

COMMERCE



PDNA GUIDELINES VOLUME B



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INTRODUCTION

The commerce sector, in accordance with the most recent International Standard Industrial Classification of All Economic Activities of the world-wide System of National Accounts (United Nations, *International Standard Industrial Classification of All Economic Activities, Rev.4*, New York, 2008. (<http://unstats.org/unsd/cr/registry/>), includes wholesale trade, retail trade, sales and maintenance of vehicles, and hotel and restaurant services.

These above may be sub-divided further into:

- Wholesale sales in exchange for a retribution;
- Wholesale sales of agriculture inputs, live animals, food, drinks and tobacco;
- Wholesale of household goods;
- Wholesale sales of intermediate products, waste including agriculture waste;
- Wholesale of machinery, equipment and materials;
- General retail sales of non-specialized goods in shops;
- Retail sales of food, drinks and tobacco in specialized shops;
- Retail trade of other new products in non-specialized shops;
- Retail sales of used goods shops;
- Retail trade outside shops;
- Repair of personal and household goods;
- Sales of motor vehicles;
- Maintenance and repair of motor vehicles;
- Sales of parts and accessories of motor vehicles;
- Sales, maintenance and repair of motorcycles and their parts and accessories;
- Retail sales of motor vehicle fuel;
- Hotels, camping and other temporary lodging; and
- Restaurants, bars and canteens.

The relevance of each activity, and its inclusion in the assessment, for each country needs to be determined by the commerce sector assessment team.

In countries where tourism activities – which include hotels, camping facilities and other lodging facilities, and restaurants, bars and canteens – are an important part of economic activities, a separate analysis of disaster's effects and impact on the tourism sector may be required (see separate chapter on tourism sector).

The commerce or trade sector may be affected by disasters of every kind, sustaining destruction of its physical assets (damage) and changes in the flows of sales. The latter may include both a decline in sales as well as higher cost of operation of commercial establishments.

As is customary, damages in commerce establishments—including premises, furniture, equipment and stocks of goods—is measured initially in physical terms and subsequently converted into monetary terms by using the construction cost or replacement value of the destroyed physical assets, to the same quality and quantity standards they had prior to the disaster. The possibility of reconstruction or replacement using improved, disaster-resilient standards, as part of a possible strategy of “building back better,” would be considered at the time of estimating needs for recovery and reconstruction.

Changes in the flows of sales in the commerce or trade sector refer to possible decline in the sales of goods and services and to increases in operational costs that may arise after—and as a consequence of—the disaster. During the post-disaster reconstruction stage, however, demand for sales of construction materials and equipment may increase and compensate—and sometimes exceed—the losses in sales caused by the disaster. However, these are to be estimated and considered afterwards, and the initial estimation of disaster's effects should not consider such positive indirect impact of post-disaster reconstruction.

The assessment of disaster's effects for this sector is more complex than in other sectors in view of the usually large number of existing commercial and service shops of different types and sizes, which may exist in the disaster-affected areas. Therefore, a special sample survey of representative, affected commercial establishments is to be carried out in parallel to the assessment and its results combined with the existing baseline information and data collected during field visits by the commerce sector assessment team in order to cover the entire universe of the sector. In fact, a joint sample survey is usually conducted for the industry and commerce sectors, since most of the information required is quite similar for both sectors.

For the estimation of damages in this sector, civil engineers are required to be part of the commerce assessment team, while economists are required for the estimation of sales flows changes.

ASSESSMENT PROCESS

This chapter describes the procedure to assess the effects of a disaster on the trade or commerce sector, using the time-proven methodology originally developed by the United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC) (*Handbook for estimating the socio-economic and environmental impact of disasters*, 4 volumes, United Nations, 2003), further developed by the World Bank's Global Facility for Disaster Recovery and Reduction (GFDRR) (*Guidance Notes for Damage, Loss and Needs Assessment*, 3 volumes, The World Bank, Washington, D.C., 2010), and now expanded and adopted by the PDNA. Application of the methodology enables the assessment of disasters' economic and social impact on the trade or commerce sector, and the estimation of post-disaster needs for recovery and reconstruction.

