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Cargo loss prevention: Suggestions for a domestic
policy in developing countries

Study prepared by Mr. S.P. Gupta and Mr. T. Nityananda,*
at the request of the UNCTAD secretariat

* / Director and Assistant Manager (Technical) of the Loss Prevention Association of India, Bombay.

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INTRODUCTION

(i) The Committee on Invisibles and Financing related to Trade, at the second part of its ninth session (September-October 1980), considered the subject of loss prevention in fire and marine cargo insurance in the light of a study on the subject (TD/B/C.3/162), which had been submitted by the UNCTAD secretariat at the Committee's request (seventh session, October-November 1975). ^{1/} As a result of the discussions on the matter, the secretariat was requested "to continue its work on the subject of loss prevention in fire and marine cargo insurance by preparing a list of priorities for measures to be taken by Governments, industry and trade, the insurance companies and the public, and to provide guidance and assistance to countries desiring to set up appropriate agencies to enforce the recommended safety measures..." ^{2/}

(ii) The present study is submitted in response to the portion of the above request that relates to marine cargo insurance. It has been prepared by Mr. S.P. Gupta, Managing Director, and Mr. T. Nityananda, Assistant Manager (Technical), of the Loss Prevention Association of India, Bombay. The UNCTAD secretariat is in full agreement with the views expressed.

(iii) This study amplifies some of the basic concepts of loss prevention in marine cargo included in the previous document (TD/B/C.3/162), and suggests a number of practical measures in the areas of packaging, transportation, storage and security of cargo. It also outlines the elements of a global strategy in the field of loss prevention. This strategy calls for general and permanent co-ordination of efforts by all the interests involved (governments, insurers, shipowners, port authorities, etc.) in numerous fields, not just the adoption of individual technical measures. In this respect, the setting up of loss prevention associations in developing countries would provide the institutional framework for carrying out that strategy (see the annex) and should therefore be the subject of encouragement and support.

^{1/} See the report of the Committee (Official Records of the Trade and Development Board, Seventh Special Session, Supplement No. 2) (TD/B/59C), paras. 132 and 157-159.

^{2/} See resolution 19 (IX) in the report of the Committee (ibid., Twenty-second Session, Supplement No. 2 (TD/B/833), annex I, para. 6(a)).

I. GENERAL CONSIDERATIONS

1. Loss of or damage to cargo in transit should be a matter of serious concern to the shipper and the buyer alike, particularly because even a comprehensive insurance cover cannot fully compensate all the adverse effects of loss. Further, all cargo losses represent wasted effort, and add to the cost of goods and services. In developing countries facing the problem of scant resources and their conservation, cargo losses indirectly contribute to inflationary trends and reduce the per capita availability of products. Though accurate statistical data relating to the extent of cargo damage are not available, estimates in some developing countries suggest that the economic impact of the failure of products to reach their destination in an acceptable condition is unquestionably severe, and that such losses result in a substantial reduction in the export earnings of these countries. Cargo loss prevention should therefore be one of their national objective.

2. Studies carried out by insurers over a period of time indicate that around 70 per cent of cargo losses are preventable through loss control measures by those concerned in the areas of packaging, transportation, handling, storage and security of cargo. While the loss-producing factors related to these major areas may be generally the same in any country, developing countries could face special problems in devising loss prevention actions, owing to:

- (a) climatic factors, such as extreme weather conditions;
- (b) social factors, like easy availability of manual labour, which tends to discourage mechanization;
- (c) material factors such as congested and over-worked ports;
- (d) relatively unsophisticated methods of handling and transportation;
- (e) inadequately developed roads and highways unsuitable for fast transportation of cargo to and from business centres in the hinterland;
- (f) longer layovers of cargo at terminals due to the lack of direct shipping routes to markets, etc.

3. Such situations create an atmosphere that is conducive to the occurrence of cargo losses which may assume catastrophic proportions unless controlled by organized and sustained efforts to improve the infrastructural facilities in the fields of packaging, transportation, handling, storage and security of cargo. These efforts to control the situation should be supported by a long-term educational programme to change the attitudes of the parties involved in cargo transit in favour of loss prevention.

4. In addition to the engineering and educational measures, enforcement of a set of statutory regulations prescribing the minimum standards of packing and care in transportation and handling might be useful in those developing countries where trade and industry have not displayed sufficient self-discipline and control. The specific activities that could be undertaken individually or collectively by national governments, trade and industry, cargo terminal authorities, technical institutions and educational organizations to promote cargo loss prevention depend on the economic and social conditions as well as the level of cargo loss prevention practices and degree of awareness prevailing in the country concerned.

