if environmental controls are not adequately incorporated into development plans. Since mine developments typically involve long-range planning, it is essential that mitigating measures to limit environmental impacts be considered at the conceptual stage of a development.

99. The health and safety of miners and surface workers in the mining industry deserve considerable attention. This is particularly the case for underground miners who are exposed to a greater risk of accidents and occupational hazards than surface workers or open pit operators. In some developing countries the underground conditions can only be described as extremely difficult and hazardous. Not only do the miners themselves benefit from an improved working environment, but the mining enterprise itself benefits from increased productivity. In one instance, estimated productivity increased by approximately 10 per cent through improved safety conditions. 16/

5. Fire and marine cargo loss prevention

100. Fires are major destroyers of property, equipment, and lives every year in developing countries. Their prevention and control are important priorities. Also, because of the great reliance by developing countries on marine cargo shipments, loss prevention activities in this area often are a national priority. Most of the money spent by governments in developing countries on fire-related measures is used in setting up infrastructure that is concerned solely or predominately with extinguishing fires. Little input goes to fire prevention. This would require adequate and competent inspecting facilities, possibly in conjunction with the insurance industry's efforts.

101. Too often management invests great sums of money in setting up a complex plant, yet it affords little attention to fire safety measures. As explained later, government could establish incentives to rectify the situation, as could fire insurers. Two excellent UNCTAD studies have already presented much worth while information on these topics, so their findings need not be repeated here. 17/

6. Appropriate exchange controls and trade laws

102. The vast majority of developing countries have economic programmes of minimizing the non-essential outflow of foreign exchange. This policy can restrict the ability of domestic commercial and industrial enterprises to import loss control and safety equipment and methods. Such an approach could prove short-sighted since otherwise preventable damage and injury could provoke an even larger outflow of foreign exchange at a later time. Moreover, it ignores the additional cost burden imposed on the national economy through having to finance the cost associated with higher accidents and loss rates.

103. Similarly, duties and other import restrictions on locally unavailable, yet reasonable safety and loss control devices could be eliminated, with positive net economic benefits. Duties and import restrictions can discourage

local affiliates of multinational enterprises as well as other local enterprises from pursuing justifiable casualty prevention programmes.

7. Other measures

104. Each government should ask itself whether, in addition to the laws mentioned above, further laws are necessary to foster sound risk management. For example, a government may find that laws are needed in the consumer product safety area, in the transportation of hazardous materials, or in the manufacture and use of foods and drugs. Virtually all developing countries have a code for foreign investments within the country. The code could require a compulsory risk assessment and risk control programme in connection with foreign investments.

105. Building codes that are attuned to the special needs and situations of developing countries should, of course, be in place and rigorously enforced. For example, Mexico's building codes were upgraded in recognition of the earthquake hazards.

106. National data on loss experience, especially non-insured losses, are seldom collated and published in many developing countries. Governments are encouraged to begin the systematic collection of insured and non-insured loss experience or to delegate the collection of such information to some other entity. At a minimum, insurance companies should be required to collect and publish insured loss data. Sound public policy formulation requires the existence of reliable, complete data.

107. If the fire, safety, and other inspection services offered by insurers and reinsurers are found to be insufficient, it may be appropriate for government to establish its own inspection service to ensure compliance with codes, regulations, and sound loss control activities. Alternatively, government could encourage insurers and others to undertake a more complete and comprehensive approach to providing such services. Worth noting is that some insurers and insureds do not support such activities because of concern over potential adverse results.

108. Government tax policy as relates to other-than-insurance can influence whether certain loss control measures are adopted. Some governments do not permit tax deductions for the costs of installing loss control and safety devices. Governments should give serious consideration to permitting full income tax deductions for loss prevention and mitigation programmes, loss control and safety devices, and appropriate environmental protection equipment.

109. Finally, in some countries, the security forces may be asked to play a limited role in risk management promotion. They could be trained to conduct risk assessments of factories, mines, and the like and to provide reports thereon to management and government. Also, when such persons returned to civilian life they may be expected to apply their risk management expertise in other ways.

B. The role of the insurance industry

110. The UNCTAD has long recognized the important role that insurance plays in development efforts and has assisted in the creation and strengthening of

domestic insurance industries in many developing countries. Today, virtually every developing country in the world has its own local insurance industry.

1. The effects of risk management on insurance

111. The creation and strengthening of a national insurance industry is not an end unto itself. Rather, it is seen as an effective means to help accomplish certain development objectives, including its traditional role as a "lubricant of commerce", as well as its special role in developing countries in foreign exchange conservation. Sound risk management will help the insurance industry to perform its role better.

112. Additionally, sound risk management will help hold down loss costs through improved loss control. This implies reduced claims for insurers, which in turn implies a greater insurer surplus and therefore net retention, as well as a corresponding reduction in insurance premiums and reliance on reinsurance. This means that the commercial and industrial enterprises can offer more competitive products. Insurance companies can focus better on large loss exposures, those that could undermine the welfare not only of commercial and industrial enterprises in developing countries, but of the entire national economy.

113. Risk management connotes awareness of risk by the managers of commercial and industrial enterprises. This new level of awareness often has been found in developed countries to lead to the recognition for more insurance and for new forms and combinations of cover.

114. Clearly, insurers and reinsurers must keep abreast of risk management developments and must aggressively play their appropriate role. Risk management is not a threat to a soundly-based, quality insurance industry. It is (and should be) a threat to any insurance industry that will not update coverages, upgrade policy limits, adjust policy provisions, and rate to hazard.

115. Insurance will prove to be an essential part of any well-conceived risk management programme. In fact, the risk management discipline arose out of insurance. If the insurance industries of developing countries would seize the initiative, they could provide the leadership role for the appropriate promotion of risk management in their countries.

116. However, insurers' role in promoting risk management must be backed by strong and appropriate building codes, fire codes, worker health and safety laws, and other loss control-oriented requirements. Additionally, government must ensure that its insurance laws do not unduly stifle insurer and reinsurer innovation, as discussed earlier.

2. Evaluation of insurance in developing countries

117. Insurance may be considered as comprising three elements: (1) coverage, (2) price, and (3) service. Insurance in developing countries can be evaluated on these three bases. As will be shown, some problems exist that inhibit the promotion of efficient risk management practices.

118. Coverage. Coverage refers to the protection provided by the insurance contract. A general coverage problem is that the demand for insurance

coverages sometimes is determined by its availability. Without risk management knowledge, commercial and industrial enterprises tend to be led by insurers and brokers. The philosophy of the policyholder may be "if the insurer does not provide this coverage - we don't need it." For example, business interruption insurance and crime insurance are recognized as necessities for many policyholders. However, in many cases, these coverages are not available. Other specific coverage-related problems follow.

119. Insurance policies that combine perils, exposures, and locations are not available in many developing countries. It is common to issue a separate insurance policy for each location and for each type of property (i.e., buildings, machinery and inventory). Additionally, policies commonly cover specified perils only (e.g., fire, lightning, and explosion). This type of multiple contract confusion often leads to errors and gaps in coverages. More extensive use of package contracts would be in the interest of less experienced policyholders.

120. Some insurers in developing countries write insurance for property risks on an "actual cash value" basis only. This means that the depreciation risk (the difference between replacement cost and depreciated value) must be absorbed by the policyholder. If commercial and industrial enterprises of developing countries are to be provided adequate insurance cover, more insurers should offer replacement cost coverage. This not only fills a market-place need but can increase the premium income of insurers.