After a disaster, the trade sector may sustain the destruction of its assets (damage) that may include premises and equipment as well as stocks of goods for sale. In addition, after a disaster the sector may face changes in its production flows, including sales decline and possible higher costs of trade arising from the fact that the sector assets are destroyed or to other causes associated to the disaster (such as lack of goods to sell, strategic inputs of water and electricity, temporary absence of labor, lack of working capital, etc.).

As in the case of other sectors, the **value of damage in trade** is measured initially in physical terms and is subsequently converted into monetary terms by using the reconstruction or replacement cost of the destroyed physical assets, to the same quality and quantity standards and using unit replacement costs that prevailed prior to the disaster. The possibility of

reconstruction or replacement using improved, disaster-resilient standards, as part of a possible strategy of “building back better,” is to be introduced later when estimating financial requirements for recovery and reconstruction.

Changes in flows in the trade sector refer to the value of the decline in sales and to possible increases in production costs that may arise after, and as a consequence of, the disaster. Increases in trade costs in fact represent increases in intermediate consumption for the sector, and are to be treated accordingly when estimating macroeconomic impact. Post-disaster reconstruction activities, on the other hand, may actually produce an increase in the demand and production of certain goods, which case is analyzed later on in the assessment when estimating the possible positive impact of reconstruction.

The assessment of disaster's effects in the trade sector is more difficult than in other sectors of economic activity in view of the usually large number of existing trade establishments, of different types and sizes, which are usually spread over large areas of a country. Furthermore, there exist many trade activities that are not formally registered in the national accounts, since such activities are informally conducted by individual persons. Therefore, as mentioned above, a special sample survey of affected trade establishments is to be carried out parallel to the field visits to be made by the trade sector assessment team, and its results are to be combined with the existing baseline information in order to cover the entire universe of the sector. In addition, during the assessment, efforts are to be made to enlist the cooperation of trade associations of the private sector which usually have direct access to information from its associated individual members and which have a vested interest in obtaining post-disaster assistance. Moreover, advantage is to be taken of the presence of informal traders in temporary shelters during the emergency stage, to conduct a sample survey of informal trading whereby the value of damage and of losses in sales are obtained for the informal sector.

The trade sector assessment team should keep in mind that in some countries the public sector may actually own and operate public markets which may also be affected by the disaster.

For the estimation of damage in this sector, civil engineers and architects are required to be part of the trade or commerce sector assessment team, while economists are required for the estimation of possible changes in the flows of sales.

PRE-DISASTER SITUATION

The following baseline information on the characteristics and capacity of the trade or commerce sector must be obtained to provide the quantitative basis required for the assessment:

- Number and size of commercial establishments, by type of commerce, existing in the affected area;
- Typical physical facilities in each of the above, including a description of the usual furniture, equipment and storage of goods to sell, as well as required for the provision of services;
- Information on the value of annual or monthly gross sales for each type of commercial establishment; and
- Quantitative information on the usual destination of sales, whether it is for domestic consumption and/or for export to other countries.

This type of information is normally available in the country's most recent commerce sector survey or census, conducted either by its Ministry of Trade or Commerce and/or by the Statistical Office. Further information may be obtained from the national accounts handled by the national Statistical Office. Since this information may already be out of date at the time of the assessment, projections to the current year must be made based on recent growth rates for the sector.

Additional information may be obtained through direct contacts with private sector Chambers of Commerce representatives, who would normally have detailed information on the capacities and sales of their associates. In fact, such private

sector bodies should become partners in conducting the assessment, since they are normally very keen to define post-disaster needs for recovery and reconstruction.