5. One way to develop an appropriate national strategy for cargo loss prevention is to formulate an action plan containing general guidelines on the approach to the problem, and to incorporate the suggestions of all the interests concerned after a full discussion in a convenient forum on the possible impact of implementation of the plan on their respective disciplines. This method could relate the action plan more closely to needs and also create an environment in which the involvement and support of the concerned interests in the implementation of the plan can be more readily enlisted. Alternatively, national governments could constitute a special unit in the appropriate ministry to examine the current status of cargo loss prevention practices in relation to the guidelines available in the action plan, and take steps to implement the strategies for cargo loss prevention evolving from such an exercise.

6. The unit could be under a high-ranking official, who should report directly to a senior Cabinet Minister of the Government. The unit could set up consultative committees consisting of representatives of various interests connected with cargo transit. These committees could make a detailed study of the various aspects of cargo protection and advise the unit on the ways of organizing cargo loss prevention practices. Apart from the recommendations of the consultative committees, the unit could obtain guidance for the national priorities from the opinion of informed circles by organizing conferences or seminars in different parts of the country from time to time. The next part of the report deals with the measures to be taken by national governments and by non-governmental agencies in the areas of packaging, transportation, storage, handling and security of cargo.

II. THE ROLE OF GOVERNMENT

A. Packaging

1. The need for growth in the packaging industry

7. The industrial production in developing countries has been continuously increasing for the past few decades. A comparable growth in the packaging industry is necessary in order to maintain the standard of packing, especially of industrial products, which is essential if they are to reach their destination safely. Further, developing countries face special problems in international trade. For instance, long layovers and frequent handling of export cargo at transshipment points are common, owing to the lack of direct shipping routes from the developing countries to markets in developed nations. These circumstances together with extremes of temperatures, and inadequate transport, handling and storage facilities within the countries make heavy demands on packaging.

8. Non-availability of suitable packing material at reasonable cost may lead to a tendency to compromise on packaging quality. This is detrimental to cargo safety. National governments should therefore make suitable provision in their industrial development plans for the expansion of the packaging industry as well.

2. The need to set up Packaging Institutes

9. The need to use locally available raw materials and the need for special packaging to protect cargo against hazards arising from extreme weather conditions and inadequate and relatively unsophisticated methods and facilities for handling and storage of cargo in developing countries are often difficult to reconcile. Governments, trade and commerce as well as insurers are therefore called upon to make special efforts to study these seemingly conflicting needs and to develop indigenous packaging techniques for cargo protection. The establishment of a National Institute for Packaging Development as a joint venture of the national government, the packaging industry and allied interests in the country concerned would help to overcome these difficulties. Such a venture would enjoy government support as well as the involvement of industry.

10. The functions of the institute could include:

(a) the assessment of requirements and the country's needs in the area of packaging;

(b) research into viable alternatives of locally available packaging materials to develop cost-effective packing and to prevent natural supplies of packing materials from becoming depleted;

(c) improvement of standards of packaging with a view to preventing loss of and damage to industrial products;

(d) conservation of resources for packing materials and promotion of exports;
and

(e) creation of infrastructural facilities for achieving overall packaging improvement in the country.

3. Accent on functional packaging

11. To minimize wastage and spoilage of agricultural products and to ensure adequate protection against damage for industrial and other products, it is desirable to develop packing methods that lay greater emphasis on functional aspects of cargo safety during transportation rather than promotional or aesthetic attributes aimed at consumer attraction or acceptability. National governments should recognize the utility of functional packaging as a means of controlling cargo loss, and assign priority in their industrial development plans to those segments of packaging industry that contribute to the production of packaging materials for cargo protection.

4. Encouragement for the production of packaging machinery

12. The improvement of the standard of packing is related not only to the availability of packing materials at a reasonable cost, but also to the availability of the right type of packing/packaging machinery. The government's licensing policy should take this factor into account and encourage investment in the production of packaging and package handling machinery that is suited to the growing needs of packaging in the country.

5. Testing of packages and packaging materials

13. The quality of packaging material as well as the design and construction of the package can vitally affect the safety of the product packaged. In fact, studies by some United Nations agencies indicate that exporters in developing countries lose a substantial portion of their export earnings because of poor design and inadequate construction of packages, although the packaging materials themselves may be of good quality. It is evident that not only is it necessary to test packing materials to assess their quality, but that it is essential to evaluate the total package for its functional characteristics, shelf life and transport worthiness in order to ensure cargo safety. The government test facilities or the Packaging Institute should set up testing facilities at as many commercial centres as possible depending on the demand at these places to assess the characteristics of packaging materials and their influence on the products and capabilities of a package to withstand transport hazards and to predict its behaviour under different climatic conditions.