121. Standardization of insurance contracts can be beneficial and leads to administrative efficiency. However, the risk of loss is seldom uniform for all policyholders. When the insurer does not have the ability or desire to modify standard contracts to meet the particular needs of individual policyholders, insurable risks exist for which the policyholder wants and needs protection but for which the insurance market-place is unresponsive. This projects rigidity into the system of insurance that is not in the interest of policyholders. Insurers are encouraged to tailor provisions more closely to policyholder needs.

122. While liability insurance is not as critical as property insurance in developing countries, many local affiliates of MNEs believe that developing countries do not provide adequate limits of liability. By refusing to make available the limits of liability insurance desired by such enterprises, insurers in developing countries are forgoing insurance business and also not responding adequately to market demands.

123. Inflation continues to be a problem, particularly in many developing countries. Its impact on insured values coupled with a 100 per cent co-insurance requirement can lead not only to underinsurance and to penalties being assessed on the degree of underinsurance. This problem, requires some responsibility on the part of the insurer for updating of values. In some countries where inflation is a problem, mandatory appraisals and insuring to those values are required. Another approach is automatic indexing of the policy so that policy values track with inflation. Again, insurers could promote effective risk management by providing more appropriate limits and increase business by accommodating these problems.

124. A dimension of coverage relates to the quality of the insurer providing the cover. As noted already, insurers in developing countries - both government-owned and privately owned - are often undercapitalized. Profits from government-owned insurers are often required to be paid to the government and profits from privately-owned insurers are often paid out in dividends to shareholders. In each case, retention capacity could have been increased had the insurer been able to retain such profits, using them to augment net worth.

125. Many insurers in developing countries bear little of the actual risk, passing along the overwhelming majority to reinsurers. Such insurers may be acting as little more than brokers, effectively surviving on the commissions paid them by their reinsurers. Following this practice, the insurers will never evolve to be genuine, local risk bearers and, hence, will continue to support high premiums that afford them high commissions. Unfortunately, the commercial and industrial enterprises that are their insureds must pay these high premiums and the country as a whole must use portions of its foreign exchange reserves to pay for some reinsurance that otherwise would not have been needed. Insurers in developing countries should strive to retain meaningful portions of appropriate risks, not only to preserve foreign exchange, but also because this will provide a stronger incentive for the insurers to promote loss prevention.

126. Price. Price refers to the system of classifications, rates, and rating plans used by an insurance organization. In many developing countries, insurers agree among themselves as to the premium schedules for the various lines of insurance. This tariff price-fixing approach may be government-required or exist with the acquiescence of government officials. Besides resulting in insurance being more expensive than it needs to be, this type of system can create two problems: (1) restrictive price fixing in the market-place and (2) failure to recognize individual risk differences in the rating structure.

127. Commercial insurance rating in many developing countries does not reflect adequately individual differences in hazard levels. Many developing countries inherited their rating system and tariffs from their former metropolitan Powers. They simply copy the system and rates, usually adding a margin. In property insurance, the system may not reflect important hazard-related differences in construction, protection, occupancy, and exposure. This means that high hazard companies are rewarded at the expense of more efficient, loss-conscious producers. It is in society's interest to encourage good construction and sound design through insurers' rating systems.

128. A reasonable tariff or other rating system should reflect actuarial precision and a scientific approach to rate-making. A common rating system that recognizes broad hazard differences for many small enterprises, that may be uniformly applied, has administrative efficiencies that can lead to economy in rates. But even here certain hazard differences should be recognized. For larger risks, failure to recognize individual hazard differences creates extreme inequities. For medium- and larger-size enterprises, a system of rating plans that recognizes these differences can be developed. Examples include prospective experience rating, retrospective experience rating, schedule rating and dividend plans. 18/ For the most part, these rating systems are used in casualty insurance, while in the property lines, specific recognition of individual hazard levels and promulgation of individual rates is more appropriate.

129. In addition to rating systems that provide an incentive to reduce hazards, deductibles have long been recognized as a means of supporting loss control activities. If the policyholder knows that he is responsible for a portion of the loss, the policyholder has an incentive to reduce both the number and severity of losses. In many developing countries, such incentives either are not available or offer too few options and insufficient rate credit.

130. From a risk management perspective, deductibles permit the policyholder to absorb small, frequent losses and purchase insurance for the larger, less predictable losses. Deductibles promote efficiency in insurance purchasing and create considerable incentive to control losses. Insurers are encouraged to upgrade their practices with respect to appropriate use of and rate credit for deductibles. Any resulting loss of premium income probably would be more than offset by redirection in losses and administrative expense savings.

131. Service. The insurance product is intangible. In this respect, services provided by an insurance carrier play a critical role. Many insurers in developing countries could do much to improve services. Some risk management-related services in need of improvement are discussed below.

132. Risk assessment, the process of identifying and evaluating loss exposures, is given little emphasis by many insurers in developing countries. The approach tends to be one of applying given insurance products to policyholders rather than looking at the needs of a policyholder and trying to structure an insurance programme to meet those needs.

133. Insurers could be of great assistance to their commercial and industrial clients in this area. They could provide assistance in helping them to draw up a risk inventory, pointing out previously unknown and concealed risks. This service should apply to both insurable and non-insurable risks. The result would be a better risk management programme for their clients (and fewer claims to pay) and probably more insurance sales for the insurer, in recognition of previous gaps and shortcomings in coverage.

134. Insurers' and reinsurers' loss control services in developing countries have focused most on fire loss prevention inspection. The quality of this inspection service often is not as high as desired. A further problem is that the advice of most national and insurance inspection bureaux and of reinsurers tends to be insurance and rate oriented; rather than driven by a broader concept of risk analysis and control. A substantial need exists for insurers and reinsurers to expand the scope of their inspection services and for more frequent but primarily more extensive and technical analyses of exposures, with recommendations for alleviating hazards. Arguably, a monopolistic insurer - as the only insurer in the market - has a special obligation to provide a wide range of loss control and other services.

135. The timely and efficient payment of legitimate claims by insurers is the raison d'être for insurance. Unfortunately, claims are not paid as rapidly as desirable in some developing countries. This can irritate policyholders and could cause them to seek cover, legally or otherwise, from outside the local market. Additionally, claims handling is a major source of data for tariff-setting purposes. Too often, however, the data are not sufficiently disaggregated to permit a detailed study of the loss characteristics. A better use of such data could provide the actuarial basis for a more hazard-sensitive rating system.

136. Traditionally, insurers in developing countries have provided services - loss prevention, safety inspection, rating, claim adjusting, etc. - only if insurance was purchased. Insurers may want to consider unbundling such services from the insurance contract, offering them separately on a fee basis irrespective of whether the client purchases insurance.

3. The role of reinsurers

137. Many national, regional, and international reinsurers are interested in loss prevention and mitigation by policyholders and may offer extensive loss prevention services. However, in situations that involve little competition among reinsurers, reinsurers may themselves benefit from an unjustifiably high and rigid tariff system.

138. This over-simplification explains, in part, why a reinsurer may not oppose, and may even support, the use within a country of an artificially high and rigid tariff system. This behaviour does not encourage direct-writing companies to support a change in the rating system - changes that may better reflect hazard and foster sound risk management practices. A way to avoid this situation is for direct writing insurers of developing countries to take greater advantage of competition among reinsurers.