Further quantitative baseline information may be obtained from the municipalities where the commerce or trade shops are located, since they usually present reports of their stocks and facilities for tax payment purposes. Similar data may be available from insurance companies for those commerce or trade shops that carry infrastructure and/or sales insurance, although it is recognized that in developing countries the degree of insurance penetration is low.

The assessment team for the commerce or trade sector should be aware that large commercial establishments make the highest percentage of sales in any given country or area. This fact should facilitate planning for field visits and sample surveys. However, micro-sized to medium-sized commercial establishments are always more numerous and usually generate more employment of personnel, and their analysis requires special attention. The latter consideration is very relevant for the case of informal traders, usually the most affected by disasters, whose sales are not necessarily included in the national accounts; in this case, use may be made of special sample surveys conducted in temporary shelter camps during the assessment.

On the basis of the previously listed information, a typology of commercial shops, under private or public ownership, is to be defined for purposes of the assessment.

FIELD VISITS FOR POST-DISASTER DATA COLLECTION

Field visits to determine the effects of the disaster in the affected trade or commerce shops must be carried out by the trade sector assessment team, in combination with sample surveys of typical commercial establishments and informal traders.

Any data from existing reports from the emergency phase – however partial in coverage – must be used in conjunction with the information obtained during the field visits and the sample survey mentioned above, to estimate the number of commerce establishments of each pre-defined type that may have sustained total or partial destruction and whose sales may be affected directly or indirectly by the disaster.

The field visits by the assessment team, coupled with information obtained from the sample survey questionnaire responses, should enable the commerce sector team to define the average type and value of damage for each commerce establishment type; the time of sales stoppage or decline due to different reasons such as destruction of premises, equipment and machinery; temporary unavailability of inputs such as electricity and water; temporary unavailability of sufficient labor and of goods to sell; and the likely requirements for recovery and reconstruction. During the same field visit, unit reconstruction and replacement costs for rebuilding physical assets as well as replacement of equipment and stock of goods are to be obtained, through interviews with traders. Any difficulties and limitations foreseen by the owners of such establishments—for instance, in terms of financial and credit requirements, availability of goods to sell, availability of labor, etc.—are to be identified.

On the basis of the information thus collected and in combination with the baseline data on existing physical capacities and normal or non-disaster volume of sales, it will be possible to develop a scenario of how the sector will likely function after the disaster until full recovery and reconstruction is achieved. This would include developing separate calendars for the repair and reconstruction of buildings and other facilities, replacement of equipment and goods to sell and for the resumption of normal or non-disaster sales levels over time.

¹ A copy of the questionnaire developed for this type of sample survey of industrial and trade shops is attached; it requires only minor adaptation in order to capture information on specific, different types of commerce.



ESTIMATION OF DISASTER'S EFFECTS

EFFECTS ON INFRASTRUCTURE AND PHYSICAL ASSETS

The value of the destroyed assets (damage) in the commerce or trade sector is to be estimated on the basis of the cost to rebuild or repair the buildings and other associated premises that were totally or partially destroyed, as well as the replacement cost of the furniture, equipment and stocks of goods to sell that were destroyed, assuming that they are being replaced with the same capacity and quality they had prior to the disaster. The higher costs involved in building back to improved, disaster-resilient standards and in retrofitting existing structures are to be included as part of the subsequent estimation of needs in the assessment. If the equipment and machinery that was destroyed can only be substituted by more modern and capable machinery, the additional costs involved should be taken into consideration during the estimation of needs.

Since the affected area is likely to have a very large number, size and type of commerce establishments, the damage assessment must rely on information obtained from the already-mentioned parallel sample survey to define average values of damage for each type of commerce, and on counts of the number of each commerce type that were either totally or partially destroyed. Then, an extrapolation of the value of damage to cover the entire universe of trade establishments in the affected area or country must be made based on an assumed ratio of destroyed versus total number of shops. In some instances, for the estimation of the ratio of micro- and small-to-medium size trade shops, use has been made of the ratio of destroyed to existing housing units, whenever an actual ratio has not been possible to obtain. The accuracy of this extrapolation of course is of paramount importance, and the assessment team should devote sufficient time in order to discuss and agree on such ratio, so that results are reliable.