6. Export inspection scheme

14. To provide for the sound development of export trade in some developing countries, most of the export trade is generally subject to statutory quality control and inspection by Export Promotional Councils. These Councils inspect the commodities notified by the Government and determine whether the quality of the commodity meets the standards/specifications applicable or any other specifications stipulated in the export contract. Such inspection and quality control is generally limited to the product and is not extended to the package. As failure of a package to perform the functions expected of it during transit may damage the product and affect its conformity with contract specifications or standard specifications at the time of receipt by the importer, national governments might consider extending the export inspection scheme to cover the transport package in addition to the product.

7. Certification marks on packages

15. The system of providing certification trade marks on product labels is already in vogue. Certification trade marks have been recognized as denoting quality and conformation to standard specifications. These marks enable goods to be marketed with a degree of confidence since the certifying agency assumes responsibility for the conformity of the product with stipulated specifications. The introduction of similar certification marks for transport packages in respect of their performance and the construction materials used would help to improve the quality of packages and reduce the incidence of their failure. National governments could work out a scheme to introduce this system after establishing the testing facilities referred to earlier in this respect.

8. Training in packaging

16. In many developing countries there is a dearth of people who are qualified and/or trained in the area of packaging. Universities and technical institutions do not offer any courses on packaging, though in some universities, certain aspects of packaging materials as well as the packaging of specific products like pharmaceuticals and food are taught. In many organizations, the task of packaging is entrusted to persons in charge of other departments.

17. Lack of technical knowledge of packing and packaging could be a hindrance to innovations. Further, uninformed officials usually lack the initiative to examine the adequacy or otherwise of packaging and to improve it where necessary. They are also often unable to devote the required time and effort. Thus, in many industries, packaging is still looked upon as no more than a carpenter's job. Packaging as a means of product protection is not likely to yield the desired result unless it is entrusted to a technically qualified person who is familiar with the characteristics of the product in terms of its fragility, susceptibility to shocks, corrosion, etc., the properties of packaging materials, and the cost-effective methods of package construction. Governments might think of introducing postgraduate academic courses in packaging in technical institutions and intensive training courses in packaging in Packaging Centres/Institutes with a view to developing overall packaging expertise. A survey of the educational facilities already available in the area of packaging would help in devising a comprehensive packaging education programme.

18. In due course, governments could create a cadre of professional packaging specialists who would be available for appointment in manufacturing industries to advise the management on scientific and functional package development and to undertake the responsibility of developing transportworthy packages.

9. Technical know-how

19. Technical know-how is necessary to establish research, development and training capabilities within the country to serve as the basis for the systematic growth of the packaging industry. The technical know-how needed for to develop packaging standards could be built up with the assistance and support of United Nations agencies, wherever necessary, and by close co-operation and the exchange of experience among the developing countries themselves or between developing and developed countries.

10. Packaging laws and regulations

20. The need for legislation in the area of packaging arises out of, among other factors, concern for the consumer's right to receive the goods in proper condition. The laws could deal, inter alia, with safety in handling and transport and protection for products from environmental hazards. Rightly formulated, they would help to upgrade the standards of protection in packaging. The laws and regulations could be enacted by national or local governments, or even by trade associations in the case of regulations.

11. Incentives for innovation

21. In order to ensure sustained interest in the development of packaging materials and techniques, the government should provide a forum to recognise the talents engaged in pursuit of high quality in packaging. The government could institute national awards for excellence in packaging, laying special emphasis on the protection aspects of transport packages. Such awards, presented as an annual feature, would foster improvements in the standard of packing and innovative skills.

B. Storage

1. The need for well-designed storage facilities

22. The expansion of trade and commerce calls for comparable improvements in cargo handling and storage facilities. The trends towards production of an increasing variety of goods has led to the emergence of various types of storage places ranging from ordinary buildings to special types like the refrigerated godowns for perishable goods, hazardous goods warehouses, etc. Loss of or damage to cargo during the period of storage occurs as a result of a number of factors arising from design and layout of storage places, stacking methods, ventilation and lighting, clearance and traffic lanes, handling methods, fire safety precautions, cleanliness, security, etc. It is obvious that the availability to trade and industry of adequate, appropriate and conveniently situated storage places facilities would help to prevent cargo loss.