139. National, regional, and international reinsurers should be encouraged to undertake practices that encourage local insurers to develop plans and offer rating systems that are compatible with the promotion of risk management principles. Reinsurers can play a most important role in providing the environment that encourages such behaviour and in providing quality loss control and rating advice. Some professional reinsurers have for many years provided professional training and technical assistance to insurers in developing countries. Their continued activities in these areas are to be encouraged.

4. The role of intermediaries

140. For years the insurance intermediary (agent or broker) has played an important role in the insurance transaction. When an individual or business enterprise perceived a need for insurance protection, the insurance intermediary was there as the entity to join the buyer and seller in the insurance transaction. The intermediary has served additional functions such as assisting the buyer in focusing on the buyer's specific insurance needs and, where feasible, locating the appropriate insurance markets to meet those needs. Certainly in many countries, the insurance intermediary has been instrumental in raising the consciousness of the public as to the need for financial protection through the insurance mechanism.

141. However, in many developing countries, local intermediaries are not well informed. As a result, they cannot render high-quality advice to their clients. Clearly, a greater effort in education and training of local intermediaries would encourage a more efficient use of insurance.

142. The quality intermediary today should do more than serve as a facility for the purchase of insurance protection. For example, in the area of loss control, the commercial or industrial enterprise may require a number of outside services such as inspection, appraisal, or audit. Such services may

or may not be provided by insurance companies. In cases where they are provided, the quality of service may not meet the needs of the enterprise. Assistance also may be needed in the area of claims management or general consulting services. Parallel to the emergence of risk management has been the development by some international brokerage firms of risk management service entities or departments to meet the newly created demand for such services. One might anticipate a similar evolutionary pattern within developing countries.

143. Quality intermediaries in developing countries can be of particular assistance to small- to medium-size enterprises by more competitively shopping for insurance, where this is possible, and by helping to pinpoint insurance needs. They can bring pressure to bear on insurers to offer the full range of fairly priced, quality products needed by policyholders.

5. The international insurance market

144. Many international reinsurers, insurers, brokers, and consultants have been active in the promotion of risk management, taking positive roles in numerous aspects of loss control as well as in providing other fee-for-service risk management consulting services. Such entities have incentives, through increased business opportunities, to make their skills and expertise available to developing countries. Developing countries that create a positive environment, permit this expertise to be used to maximum advantage for the country.

145. However, the goal of self-reliance through increasing national expertise should be kept prominently in mind. Developing countries should take care to avoid simply permitting such advisers to "advise and depart", without nationals of the country obtaining maximum learning from this imported expertise.

C. The role of commercial and industrial enterprises 19/

146. Management cannot seek to profit by providing goods or services without facing the possibility that casualties will reduce earnings and deplete assets. Damage to property or theft may abruptly diminish flows of revenue and necessitate emergency expenditures. Liability to employees, customers, or others for damage to property or bodily injury may drain off revenues and require changes that obstruct operations.

147. Profits lost through casualties or through uneconomic use of insurance reflects as unfavourably upon management as does the shrinkage in earnings from any other cause. Indeed, casualty-related reductions in profit reveal inadequacies in management more sharply than do losses caused by economic recessions. Therefore, management must work diligently and systematically to control the risk of loss of profits and/or assets through casualties.

148. The nature of the risk exposures of commercial and industrial enterprises located in developing countries and the manner in dealing with them have been discussed throughout this report. To reiterate and expand briefly, there often is an insufficient appreciation of the risks and their adverse impacts and costs. The effects of indirect losses are too often minimized. Insurance purchased might not cover as broadly as would be desirable and it may be more expensive than it truly needs to be.

149. Commercial and industrial enterprises located in developing countries may have inadequate accounting and other systems to monitor operating results adequately. This can mean that the full impact of casualties may not be accounted for properly, or perhaps, not at all.

150. Such enterprises rely heavily on the advice of insurers and brokers. It must be realized, however, that insurers and brokers have an interest to sell insurance and may not have as strong an interest in preventing losses. Also, insurers and brokers often see the insurance they sell as being all that the client enterprise should need.

151. The loss exposures of such enterprises can be enormous, as discussed earlier. Inexperienced management, an underdeveloped infrastructural system and poor maintenance can all compound these exposures and result in an underestimation of their impact. Loss prevention is too often given far too little attention.

1. Management responsibilities

152. If risk management is to play fully its integral part in development, responsibility for its successful integration must rest ultimately with the top executives of the commercial and industrial enterprises of developing countries. This means that the executives must both make a full commitment to risk management and become knowledgeable enough to recognize its potentials. Probably the single most important contribution to the improvement of risk management in developing countries would be for such executives to embrace the minimization of loss concept as strongly as some do the maximization of profits concept.

153. Profitability and risk management are not incompatible. Good risk management is good business. Reducing losses over time has the effect of enhancing the wealth and viability of the enterprise. The best way for executives to cause lower-level managerial awareness of risk management and its importance to the organization is to include measures of the success of a risk management programme as part of the overall evaluation process. Success in controlling losses should be as properly rewarded as success in the manufacturing, production, and sales processes. However, employees must possess the tools necessary to accomplish the task. Training is a key to making the concept of risk management a pervasive attitude among all supervisors and personnel.

2. The role of multinational enterprises

154. When an MNE considers operating in a developing country, it should understand the economic, social, cultural, and political nature of the government and the people. Developing countries are in need of the assistance provided by MNEs and the developed nations of the world, yet they have a goal of national and economic independence. If a MNE decides to commit resources to a developing country, it should do so with a long-term perspective and in partnership with the host nation. If facilities are to be constructed, they should incorporate the latest suitable features that assure a safe and continuous operation. Any possible negative impact on the environment and specific hazards associated with the facility and its operations should be clearly communicated to the host government and all involved personnel. Manufacturing and process standards followed in the MNEs home country also

should be applicable to its developing country affiliate. Most processes have been engineered with safety in mind, yet personnel must be properly trained and supervised to maintain a safe environment.

155. The local MNE affiliate can serve as a model for sound risk management and can promote risk management activity within the country. Risk management experts - for example, property conservation engineers and occupational safety specialists - could use their talents in constructive ways beyond the confines of their MNE employer.

156. Commercial enterprises also must realize that they have a responsibility beyond the narrow concept of efficient operation and profitability. This broader concept of responsibility is especially true for the MNE. For example, one MNE has adopted a policy statement that "We will participate in all societies in which we do business as a responsible and ethical citizen, dedicated to continuing social and economic progress." Others have similar policy statements. MNEs' policy statements should require disclosure to the host government and local employees of actual or potential danger in the use of hazardous technology, chemicals, and processes. Such declarations are important in that they set the tone for the enterprises' entire operation. Fortunately, a number of MNEs have displayed this enlightened self-interest of recognizing and accepting this broader degree of responsibility.

157. MNEs can sometimes create problems for developing countries and for their local affiliates. For example, some MNEs try to establish risk management practices for local affiliates. This can be met with resistance unless an appropriate understanding of local conditions and constraints exists. For example, one MNE directed, as part of its employee safety programme, that employees of an affiliate wear safety goggles of the type used in its home country. The problem was that the hot, humid conditions of the host country caused the goggles to fog badly, resulting in an increase in hazard rather than a decrease.