In addition to the estimation of the value of damage, the commerce sector assessment team must obtain the average age of the destroyed infrastructure, and deliver this data to the macroeconomic assessment team. Note, however, that the estimated value of destroyed assets is that of their replacement cost, and not that of their depreciated or "book value."

In addition to the above, despite the low penetration of insurance in developing countries, the commerce sector assessment team must obtain information on the possible existence of insurance on both the destroyed premises and on sales. For this purpose, the questionnaire on the sample survey of commerce shops includes space to clarify this issue, and the commerce sector assessment team should also visit local insurance companies to ascertain the overall coverage of insurance on the sector, the percentage of covered assets and sales and the likely delay in the delivery of insurance proceeds to the insured trade or commerce shops. The commerce sector assessment team should be aware that the value of damage is not to be reduced by the amount of possible insurance, and that the availability of insurance is to be used only to estimate recovery and reconstruction requirements.

EFFECTS ON SALES OF GOODS

The estimation of trade sales flow changes must be made on the basis of several considerations, of which the time frame for their occurrence is paramount. Sales flow changes will normally occur over the time period required to achieve full reconstruction of premises, replacement of destroyed furniture and equipment, and resumption of normal availability and flow of goods to sell. Therefore, sales flow changes are likely to occur due to:

- Destruction of sector assets, in terms of destruction of buildings, equipment, furniture and stock of goods to sell;
- Temporary stoppage of sales due to lack of electricity or water;
- Temporary disruption of goods availability and inflow;
- Temporary unavailability or shortage of labor;
- Future unavailability of goods to sell that may be due to future losses expected in agriculture, livestock and fishery production (This refers to the case of food products obtained from the food processing industry, but is also applicable to goods from other agro-industry enterprises that may face future shortages of raw materials due to future losses in primary agriculture, livestock and fishery production);
- Insufficiency or non-existence of working capital at the commercial enterprise; and
- Possible changes (declines or increases) in demand that may arise from possible generalized income decline of the population and from anticipated or foreseen high demand for construction materials for the reconstruction, respectively.

Therefore, it is essential for the commerce sector assessment team to develop a comprehensive calendar of how and when the above-mentioned limiting factors would be overcome, giving due consideration to the availability and ease of adequate financing.

The changes in sales flows to be estimated should include both possible sales decline and operational cost increases. The value of possible sales decline is to be estimated on the basis of the expected time frames necessary to achieve normal or non-disaster levels of sales, after overcoming the possible problems described above. Increased operational costs may arise from the following possible reasons:

- Payment of overtime to staff to attend and solve urgent problems immediately after the disaster occurs;
- Rental of alternative premises, furniture and equipment while the destroyed or damaged ones are being rebuilt or repaired;
- Temporary acquisition of electricity and water from alternative sources, such as renting or acquiring portable power generators; and
- Temporary acquisition of goods to sell from alternative sources that may be more costly and/or located in far-away locations including other countries.

The estimated figures of damage and changes in sales flows should be broken down according to ownership by private and public sector. In this regard, it should be recalled that trade enterprises may be publicly, privately, or jointly owned.

EFFECTS ON GOVERNANCE

Depending on the individual characteristics of the disaster-affected country, the trade or commerce sector is usually in the domain of the private sector, although there are many cases where the public sector may own and operate some trade or commerce facilities. Due to any disaster, the function of governance in the trade sector may be negatively affected, and an analysis of such disaster's effects must be carried out as part of the assessment.

GOVERNANCE IS AFFECTED IN FIVE POSSIBLE AREAS:

- 1 Knowledge and skills: technical expertise and institutional information for the sector;
- 2 Resources: human, material and financial, including availability of skilled labor, raw materials for processing, cost and price structure, etc.;
- 3 Systems, information management, communications and basic inputs; and
- 4 Legal authority, monitoring, oversight and reporting.