2. Government warehousing scheme

23. In most developing countries, the construction and operation of warehouses is a highly capital-intensive activity with low returns. Consequently, private capital is generally shy of entering this field, so there is evidently a need for government action to provide the warehousing facilities. National governments could formulate through legislation a warehousing scheme to provide and operate a wide network of warehouses at major commercial centres and any other places they might be required. Depending on the size of the warehouses and the general system of administration in the country, the warehouses could be provided and operated by the public, private or co-operative sectors. The warehousing scheme must specify, as one of its objectives, the conservation of the national wealth through the reduction of damage, deterioration and other forms of wastage and loss of goods in storage. The design, construction, operation and maintenance of the warehouses under the scheme should then be of a high enough standard to achieve this objective.

24. Governments should establish an agency to implement the warehousing scheme and also to undertake, over a period of time, research and development in relation to new storage techniques and the design of warehouses suited to the climate, procurement and

distribution system and other relevant factors in the country, and to evolve codes of practice for the safe storage of different commodities. Such an agency could also build up expertise to provide consultancy and training services in various aspects of warehousing for other organizations possessing and operating storage facilities or warehouses.

3. Customs bonded warehouses

25. Cargo damages frequently occur while goods are in customs bonded warehouses which are usually ill-equipped to ensure protection of cargo. The government could improve the bonded warehouses, if necessary, through the establishment of warehouses under the Warehousing Scheme referred to earlier, at major production centres and port towns and at seaports and airports. The government should also encourage the establishment of private bonded warehouses which, besides serving the needs of major exporters and importers, would ease the load on public bonded warehouses thereby providing an increased opportunity for the trade to utilize the facility.

4. Transit storage in inland transportation

26. Cargo losses are common during transit and transshipment storage in rail and road transportation. In countries where rail transport is managed by government departments, the government must ensure the provision of funds specifically for the progressive augmentation and improvement of the storage facilities at railheads. Owing to limited covered storage facilities at the rail and road terminals, there has been an increasing tendency to store the cargo in the open. The government should popularize the cargo protection measures that are necessary for open storage of goods. One of these measures is the 'cover and plinth' (CAP) system which provides for the storage of cargo on raised platforms or plinths with waterproof coverings on the cargo.

C. Transportation

27. When defining their major policy objectives in the area of cargo transportation, most governments rarely consider the impact of cargo losses during transportation on productivity in the transport sector and on the national economy in general. In fact, certain aspects of cargo transport such as stowage on trucks, tonnage carried, speed of vehicles, driving skills, etc., not only influence cargo safety, but also have a definite bearing on fuel consumption, vehicle wear and tear, etc., all of which affect the productivity of the transport sector. National governments should therefore consider cargo protection to be one of the important avenues of profitability and productivity in this sector and make specific mention of it in national plans along with other objectives related to transportation.

1. Legislative measures

28. One of the effective methods of achieving any objective is to have statutory backing. The rules and regulations concerning rail and road transport should therefore incorporate the more essential loss prevention measures. In some countries, railway regulations are fairly comprehensive and incorporate specific arrangements for cargo stowage and protection from the environment, marking requirements, and locking and sealing rules, from the point of view of cargo loss prevention. As regards road transportation, the law, except for the provisions concerning condition of the vehicle, is generally inadequate in respect of cargo loss prevention requirements. In the

United Kingdom, the Motor Vehicles (Construction and Use) Regulations stipulate, inter alia, the requirements for restraining the loads on motor vehicles against movement relative to the vehicle. Developing countries can use these regulations as a general yardstick in formulating rules relevant to their local conditions and requirements.

2. Prevention of road accidents

29. Extensive damage to goods resulting from accidents to loaded vehicles during journeys is not uncommon. Bad vehicle condition and rash driving are the commonest causes of road accidents. It should be possible to ensure that trucks are in roadworthy condition through suitable legislation. Many developing countries already have laws like the Motor Vehicles Act and rules which include, inter alia, provisions to ensure that vehicles are in good repair and sound working condition. In the interest of safeguarding life and property, measures should be taken for the strict enforcement of such statutes.

30. Corrective action for rash driving should include, apart from the imposition of severe penalties for violation of traffic rules, a long-term plan for the development of driving skills. In liaison with voluntary organizations like Automobile Associations, and the Road Transport Industry, national governments should take steps to arrange for truck drivers to have intensive training in the concepts and techniques of defensive driving tailored to suit the local situation. This, together with strict procedures for the issue of licences to competent drivers only and a scheme to improve the condition of the roads, and particularly the highways, would provide an environment conducive to road safety.