158. A problem related to the utilization of modern technologies in developing countries is the feeling by some MNEs that as long as they have satisfied the minimum requirements of the host country, they have met their obligations to the people. Clearly if maximization of profit is the most significant goal of a new venture, satisfying the minimum legal and regulatory constraints will, at least in the short run, optimize the profit goal. Short cuts will be taken in plant design regarding damage control and safety. The commitment to the training of supervisors and employees will not be as strong. Unique hazards associated with the various processes of the plant will be either de-emphasized or ignored. If a disaster occurs, the plant personnel will not be properly trained to handle the emergency. A small, controllable loss easily can gravitate to a large, catastrophic event. Such a loss can spread to the local community, itself not prepared for or able to deal with such an event. Chaos reigns due to the failure of the MNE to apply existing state-of-the-art techniques of risk management on a world-wide basis to facilities in developing countries.

159. Some MNEs themselves do not have a strong commitment to risk management, with the result that their standard may, in fact, be deficient. For example, some MNEs discourage or will not even permit their head office risk manager or related experts to go to an affiliate's location to review the affiliate's

risk management programme. Such a prohibition is counter-productive. On the other hand, some developing countries discourage such risk managers and other experts from coming to the affiliate and providing advice. This too can be short-sighted.

160. MNEs can create problems for developing countries in other ways. For example, the Loss Prevention Association of India (LPA) made the following observation:

> Many [multinational enterprises] ... provide to their Indian counterparts, detailed drawings, manuals and other technical data required for establishing, operating and maintaining plant, machinery and processes to produce an end-product. They also provide expertise in maintaining quality and sometimes even in marketing the products. They train the operating and maintenance personnel of the Indian plant in their (collaborator's) plants. However, when it comes to making available such support for safety, there is a marked difference in attitudes. [MNEs] ... in general have not made available to their counterparts in developing countries data on process and material hazards; standards of safety to be maintained; methods, procedures, appliances to be used to maintain such standards; systems to identify and evaluate risks and methods to deal with risks. 20/

161. The LPA also commented on the difficulties in establishing and enforcing industry-level standards, especially with respect to MNEs:

> Firstly, what constitutes a hazard is perceived differently in different countries and because of this, accepted tolerance levels to hazards (which we would call standards) vary from country to country.
>
> Secondly, the engineering and other measures adopted to regulate risks vary even more significantly because of technological innovations and because of management philosophies ... When different technologies to produce the same product have been imported from different countries, this variation in methods used to provide protection often baffles safety engineers.
>
> Thirdly, the standards setting agencies in developing countries, particularly in India and perhaps in the British Commonwealth have drawn heavily from British standards, law and practices. This philosophy itself has created its share of problems arising from social, climatic and other differences that exist between the two countries. If to this situation, we superimpose variations in safety standards and practices that have already been imported and established, the task of standardization is made more difficult.
>
> Finally, it is necessary to appreciate the evolution of the problems of risk management itself. Risks have proliferated because of imposition of technology in a society that was otherwise not technological. The man-machine interface has not only led to accidents and losses but more alarmingly to social stress in developing countries. When different levels of technologies and consequently divergent severities of risks are imposed on a developing society, there is a great need to reduce the mismatch between men and machines. [MNEs] ... have generally not

recognized this need and have left it to the local governments to update the skills and attitudes of millions to absorb this technology safely. Unfortunately, as Bhopal has shown, the costs are unaffordable.

162. The message of the LPA speaks succinctly for itself and needs no elaboration. The intent is not to criticize all or even most MNEs, but rather simply to point out difficulties that can be encountered - as viewed from the host country's perspective. MNEs have both a special, positive role to play in the promotion of risk management, and they also have special obligations. Many MNEs are model citizens in developing countries and deserve the full co-operation and support of the host government. Regrettably, some MNEs also occupy the other end of the spectrum.

3. The small business

163. Much of the preceding discussion has focused on risk management for larger industrial and commercial enterprises in developing countries. Most enterprises in developing countries are, however, small operations. Sound risk management for them is arguably more important, not less so, since their margin for error is less.

164. The typical business in a developing country must rely on insurance and the advice and counsel of the insurance company and agent or broker. Loss retention may be appropriate but only at some modest level via a deductible for which adequate premium credit is given.

165. Loss control activities for small operations flow from common sense, experience, and advice from the agent or insurance company. This is not to minimize the effect of risk management on the small firm's results. It is just that the range of options is less and the consequences of a mistake to the survivability of the firm can be severe.

166. A smaller enterprise will not have a risk manager or even an insurance manager. The smaller enterprise would be well advised, however, to designate a high-level person to become knowledgeable about risk management and its benefits. This person should review the company's operations carefully to pinpoint possible loss areas and ways to minimize them. A well-informed agent or broker can assist in this process, although too often an insurance agent or broker focuses only on insurable losses.

4. Risk management organizations

167. Commercial and industrial enterprises should encourage the development of risk management organizations among the risk management specialists of the country. Risk management organizations exist in many developed countries and some developing countries, including Brazil, India, Mexico and Nigeria. A list of them is provided in annex I (see TD/B/C.3/218/Add.1). These risk management organizations provide a useful forum for the exchange of ideas. Networks develop among risk managers that are most helpful in the growth of risk management knowledge within the country.

D. The role of lending institutions

168. Both purely national and international lending institutions also could aid in the promotion of risk management in developing countries. For its

part, the World Bank has prepared a booklet entitled "World Bank and International Bank Corporation Guidelines for Identifying, Analyzing and Controlling Major Hazard Installations in Developing Countries". These guidelines are to be followed in connection with World Bank-financed projects.

169. The major money-centre banks throughout the world could also support these or similar guidelines with respect to the projects they fund. It would be expected that smaller, local banks and other lending institutions could do likewise over time.

170. Also, individual lending institutions of all types should gain an appreciation for the importance of their granting extra capital to finance loss control, safety, and environmental protection improvements.

E. The role of educational and training institutions

171. Local, foreign, and regional education and training institutions can play a vital role in the promotion of risk management in developing countries. Universities in many developing countries have well-developed management and other programmes. However, risk management is not commonly taught. Developing countries may want to give consideration to having such courses, or perhaps even having an entire curriculum, offered through their universities. Universities and institutions involved in the sciences and technical areas could offer courses either over the entire spectrum of risk management or with respect to selected elements only, for example, in the safety engineering area.

172. Many developing countries have insurance training institutes, and these institutes can be an important source of risk management information and training. Already, some institutes in developing countries are offering courses on various aspects of risk management. This trend is to be encouraged. Those countries that do not now offer risk management training through their insurance institutes should give serious consideration to the benefits that could be derived not only for the institute but for the insurance industry and economy as a whole by offering such courses.

173. Besides insurance institutes, many developing countries have safety-related institutes. Such institutes also can have an important role to play in the promotion of risk management. The activities of insurance institutes, safety institutes, and others that offer risk management training should be closely co-ordinated.

174. Both university professors and training institute personnel often publish articles, pamphlets, books, and monographs on various subjects. While much has been written about risk management in developed countries, very little has been written about it in developing countries and even less has been written by knowledgeable persons from developing countries. Academic, training, and industry personnel in developing countries could contribute greatly to the promotion of risk management by conducting research in this area and publishing the results.

175. Important UNCTAD/UNDP-supported regional insurance institutes include the Insurance Institute for Asia and the Pacific in Manila; the West African Insurance Institute in Monrovia; the International Institute of Insurance in Yaoundé; and the Singapore Insurance Training Centre in Singapore. These and other insurance institutes in developing countries offer regional training and

have an excellent opportunity to participate in the promotion of risk management in developing countries. They are encouraged to continue their existing offerings in this area and to deepen and broaden the scope of existing programmes relating to risk management.