In the assessment of disaster's effects, an analysis must be made to determine how the capacity of the public sector to oversee the functioning of the sector may have been affected (including damage to Ministry of Commerce facilities, loss of registries, lack of sufficient commerce inspectors, etc.). Furthermore, analysis is necessary of how the disaster may have altered the structure of costs and possible increase in unit prices of the goods to sell; and how the disaster may have caused traders to be unable to continue servicing pre-existing loans, etc. The last factor is of special relevance to informal traders, but is also relevant to larger trading units.

EFFECTS ON RISK AND VULNERABILITIES

Risks for both formal and informal traders may increase after a disaster. While disaster risk may have been high before the disaster due to the absence or insufficiency of human settlement plans and land zoning, the disaster may bring about a higher degree of risk and vulnerability for the sector, due to instability of sloping terrains where trade shops may be located, the possible occurrence of aftershocks following an earthquake, increased fire risk and lower availability of goods to sell after a prolonged drought, etc.

This kind of higher risk and vulnerability must be duly assessed and schemes to reduce such risk should be identified and included in the needs for recovery and reconstruction under disaster-resilient standards.

ASSESSMENT OF DISASTER IMPACT

The trade or commerce sector assessment team must make additional estimations in this sector that may have an impact at both the macro-economic and personal or household levels, and deliver them to the appropriate assessment teams handling disaster impact analysis.

For the **macroeconomic impact analysis**, the following values must be estimated by the trade sector assessment team and delivered to the macroeconomic impact assessment team:

- The estimated value and calendar of changes in the flows of sales (including lower sales levels, and possible higher cost of sales (higher values of intermediate consumption), expressed in current value, to be used for the analysis of disaster impact on gross domestic product and growth;
- The estimated value of goods that will not be exported to other countries due to shortages of production, and/or the estimated value of goods that may need to be imported due to shortages in their domestic or local production, since this would have a bearing on the balance of trade and payments of the country;
- The estimated imported component of the commerce sector reconstruction costs (including the items that are not produced locally in the affected country and that will have to be imported from abroad), expressed in percentage (%) terms of reconstruction needs once they have been assessed, to be used for the impact analysis on the balance of payments;

- Estimated values of tax revenues (sales taxes or value added taxes, depending on the country's tax scheme) that will not be accrued by the government due to the decline in commerce sector sales, to be used for fiscal sector impact analysis; and
- Values of decline in sales and higher production costs arising from the disaster in the case of government-owned commerce enterprises, to be used in the analysis of disaster impact on the fiscal sector.

For the estimation of **disaster impact on personal well-being and on human development**, the following values must be estimated by the trade sector assessment team and delivered to the human development impact assessment team:

- The estimated value of sales that will not be made by trade enterprises after the disaster, which may translate into possible employment and personal income losses for the commerce sector labor force; and
- The estimated value of informal-sector sales obtained from the separate sample survey of informal traders conducted in the shelter camps, which would translate into livelihood and income losses.

The assessment team for the trade sector should be aware that any losses in personal or household income are not to be added to the value of losses in trade sales; otherwise, double accounting of disaster's effects would occur. Instead, the team must keep in mind that these losses in personal or household income are disaster's effects measured at a different level of analysis.

CROSS-SECTORAL LINKAGES AND ISSUES

During the assessment, several cross-cutting issues must be given due consideration. These include the differential impact of the disaster on gender and the possible impact on the environment.

For the trade sector, the gender breakdown of the labor force – whether skilled or not – is an essential part of the baseline information gathered at the start of the assessment, together with information on wages and salaries. Once the estimated values of losses in sales for the sector are made, separate estimates are to be made of the number of jobs temporarily or permanently lost due to the disaster for both men and women, together with how their personal income may have declined. This should be done for both the formal and informal parts of the trade sector.