31. Driving when intoxicated or fatigued are other common reasons for accidents involving trucks. While alcohol consumption is a social problem not restricted to the truck driver population alone, driver fatigue can be avoided by regulation of the working hours of drivers especially those employed on long routes. National governments might work out suitable legislation and enforcement machinery to regulate the employment of truck drivers beyond a specific number of hours a day.

3. Interstate permits to reduce transshipment, storage and handling

32. In larger countries, transport permits are generally given by local governments, solely for plying vehicles within their area of jurisdiction. The non-existence of interstate transport permits leads to a large number of transshipments and greater exposure of cargo to loss during transit, storage and multiple handling. The national government should keep cargo loss prevention in mind when considering the overall issue of interstate transportation of goods and secure the co-ordination and co-operation of local governments in the issue of interstate cargo transport permits to the greatest possible extent.

4. Improvement in the design of wagons

33. In rail transportation, the use of specially designed cushion cars for loading fragile equipment could reduce impact damage. The government's research and development departments should explore the feasibility of developing special purpose wagons for different types of commodities. However, in developing countries where the

general practice is to send merchandise of all kinds in small lots as "smalls" in a wagon, it might be advisable to introduce more multipurpose wagons with as many loss prevention features as possible.

34. The railway containerization scheme has proved to be a very useful system for the door-to-door movement of goods, and has substantially improved the loss ratio in some developing nations. The size of the railway containers need not necessarily match the ISO specifications for intermodal freight containers. A smaller size of container suited to the mechanical handling facilities available at railheads, the less developed roads at destinations in the hinterland, and the quantities of cargo normally sent at a time by traders, manufacturers and others using the container service, has been successfully tried out in some developing countries, and could be employed to start with.

III. THE ROLE OF NON-GOVERNMENT AGENCIES

A. National standards institutions

35. The effectiveness of standardization in reducing the cost of packaging and transportation is well known. National standards institutions could prepare standards for materials used for packing products, the construction of typical packages, a code of specifications for transport packages for specific products, standards for storage areas, lifting gear, etc., with a view to preventing avoidable product loss and damage. These institutions could also prepare comprehensive codes incorporating exhaustive specifications for filling methods, closures and test procedures. By following such codes and standards, the product manufacturers would be able to avoid cargo losses due to package failure.

36. The use of freight containers in intermodal transportation of goods has a great potential for reducing packing costs and damages. The full benefit of reduced damage, packing costs and transportation costs could be obtained through standardization of package dimensions in relation to the container dimensions.

37. The codes or standards would usually be finalized after thorough scrutiny, intensive discussions and approval by representatives of government, manufacturers, trade and professional organizations and interested parties. This procedure would serve to ensure acceptability of the standards by all concerned, implementation without difficulty and adoption on a voluntary basis.

38. Standards institutions, through a testing and certification scheme, could also certify the quality of packaging materials, cargo gear, machinery and other equipment for handling and transportation of cargo, etc., thus ensuring a better performance by these products.

B. Role of trade and industry

39. Trade Associations, town planning authorities or the civic administration at important business centres and in port towns should encourage their members to establish good storage facilities suitable for different types of commodities, like agricultural produce, iron and steel, edible oils and other consumer goods. These warehouses should be so constructed as to protect the cargo from environmental hazards and from pests and rodents.

40. In developing countries, fraudulent practices to cause cargo losses are on the increase. Alertness and prudence on the part of consignees in selecting carriers and shippers on the basis of their reputation and experience can effectively curtail cargo losses by fraud. It is wise to have relevant and updated market data on the road transport industry, so that carriers of repute and standing can be selected. A data base of this kind should include information on the carriers' turnover, number of trucks owned, number of destinations served, the list of clients, etc. The insurers, manufacturers' organizations and bankers could jointly undertake the collection of such data with active co-operation and support from the road transport industry.

41. Data on claims arising in rail or road transport should be regularly collected, collated and analysed in order to determine the most frequent causes of cargo loss and damage and to institute remedial measures. Depending on the size of the transport organization and the volume of traffic handled by it, either a claims analysis unit within the organization or a claims analysis committee of the association of goods transport undertakings could be set up to undertake the statistical analysis and research.