176. Developing countries should not ignore the education and training opportunities that exist in universities and other institutions in developed countries. Many universities in the United States offer risk management educational programmes. In Europe, the Federal Republic of Germany has for a long time given consideration to the principles of risk management in universities involved in the sciences and technical areas. More recently, other European universities in the United Kingdom, Switzerland and elsewhere have increased their offerings. Besides universities, numerous safety and loss control institutes are located in developed countries and, of course, a few insurers and reinsurers are noted for their training activities. The annexes provide a listing of sources of risk management information, training, and education internationally.

F. <u>The role of unions</u>

177. Labour unions are prevalent in many developing countries and have been concerned for decades about worker safety. Unions and management should together create workable standards for all forms of worker safety and should monitor results closely.

178. Union members will know firsthand about employee safety and can constitute a major contribution toward improving loss prevention and safety measures. Certainly, also the important work already completed in this area by the International Labour Office and by national labour organizations should be consulted and integrated into the process.

G. <u>The role of religious and cultural organizations</u>

179. Religious and cultural organizations can do much to increase risk management awareness. These activities have been and likely will remain targeted toward helping individuals as opposed to business enterprises but, obviously, businesses are composed of individuals.

180. Such organizations can help educate citizens about loss prevention, safety, and how to respond to accidents and emergencies. Already they often provide emergency medical care and shelter. Good risk management is covered with these very types of responses.

181. Also, religious and cultural organizations can help shape risk management practices to be compatible with the citizens' value systems.

H. <u>The role of regional and international organizations</u>

182. Regional co-operative associations and organizations also should be sensitized to the benefits that can accrue to developing countries from appropriate risk management practices. For example, the various regional commissions associations and reinsurers could be encouraged to include risk management components within their activities.

183. Numerous international organizations are already involved in various aspects of risk management. The International Labour Office, through its tripartite approach (employer, employee, and government working together) has been a positive force in the promotion of employee health and safety for decades. The World Health Organization's responsibilities extend beyond assistance in national health care planning, to include aspects of risk management. The United Nations Educational, Scientific, and Cultural Organization has been involved in the assessment and mitigation of earthquake and other risks. The United Nations Development Programme has supported numerous safety, loss prevention, and insurance programmes and related training and educational activities throughout the world. The United Nations Environment Programme has, among other things, designed training programmes to try to influence managers' values and attitudes and ultimately their decisions with respect to environmental matters.

184. The United Nations Disaster Relief Organization provides pre-disaster planning advice and generally promotes the study, prevention, control, and prediction of natural disasters. Nuclear safety standards and other related matters fall within the purview of the International Atomic Energy Agency. As alluded to earlier, the World Bank's financial role provides it with an excellent opportunity to influence the adoption of a wide range of appropriate risk management practices with respect to large, often hazardous projects in developing countries.

185. Additionally, the International Development Organization, the International Finance Corporation, the International Telecommunications Union, and the International Civil Aviation Organization all have, or can contribute to the promotion of, sound risk management practices. And of course, the United Nations Conference on Trade and Development has been actively involved in numerous aspects of risk management, including loss prevention and especially in the role that insurance can play. The UNCTAD Special Programme on Insurance has provided technical assistance for governments on insurance matters, has published several insurance studies, and supports insurance training in several countries and regions. Its activities have, however, had an understandable insurance orientation, and insurance is only a part of the risk management equation.

186. It is clear, therefore, that numerous international organizations are involved in portions of the risk management process. Risk management by its nature cuts across numerous specialities, so the multiplicity of involvement by various international organizations should not be surprising. However, to perform its mission most effectively, risk management should be thought of and applied as an integrated process - not as separate pieces. A recent United Nations report commented critically on the proliferation of agencies to which a government may turn for the same kind of developmental assistance. Herein lies a problem: too little co-ordination of activities among international organizations and perhaps too much overlap. No centralized source exists where information has been collected and collated on a world-wide basis as to governmental and insurance risk control and financing requirements, as to loss information, or as to general sources of training and information on risk management.

Chapter IV

CONCLUSION

187. Risk management offers many potential benefits for developing countries. Although it is no panacea for the many problems they face, it does have a constructive role to play, provided practices are attuned to the prevailing legal, cultural, economic, environmental, and political realities. However, it would be unrealistic to believe that any one organization can be the cause of successful integration of risk management within a developing country. A co-operative approach is needed.

188. The successful promotion of risk management will require the endorsement and active support of government and governmental officials. This study has outlined various means by which this support can be implemented, recognizing that governments' first obligation is the protection of their citizens.

189. Government alone, however, cannot achieve the goal. The insurance industry - both national and international - can play a particularly critical role provided certain changes are made in some practices in many developing countries. The industry's failure to make these pro-policyholder changes could result ultimately in a decrease in business for the local insurance industry and, more importantly, in certain local commercial and industrial enterprises not being as competitive as they otherwise might be.

190. Of course, the risk management process will not become an integral part of management in developing countries unless the relevant commercial and industrial enterprises are willing to allow this to occur. This has been a problem in developed countries and can be expected to be one in developing countries. Management must be convinced that the financial and non-financial benefits of sound risk management outweigh the costs. This demonstration requires both research and education. The multinational enterprise, because of its superior resources and its special obligations, can be a potent force behind risk management promotion.

191. Through their power to influence borrower actions, lending institutions can be expected to do much to promote sound risk assessment and loss control. They are encouraged to devote more attention to these matters.

192. Educational and training institutions in developed and developing countries can be expected to contribute significantly to risk management practice and knowledge. As in other endeavours, effective education and training programmes will prove essential.

193. Labour unions, because of their long-term concern for worker safety, can join with management in creating a safer work environment. Religious and cultural organizations also can play an important role in helping to mould risk management practices so that they are in accord with the society's value system.

194. Governments of developed market-economy countries and of the socialist countries of Eastern Europe should continue and increase the sharing of their risk management knowledge and skills, and it is important that they should encourage their own MNEs to do likewise. Governments of such countries should be sensitive to potential difficulties caused to developing countries by their

MNEs and should work with the MNEs to minimize disruptions. The bilateral and multilateral sharing of data and loss control standards is encouraged. Delays by governments in reporting results of important industrial accidents and disasters that can have international implications should be avoided. Governments, to the extent feasible, should encourage or require disclosure by their MNEs of the existence of hazards to host governments in a manner comparable to that which they themselves require.

195. Regional and international organizations should recognize their special opportunities to assist in risk management promotion. A better co-ordination of effort is needed.

196. It has been suggested that an inter-agency committee on industrial safety be established. The committee's purpose would be to achieve the dual goal of (1) providing a single focal point to which governments could refer on matters relating to industrial safety and environmental impact, and (2) avoiding duplication of efforts by agencies involved in the same or complementary aspects of the problems under review.

197. This approach has merit but industrial safety is only a part of risk management, albeit a critically important part. If risk management ultimately is to make a meaningful contribution to the physical and economic well-being of a country, to its citizens, and to its commercial and industrial enterprises, a better co-ordinated approach is needed at both the national and international levels.

198. At present, it is unrealistic to expect risk management specialists to emerge in most developing countries. It is, therefore, all the more important to have co-operation among the various interested and affected entities and to draw from the available international expertise. One approach to stimulating this necessary international co-operation would be to establish a broad-based international working party to make detailed recommendations on how best to bring about this desired result.