The trade sector usually discharges waste into the environment. Due to a disaster, the flows and manner of waste disposal may change and the environment may sustain damage to its natural or built assets. Environmental services may decrease. Any such changes must be quantified by the assessment team with assistance from environmental economists, and expressed in monetary terms for inclusion in the assessment.



ESTIMATION OF POST-DISASTER ECONOMIC RECOVERY AND RECONSTRUCTION REQUIREMENTS OR NEEDS

The estimation of the value of post-disaster financial requirements to ensure recovery and disaster-resilient reconstruction of the sector must not be initiated and undertaken until after the results of the estimation of the value of destroyed assets (damage) and of changes in sales flows for the commerce or trade sector have been completed by the sectoral assessment team and delivered to the macroeconomic or global assessment team. The commerce or trade sector assessment team should be aware that the above is essential to ensure the accuracy and consistency of the entire assessment and to guarantee that no undue influence is exerted in the estimation of post-disaster needs.

Financial requirements or needs to ensure the **economic recovery** of the commerce or trade sector are defined as the amounts of funding required to ensure returning the sector to its normal level of functioning and sales. In most cases, these needs would include the availability of financing to ensure sufficient working capital for the affected enterprises to re-start operations, and possibly refinance or reschedule non-performing loans arising from the disaster. Such financing may be channeled to the entrepreneurs through different ways, depending on their size and credit-worthiness: cash grants for micro-sized entrepreneurs, to avoid their resorting to use informal credits from loan sharks; and soft-term credit for small-to-medium sized enterprises (SMEs) channeled through the development or private bank systems, with lower-than-normal interest rates and longer repayment periods. Large enterprises that are usually at least partly insured may require temporary tax relief during recovery. The amounts of financing required for these recovery schemes may be estimated by trade economists on the basis of the estimated value of disaster-induced sales decline for each type and level of trading enterprise, since they normally have a typical value of stocks to sell in their premises that may have been destroyed. Experience acquired in the past 40 years of disaster assessment has revealed that the usual range of such recovery needs ranges between 25 to 35 per cent of the value of losses in sales; the detailed results of the commerce sample survey, however, would provide information on which to more firmly define this range or working capital needs.

The above values are to be decreased by the amounts of possible insurance on sales proceeds that some of the commercial enterprises may actually have, in order to obtain the net amounts of financing required for disaster-affected enterprises.

Financial requirements or **needs for reconstruction** under a “building-back-better” strategy are estimated by taking the estimated value of replacement of destroyed assets and increasing it by a certain percentage whose magnitude depends on the degree of quality and technological improvement as well as disaster-risk reduction defined in the strategy for reconstruction. In short, reconstruction requirements will always have a larger value than the estimated value of damage.

Experience acquired in the past 40 years of disaster assessment in many countries of the world shows that the range to increase the value of damage to obtain disaster-resilient reconstruction needs is between 10 to 25 per cent, depending on the degree of disaster-resilient features that the destroyed infrastructure had prior to the disaster. The exact increase to be adopted must be defined by civil and structural engineers who are part of the commerce sector assessment team, who have had relevant experience in this type of work.

The estimated gross value of reconstruction requirements must be reduced by the expected amount of insurance-on-assets proceeds that are to be received by those commercial enterprises that had such insurance.

ESTIMATION OF POST-DISASTER HUMAN DEVELOPMENT RECOVERY REQUIREMENTS OR NEEDS

For the analysis of human development impact, estimated values of commerce sector sales losses are to be delivered to the separate team in charge of estimating personal or household impact analysis, for the subsequent estimation of employment and personal or household income losses. This will in turn enable the estimation of requirements for the funding of temporary “cash-for-work” employment schemes.

In addition to the above, results of the sample survey of informal traders which may have been conducted in temporary shelter camps to estimate their income losses due to the disaster should also be delivered to the assessment team in charge of estimating human development impact, and for defining additional financial requirements in terms of possible cash grants or other assistance for informal male and female traders.