42. Most cargo losses can be avoided if the consignors and consignees take precautions in packing, marking, stowing and clearance. A mass claims reduction or loss prevention campaign could be launched by the railways, goods transport associations, insurers and other interested parties to raise the general level of awareness among transport users of their obligations. Such campaigns could include publicity through posters, advertisements in the media, the organization of cargo loss prevention weeks, transport-user-oriented seminars, the issue of leaflets with the various forms to be filled for booking the cargo, etc.

43. In many developing countries, modern management techniques are not applied in the transport industry, especially in road transport. An injection of professionalism into transport management would no doubt help to make managers more aware of the utility of investment in loss prevention systems. The goods transport associations in the country could establish, with or without governmental support, a Transport Management Institute to develop professional transport managers by means of a planned programme of training and academic courses in transport management. The training and academic courses should include cargo loss prevention as one of the essential subjects. In the course of time, the Institute should be capable of undertaking, inter alia, projects on cargo loss prevention aspects in the transport industry.

C. Role of carriers

44. In the area of ocean transport, the responsibility for cargo loss prevention rests almost entirely with the carriers who, under the Hague Rules, are required to "properly and carefully load, handle, stow, carry, keep, care for and discharge the goods carried". As the carriers' liability is to compensate the shipper/consignee for any loss or damage to cargo while on board the ship itself, this is a compelling reason for them to protect goods during ocean transport. It is not uncommon, however, to come across instances in which the carriers fail to safeguard the cargo entrusted to their care and yet display a tendency to avoid liability for compensation by such ways and means as discharging the damaged cargo without survey on board, issuing "said to contain" endorsements on documents for sealed FCL containers, discharging the break-bulk cargo in mixed condition instead of consignment-wise, etc. Governments should take appropriate measures to curb such tendencies. Such measures could include exerting pressure on port authorities, which incidentally are government-controlled in most developing countries, to reject discharge of damaged cargo without repair and survey on board ship, ensuring that the loose parts of consignments are stencilled or marked soon after discharge, disallowing discharge except consignment-wise, and issuing of specific guidelines to importers on the precautions and checks necessary before taking direct delivery of the contents of sealed FCL containers, etc.

45. The degree of protection given to cargo against loss and damage on board ship depends on the expertise of and care taken by the ship's personnel in stowage, lashing and ventilation and security arrangements. In view of this, the shipping companies, national shipowners' associations and the Government should arrange intensive educational, training and refresher programmes for the ship's operational and administrative personnel on these aspects.

46. The Protection and Indemnity clubs and marine cargo underwriters should publish or circulate regularly among carriers, shippers' associations, etc., reports of cargo loss or damage on board with suggestions for avoiding recurrence.

47. The menace of "missing vessels" has been dealt with in the study by the UNCTAD Secretariat on "Loss prevention in fire and marine cargo insurance" (TD/B/C.3/162). Overaged vessels, operated by small, independent shipowners or charterers with marginal financial backing and invariably flying flags of convenience are usually involved in fraudulent practices such as selling the cargo and thereafter abandoning or sinking the vessel while pretending that it sank with cargo on board. The UNCTAD study referred to measures to prevent or limit this hazard that have been worked out by some governments, insurance companies and/or committees established to investigate the problem. These measures, some of which are listed below, provide guidance for plans of action by countries facing similar hazards.

(a) The movement of overaged vessels trading in the ports of the country concerned should be restricted by the Government;

(b) The Government should take effective steps to discourage shipments by single-owner tramps;

(c) The national marine insurance companies could introduce a system of approval, for cargo insurance purposes, of tramp vessels loading at the ports of their respective countries;

(d) The national insurance companies should endeavour to institute a central marine intelligence unit to monitor the activities of dubious operators and should keep the market as a whole fully informed;

(e) A special appeal should be made to the governments of the countries where the fraudulent ship operators originate to institute criminal or other legal proceedings against wrongdoers, with a view to curbing or eliminating their activities.

48. Trade associations can play a prominent role in effectively meeting the threat posed by missing vessels. They should appeal to all shippers and importers to avoid contracting shipments with unreliable carriers in spite of offers of cheap freight rates, and to ensure that shipments are made in properly registered vessels belonging to shipowners of repute and standing.