199. At the national level, one seemingly sound approach to encourage greater co-operation would be to establish a specific pilot project for applying the risk management process. A large national commercial or industrial enterprise could serve as the target for this effort. All interested parties - the enterprise itself, government, insurers, labour unions, lending institutions, training institutions, etc. - could be involved in a detailed project of risk assessment, control and finance for the selected enterprise. Perhaps special assistance could be provided by those in developed countries who are risk management specialists. Such a pilot project could serve as the spark for further risk management promotion activities by all interested parties, each acting in its own way but with co-ordination.

200. In summary, no one entity can cause modern yet appropriate risk management practices to be adopted in developing countries. However, a concerted effort by government, the insurance industry, commercial and industrial enterprises and others can ensure that sound risk management contributes its share to economic and social progress.

Notes

1/ Resolution 27 (XI) on risk management in developing countries.

2/ This study has been prepared under the supervision of Prof. H. Skipper of the Center for Risk Management and Insurance Research at Georgia State University. The Center benefited greatly from the generous comments of numerous experts, and acknowledges in particular and with appreciation the help of Mrs. G.C. Arnaldo (Philippines), Dr. J.M. Benchetrit (Argentina), Prof. R.A. Carter (United Kingdom), Prof. J. Charbonnier (France), Mr. F. Kloman (United States), Mrs. E. Lichota (United States), and Mr. V.K. Mody (India).

3/ See, for example, O. Giarini and H. Loubergé, The Diminishing Returns of Technology (Oxford: Pergammon Press, 1978).

4/ The term "multinational enterprise" (MNE) as used throughout this study should be understood to refer to both privately-owned and State-owned enterprises.

5/ "Insurance on large risks in developing countries" (1977), TD/B/C.3/137.

6/ Henri Fayol, General and Industrial Management (New York: Pitman Publishing Corp., 1949), pp. 5-6. This book is a translation of the original.

7/ A.R.B. Amerasinghe, "Risk Management in Third World Countries: An Introduction", (no date), p. 7.

8/ Frank E. Bird, Jr. and George L. Germain, Practical Loss Control Leadership (Loganville, Ga., United States; Institute Publishing Division of International Loss Control Institute, 1986), pp. 11-12.

9/ H. Felix Kloman, "The risk management revolution", Fortune (July 1976).

10/ Risk retention methods, including self-insurance, and the factors influencing retention are discussed in many risk management books. See annex II to this study for a list of some of these books (in TD/B/C.3/218/Add.1).

11/ There is not space to present here approaches adapted to particular countries or groups of countries, although such an exercise is necessary.

12/ Conference resolution 42 (III) on insurance and reinsurance.

13/ The term "domestic insurer" as used here refers to either a locally-owned or foreign owned domiciled or licensed insurer in the country.

14/ "Insurance on large risks in developing countries" (op.cit.), p. 16.

15/ For an analysis of captive insurers in the context of developing countries, see "The impact of captive insurers on the insurance markets of developing countries" (1985), TD/B/C.3/192.

16/ Roger Batstone, "Engineering and the Environment in Major Engineering Projects", Second World Conference on Engineering and the Environment, New Delhi, 7-9 November 1985.

17/ "Loss prevention in fire and marine cargo insurance" (1980), TD/B/C.3/162 and "Cargo loss prevention: suggestions for a domestic policy in developing countries" (1982), TD/B/C.3/162/Supp.1.

18/ It is beyond the scope of this study to discuss these plans. For information on them, see J.J. Launie, J. Finley Lee, and Norman A. Baglini, Principles of Property and Liability Underwriting, second ed., (Malvern, Pa.: Insurance Institute of America, 1977), Chaps. 8-9.

19/ This section draws, in parts, from Donald L. MacDonald, Risk Control in the Overseas Operation of American Corporations (Ann Arbor, Michigan: University of Michigan, no date).

20/ Letter and annex from V.K. Mody to Harold Skipper, Jr. dated 13 May 1986.

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This report draws on the following sources:

A.R.B. Amerasinghe, "Risk Management in Third World Countries: An Introduction", (no date).

Roger Batstone, "Engineering and the environment in major engineering projects", paper presented at the Second World Conference on Engineering and Environment, New Delhi, India, 7-9 November 1985.

H. Felix Kloman, "The risk management revolution", in Fortune (July 1976).

Donald L. MacDonald, Risk Control in the Overseas Operation of American Corporations (Ann Arbor, Michigan: University of Michigan, no date).

R.A. Muckleston, Risk Management for the Smaller Company (London; Association of Insurance and Risk Managers in Industry and Commerce, 1977).

United Nations Disaster Relief Organization, "Seminar on Environmental Management of Industrial Process Safety and Hazard", Geneva, Switzerland, 2-5 December 1985.

UNITED NATIONS

TD

United Nations Conference on Trade and Development

Distr.
GENERAL

TD/B/C.3/218/Add.1
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TRADE AND DEVELOPMENT BOARD
Committee on Invisibles and Financing
Related to Trade

THE PROMOTION OF RISK MANAGEMENT IN DEVELOPING COUNTRIES

Study prepared at the request of the UNCTAD secretariat by
the Center for Risk Management and Insurance Research,
Georgia State University, Atlanta, Georgia,
United States of America

Addendum

ANNEXES

I. Institutions offering risk management education and/or training

II. Important books, manuals, journals and directories on risk management and insurance

III. International risk management organizations

GE.87-50026/6571E

Annex I

INSTITUTIONS OFFERING RISK MANAGEMENT EDUCATION AND/OR TRAINING

Country	Institution
Belgium	Centre d'Etudes, Coopération et Développement 11 rue Veydt 1050 Bruxelles BELGIUM
	Institut Supérieur de Risk Management (ISRM) Avenue Louise 114 Boîte postale 29 1050 Bruxelles BELGIUM
Canada	Chaire en Assurance Faculté des Sciences de l'Administration Université Laval Québec, Québec GIK 7P4 CANADA
Denmark	Institute of Insurance Copenhagen School of Economics and Administration 10 Julius Thomsens Plads DK 1925 Kobenhavn 5 DENMARK
France	Centre d'Etudes Supérieures de Gestion de Risques 8 Chaussée d'Antin F-75009 Paris FRANCE
	Centre d'Education Permanente de l'Assurance 8 Chaussée d'Antin F-75009 Paris FRANCE
	Ecole Nationale d'Assurance 292 rue St. Martin F-75004 Paris FRANCE

Country	Institution
Germany, Federal Republic of	Institut für Versicherungswissenschaft der Universität Köln Kerpenerstrasse 30 D-5000 Köln FEDERAL REPUBLIC OF GERMANY
	Institut für Versicherungswissenschaft der Universität Mannheim Schloss D-6800 Mannheim 7 FEDERAL REPUBLIC OF GERMANY
	Seminar für Bank und Versicherungsbetriebslehre Universität Hamburg Von Melle Park 5 D-2000 Hamburg 13 FEDERAL REPUBLIC OF GERMANY
Switzerland	Geneva Association 18 chemin Rieu CH-1208 Geneva SWITZERLAND
	Institute of Insurance Economics St. Gall Graduate School of Economics, Business and Public Administration Kirchlistrasse 2 CH-9010 St. Gallen SWITZERLAND
	Swiss Insurance Training Centre Seestrasse 133 CH-8002 Zurich SWITZERLAND
United Kingdom	Chartered Insurance Institute 20 Aldermanbury London EC2V 7HY ENGLAND
	Glasgow College of Technology Department of Banking and Insurance Cowcaddens Road Glasgow G4 0BA SCOTLAND

Country	Institution
United Kingdom (continued)	The Institute of Risk Management Plantation House 31-35 Fenchurch Street London EC3M 7DX ENGLAND
	University of Nottingham Department of Industrial Economics, Accountancy and Insurance University Park Nottingham NG7 2RD ENGLAND
United States	The American Institute for Property and Liability Underwriters Insurance Institute of America 720 Providence Road Malvern, Pennsylvania 19355 United States of America
	American Management Association 135 W. 50th Street New York, New York 10020 United States of America
	College of Insurance 1 Insurance Plaza 101 Murray Street New York, New York 10007 United States of America
	College of Business Administration The Florida State University Tallahassee, Florida 32308 United States of America
	Department of Risk Management and Insurance College of Business Administration Georgia State University University Plaza Atlanta, Georgia 30303 United States of America
	Department of Risk Management and Insurance College of Business Administration University of Georgia Athens, Georgia 30602 United States of America

Country	Institution
United States (continued)	International Loss Control Institute Hwy. 78, P.O. Box 345 Loganville, Georgia 30249 United States of America
	Risk and Insurance Management Society, Inc. 205 East 42nd Street New York, New York 10017 United States of America
	College of Business Administration The University of South Carolina Columbia, Sc 29208 United States of America
	School of Business Administration Temple University Speakman Hall Philadelphia, Pennsylvania 19122 United States of America
	The Wharton School University of Pennsylvania 307 Colonial Penn Philadelphia, Pennsylvania 19174 United States of America
	College of Business Administration University of Wisconsin Madison, Wisconsin 53706 United States of America
Worldwide	For a listing of occupational safety and health institutions throughout the world, see: International Directory of Occupational Safety and Health Services and Institutions International Labour Office CH-1211 Geneva SWITZERLAND

Annex II

IMPORTANT BOOKS, MANUALS, JOURNALS AND DIRECTORIES ON RISK MANAGEMENT AND INSURANCE

BOOKS

Property Losses
Paul I. Thomas and P.B. Reed
4th edition, 1977
McGraw Hill Book Co.
1221 Avenue of the Americas
New York, New York 10020
United States of America

Practical Loss Control Leadership
Frank E. Bird Jr. & George L. Germain
Institute Publishing, 1986
Hwy. 78, P.O. Box 345
Loganville, Georgia 30249
United States of America

Chemical Catastrophes
Regulating Environmental Risk Through Pollution Liability Insurance
Martin T. Katzman
S.S. Huebner Foundation Series, 1985
R.D. Irwin Inc.
Homewood, Illinois
United States of America

Safety and the Work Force
John D. Worral, Editor
I.L.R. Press, 1983
Cornell University
Ithaca, New York 14853
United States of America

The Theory of Environmental Policy
W.J. Baumol and W.E. Oates
Prentice Hall Inc., 1975
Englewood Cliff, New Jersey
United States of America

Corporate Risk Management
Neil A. Doherty
McGraw Hill Book Co., 1985
1221 Avenue of the Americas
New York, New York 10020
United States of America

Handbook of Risk Management
R.L. Carter and N.A. Doherty
Kluwer-Harrap Handbooks
London
ENGLAND

Acceptable Risk
Baruch Fischhoff, et al.
Cambridge University Press, 1981
Cambridge
ENGLAND

Techniques of Safety Management
Dan Petersen
McGraw-Hill Book Company, 1971
1221 Avenue of the Americas
New York, New York 10020
United States of America

La Maitrise des Risques
Erik Kauf
1978
Paris
FRANCE

Risk Management
R.L. Carter et al.
CII Tuition Service, 1981
London
ENGLAND

Financial Applications for Risk Management Decisions
Risk Sciences Group, Inc., 1981
Fireman's Fund Insurance Companies
San Francisco, California
United States of America

Company Insurance Handbook
Gower Publishing Co. Ltd, 1984
Gower House
Croft Road, Aldershot
Hampshire GU11 3HR
ENGLAND

Captive Insurance Companies: Establishment, Operation, and Management
P.A. Bawcutt
Dow Jones-Irwin, 1982
Homewood, Illinois 60430
United States of America

Essentials of the Risk Management Process, Volumes I and II
George L. Head and Stephen Horn II
Insurance Institute of America, 1985
720 Providence Road
Malvern, Pennsylvania 19355
United States of America

Risk Management Concepts and Applications
Robert I. Mehr and Bob A. Hedges
Richard D. Irwin, Inc., 1974
10 East 168th Street
South Holland, Illinois 60474
United States of America

Readings on Risk Control
Insurance Institute of America, 1983
720 Providence Road
Malvern, Pennsylvania 19355
United States of America

Readings on Risk Financing
Insurance Institute of America, 1983
720 Providence Road
Malvern, Pennsylvania 19355
United States of America

Principles of Risk Management and Insurance, Volumes I & II
C.A. Williams, George L. Head, Ronald C. Horn and G. William Glendenning
American Institute for Property & Liability Underwriters, 1981
720 Providence Road
Malvern, Pennsylvania 19355
United States of America

Handbook of Security
Kluwer-Harrap Handbooks
London
ENGLAND

Risk Management for the Smaller Company
R.A. Muckleston
The Association of Insurance and Risk Managers in Industry and Commerce, 1977
London
ENGLAND

The Role of the Risk Manager in Industry and Commerce
J.R. Parkinson
Keith Shipton Developments Ltd., 1976
London
ENGLAND

Total Loss Control
John A. Fletcher and Hugh M. Douglas
Pitman Press, Bath, Somerset, 1971
London
ENGLAND

Risk Management and Insurance
C.A. Williams, Jr. and R.M. Heins
McGraw-Hill Book Company, 1985
1221 Avenue of the Americas
New York, New York 10020
United States of America

Risk Management: Text and Cases
Mark Greene and Oscar N. Serbein
Reston Publishing, 1983
Reston, Virginia 22090
United States of America

Introduction au Risk Management
Rodney Crisp
1978
Paris
FRANCE

An Introduction to Risk Management
Neil Crockford
Woodhead-Faulkner, 1980
Cambridge
ENGLAND

Risk Management: Practical Ideas & Applications
Edward W. Siver
Risk Management Society Publishing, Inc., 1979
205 East 42nd Street
New York, New York 10017
United States of America

Risk Control in the Overseas Operations of American Corporations
Donald L. MacDonald
University of Michigan
Ann Arbor, Michigan
United States of America

The Export of Hazard
Jane J. Ives, ed.
Routledge & Kegan Paul, 1985
9 Park Street
Boston, Massachusetts 02108
United States of America

Global Risk Management: How U.S. International Corporations Manage Foreign Risks
Norman A. Baglini
Risk Management Society Publishing Inc., 1983
205 East 42nd Street
New York, New York 10017
United States of America

Corporate Uncertainty & Risk Management
Edward P. Lalley
Risk Management Society Publishing, Inc., 1982
205 East 42nd Street
New York, New York 10017
United States of America

Practical Risk Management
J.E. Bannister and P.A. Bawcutt
Witherby, 1981
London
ENGLAND

The Role of the Risk Manager in Industry and Commerce
J.R. Parkinson
Keith Shipton Developments in Association with Woodhead-Faulkner, 1976
London
ENGLAND