D. Role of port and terminal authorities

49. The use of suitable cargo gear is essential for safe transfer of cargo to or from a ship. It often happens that ships do not carry adequate cargo gear, so the port authorities and the stevedoring companies need to equip themselves with this. The port and stevedoring authorities should endeavour to improve the cargo lifting and handling gear and accessories to ensure the safety of cargo and workers. So far as is practicable from the point of view of labour employment problems, modern cargo handling methods should be introduced at port terminals to ensure quick and safe movement of cargo. Systems for classifying special and general cargo should be introduced for the purpose of providing the protection necessary to special cargo, offering protected storage spaces for high value cargo and broken packages, ensuring good housekeeping, ensuring quick clearance of cargo and, in its absence, the quick removal of uncleared cargo to places specially earmarked for such cargo and the training of supervisory personnel and workers in safe methods of cargo handling and stacking.

50. Cargo theft is another serious problem confronted by port managements in many developing countries.

51. As the conditions contributing to theft and pilferage differ from country to country, it is necessary for each country to analyse its own problems and devise ways and means of combating the threat as effectively as prevailing conditions and financial resources permit. In general terms, a good security system at port terminals should take into account, inter alia, the requirements of fencing, locking devices, traffic regulations and vehicles checking procedures at the gates, waterfront patrol systems including deployment of mechanized patrol boats, the alarm and communication arrangements, controls on the entry of personnel into terminals and methods of identifying members of the workforce, procedures for pre-employment screening of security personnel, the arming of security watchmen and their training.

52. Like any other operational system, the security system too needs to be assessed from time to time for its effectiveness. Such a review can be done best by joint approach, for example, through Anti-pilferage Committees to be constituted at the ports with senior officials of Port Administration, Customs, State Police, Port Security Department, insurers, carriers or steamer agents, clearing agents, shippers' councils or trade associations, major importers and other port interests and services as Members, and the head of the Port Administration as Chairman of the respective Committee. The Committee's recommendations on security arrangements would then enjoy support from all parties concerned, including the Port Administration which, in most instances, will have to implement a majority of the anti-theft recommendations of the Committee. The initiative of incorporating the Anti-pilferage Committees in the ports should come from the Port Administrations or preferably the national governments.

53. It is also possible to initiate and sustain an organized movement to correct theft and pilferage conditions at ports through the voluntary efforts of the maritime interests connected with the port. An example of such voluntary efforts can be found in the Security Bureau, Inc. set up at the port of New York in 1947.

The Bureau functions as a private agency with the financial and moral support of the various segments of maritime trade and industry, and maintains a liaison with law enforcement agencies in suppressing waterfront theft and pilferage. Its functions, among others, are:

- (a) to investigate reported cargo thefts;
- (b) to conduct loss surveys of specific shipments over a period of time and to suggest alternative means of shipping, methods of packing, etc. to contain the theft and pilferage losses;
- (c) to encourage its members to initiate criminal prosecutions whenever legal evidence would sustain them, and to assist the members in securing convictions of the guilty in criminal courts;
- (d) to provide recommendations for better internal control of shipping documents, more secure physical facilities, etc.;
- (e) to compile and analyse loss data from reports of theft from members so as to highlight sensitive areas, pinpoint commodities vulnerable to theft, spell out loss patterns and the modus operandi of thieves and receivers of stolen goods, and act as a clearing house for such data to the law enforcement authorities; and
- (f) to conduct appropriate training courses for newly-licensed and experienced watchmen.

54. In planning anti-theft systems, guidelines would also be available from the International Maritime Bureau set up by the International Chamber of Commerce more than a year ago with the objective of containing losses due to maritime frauds and theft.

55. Any efforts to improve the theft and pilferage risk at the port terminals are likely to be futile so long as the conditions of cargo handling and storage at the ports are conducive to the occurrence of theft or pilferage. The governments and the Port Administrations should therefore take all practicable measures to streamline cargo movement and storage at the ports and to secure quick clearance of cargo.

E. Role of loss prevention and minimization organizations

56. To promote the philosophy and concept of cargo loss prevention, it may be worthwhile to set up a specialized organization like a loss prevention association, which could undertake educational, research, training and other activities in all the areas related to cargo loss prevention. Such an organization could be set up by the insurers in the interest of preventing wastage of national resources. The organization should undertake, in a phased manner, activities aimed at determining procedures for cargo packing and movement at terminals and co-ordinating the activities of various agencies involved in cargo movement. Some of the items of activity that can be taken up by a loss prevention association are given in the annex.

IV. CARGO SUPERVISION

57. Many ports in developing countries, especially those which operate with a high berth occupancy rate, are unable to ensure proper handling and safety of cargo, primarily owing to lack of adequate time for maintenance of their berths and handling equipment and for the sorting out and orderly stacking of goods before the arrival of the next vessel at the berth. The problem is aggravated by delays in clearance and consequent congestion in transit storage areas. This situation calls for special measures to minimize losses and damage to cargo.

58. One such measure is to supervise the discharge and subsequent movements of cargo at the port until the time of clearance. This would be best achieved by the creation of a special office or agency by marine cargo insurers, in active collaboration with port authorities, to undertake the supervision of cargo loading, unloading, shifting and storage operations at the port. The supervision process involves not only the physical presence of the supervising staff during cargo movements with a view to preventing or minimizing cargo damage or losses, but also effective liaison with port authorities, clearing agents, consignees and steamer agents in recording the nature and extent of any damage that has occurred at the different stages, for the repair and reconstruction of damaged packages, making special security arrangements on board ship and on shore, arranging surveys promptly in case of damage, deterioration or shortages, and for speedy clearance of cargo from the docks. Initially, the commodities chosen for supervision could be high value cargoes, goods especially vulnerable to pilferage and theft, and cargo with a history of consistent losses. The range of goods to be subjected to supervision may be expanded progressively, depending on the experience of the insurers, the environmental conditions prevailing at the port and other relevant factors.

59. While it would be essential for the cargo supervision agency to win the confidence of all other agencies connected with cargo movement at ports by displaying a spirit of co-operation and not confrontation in securing the implementation of loss minimization measures, some kind of governmental support would greatly enhance the performance of the supervision agency. The governmental support could be in the form of recognition by the Government of the need for such supervision, a grant of special powers to control the cargo operations for ensuring safety, etc.

A. The role of insurers in loss prevention

60. The insurers gain by supporting all programmes concerned with cargo loss prevention. As rightly summed up by the International Union of Marine Insurance (IUMI), the role of underwriters in cargo loss prevention should take the form of:

(a) a reasonable expenditure of time and money on loss prevention programmes;

(b) the appointment of port inspection committees to observe, together with all other parties involved in cargo movement, the handling, stowage and security practices at the ports;

- (c) co-operation with local commercial and governmental groups in improving existing port conditions;
- (d) arrangements for special supervision of vulnerable cargo;
- (e) insistence on loss investigation reports in all cases of loss or damage; and
- (f) rewards for superior packing and shipping methods and security practices by special rate considerations.

ANNEX

PROPOSED ACTIVITIES OF A LOSS PREVENTION ASSOCIATION

1. PHASE I
 - 1.1. To compile and publish statistics of major cargo losses and the results of investigations into the cause of loss and reasons for aggravation.
 - 1.2. To maintain a good library of films, books, journals, etc.
 - 1.3. To organize publicity, lectures, seminars, film shows, etc. on the proper packing, handling and stowage of cargo and the use of proper vehicles. To publish leaflets for the education of workers, transporters, etc.
 - 1.4. To organize cargo loss minimization activities at major ports such as supervision of discharge, follow-up for speedy clearance, safeguarding of cargo and tracing of missing cargo.
 - 1.5. To participate actively in safety and anti-pilferage committees.
2. PHASE II - ADDITIONAL ACTIVITIES
 - 2.1. To provide an advisory service to trade and industry on packaging, proper transport, etc.
 - 2.2. To sponsor research into cargo losses, and possible improvements in the packaging, handling, transport, etc. of different types of cargo.
 - 2.3. To publish technical literature on storage and transport hazards of various types of cargo, recommendations for safe handling and transport, and the results of the work done in these fields in other countries.
 - 2.4. To maintain liaison with insurance companies, port authorities, inspectorates of explosives, road transport authorities, railways, shipowners' associations, standards institutions, etc. to review the existing regulations and practices in the light of experience and to suggest modifications so as to ensure safety of operation and the enforcement of regulations.
 - 2.5. To maintain liaison with trade associations to ensure the active participation of their members in improving safety.
 - 2.6. To review documentation procedures which cause delay, and to study and suggest simplifications.

5. PHASE III - ADDITIONAL ACTIVITIES

- 5.1. To provide experts to advise on the transport of special cargo and to supervise such transport.
 - 5.2. To help to arrange training for cargo handling and transport staff.
 - 5.3. To study and find solutions to specific problems referred to the Association.
 - 5.4. To co-ordinate with police, port trust and customs authorities in preventing theft, pilferage and burglaries.
 - 5.5. To advise property owners on how to safeguard their premises against burglary and to make inspections for the purpose.
 - 5.6. To study security in industrial and storage premises, to devise model security systems, and to organize and provide training for security staff.
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