Risk Assessment: Report of a Royal Society Study Group
The Royal Society
6 Carlton House Terrace
London SW14 5AG
ENGLAND

Avoiding Surpises
Frederic C. Church, Jr.
Boston Risk Management Corporation, 1982
Boston, Massachusetts
United States of America

La Gestion de la Sécurité de l'Enterprise
Jacques Charbonnier
L'Argus Publishers, 1976
Paris
FRANCE

Pratique du Risk Management
Jacques Charbonnier
L'Argus Publishers, 1983
Paris
FRANCE

Le Risk Management Européen
Jacques Charbonnier
L'Argus Publishers, 1985
Paris
FRANCE

MANUALS

<u>Risk Financing</u>
International Risk Management Institute, Inc.
10300 North Central Expressway
Bldg. 3, Suite 208
Dallas, Texas 75231
United States of America

<u>Self-Insurance Manual</u>
NILS Publishing Company
21625 Prairie Street
Chatsworth, California 91311
United States of America

<u>Safety Management Manual</u>
The Merritt Company
P.O. Box 955
Santa Monica, California 90406
United States of America

<u>Practical Risk Management</u>
1700 Montgomery Street
San Francisco, California 94111
United States of America

<u>Risk Management Manual</u>
The Merritt Company
P.O. Box 955
Santa Monica, California 90406
United States of America

<u>Protection of Assets Manual</u>
The Merritt Company
P.O. Box 955
Santa Monica, California 90406
United States of America

<u>Strategies for Insurance Coverages</u>
Bernard J. Daenzer and William R. Feldhaus
The Merritt Company
P.O. Box 955
Santa Monica, California 90406
United States of America

JOURNALS

<u>Assurances</u>
1140 Ouest Bl de Maisonneuve
Montréal, Québec H3A 3HI
CANADA

L'Argus des Assurances and Argus International
2, rue de Châteaudun
75009 Paris
FRANCE

Assicurazioni
Istituto Nazionale delle Assicurazioni
Via Sallustina
51, 00167 Roma
ITALY

L'Assureur Africain
Fédération des Sociétés d'Assurances de Droit National Africain
B.P. 308 Dakar
SENEGAL

International Insurance Monitor
International Media, Inc.
P.O. Box Camden
Maine 04843
United States of America

Bank Risk
Tillinghast, Nelson & Warren
722 Post Road
Darien, Connecticut 06820
United States of America

Best's Review, Property/Casualty Edition
A.M. Best Company
Oldwick, New Jersey 08858
United States of America

Business Insurance
Crain Communications, Inc.
740 Rush Street
Chicago, Illinois 60611
United States of America

Captive Insurance Company Reports
Tillinghast, Nelson & Warren
722 Post Road
Darien, Connecticut 06820
United States of America

CPCU Journal
Society of Property and Casualty Underwriters
Kahler Hall
720 Providence Road
Malvern, Pennsylvania 19333
United States of America

Fire Journal (NFPA)
National Fire Protection Association
Batterymarch Park
Quincy, Massachusetts 02269
United States of America

Fire Prevention (FPA-Journal)
Fire Protection Association
Aldermary House
Queen Street
London EC4N 1TJ
ENGLAND

Foresight: The International Journal of Insurance and Risk Management
Risk & Insurance Research Group Ltd.
4 Henrietta Street
Covent Garden
London WC3E 8PS
ENGLAND

International Insurance Report
Risk & Insurance Research Group Ltd.
4 Henrietta Street
Covent Garden
London WC3E 8PS
ENGLAND

The Geneva Papers on Risk and Insurance
The Geneva Association
18, chemin Rieu
CH-1208 Geneva
SWITZERLAND

Government Risk Management Reports
Tillinghast, Nelson & Warren
722 Post Road
Darien, Connecticut 06820
United States of America

Internationale Bibliographie der Versicherungsliteratur
Institut für Versicherungswirtschaft an der Hochschule St. Gallen
Kirchlistrasse 2
CH-9010 St. Gallen
SWITZERLAND

International Security Review
UNISAF Publications Ltd.
Queensway House, 2 Queensway
Redhill, Surrey RH1 1QS
ENGLAND

International Social Security Review
Association Internationale de la Securité Sociale
Geneva
SWITZERLAND

<u>Journal of the Chartered Insurance Institute</u>
Chartered Insurance Institute
20 Aldermanbury
London EC2V 7HY
ENGLAND

<u>The Journal of Risk and Insurance</u>
The American Risk and Insurance Association
Department of Finance
College of Business Administration
University of Central Florida
Orlando, Florida 32816
United States of America

<u>Post Magazine & Insurance Monitor</u>
Buckley Press Ltd.
58 Fleet Street
London EC4Y 1JU
ENGLAND

<u>Risk Analysis</u>
Journal of the Society of Risk Analysis
Plenum Publishing Company
233 Spring Street
New York, New York 10013
United States of America

<u>Risk Management</u>
Risk and Insurance Management Society
205 East 42nd Street
New York, New York 10017
United States of America

<u>Risk Management Reports</u>
Tillinghast, Nelson & Warren
722 Post Road
Darien, Connecticut 06820
United States of America

<u>The Risk Report</u>
International Risk Management Institute, Inc.
10300 North Central Expressway
Bldg. 3, Suite 208
Dallas, Texas 75231
United States of America

<u>Security Gazette</u>
AGB Business Publications Ltd.
Middlesex HA4 9LT
ENGLAND

Security Management
American Society for Industrial Security
Suite 1201
1655 North Fort Myer Drive
Arlington, Virginia 22209-9958
United States of America

Itsemap
Paseo de Recoletos 25
28004 Madrid
SPAIN

Sigma
Wirtschaftdienst der Schweiz Rückversicherungsgesellschaft
Department of Economic Studies
Swiss Reinsurance Company
CH-8022 Zurich
SWITZERLAND

Schweizerische Versicherungs-Zeitschrift
Verlag Peter Lang
Münzgraben 2
CH-3000 Bern
SWITZERLAND

Versicherungswirtschaft
Berlag Versicherungswirtschaft e.v. Rheinstrasse 122
75 Karlsruhe 21
FEDERAL REPUBLIC OF GERMANY

The Warren Report
58 Diablo View Drive
Orinda, California 94563
United States of America

World Insurance Report
Financial Times
Tower House
Southhampton Street
London WC2E 7HA
ENGLAND

Zeitschrift für die gesamte Versicherungswissenschaft
Berlag Versicherungswirtschaft e.v. Rheinstrasse 122
75 Karlsruhe 21
FEDERAL REPUBLIC OF GERMANY

I. VW. Management Information
Institut für Versicherungswirtschaft an der Hochschule St. Gallen
Kirchlistrasse 2
CH-9010 St. Gallen
SWITZERLAND

DIRECTORIES

Captive Insurance Company Directory
Tillinghast, Nelson & Warren
722 Post Road
Darien, Connecticut 06820
United States of America

International Directory of Occupational Safety and Health Services and Institutions
International Labour Office
CH-1211 Geneva
SWITZERLAND

Annex III

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IIIRM - INDIA

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*/ An umbrella organization representing: France (GACI), Belgium, The Netherlands, Italy, Federal Republic of Germany, United Kingdom and Spain.

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Telex: 1776207 INCOME

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Note: The listed names and addresses are believed to be correct as of March 1986. To obtain up-to-date information, contact the Risk and Insurance Management Society (United States of America), whose address is shown above.