

I N T E R N A L C O N T R O L																	
PROGRAMMING FOOD RESOURCES	CALL FORWARD AND ACQUIREMENT	PORT	STORAGE AND HANDLING	FOOD RECEIPT AND DISPATCH	LOSSES AND CLAIMS	INVENTORY ACCOUNTING AND REPORTING	FOOD DISTRIBUTION TO SITES	MONITORING PROJECT SITES									
A	G	E	N	T	S	A	N	D	C	O	N	T	R	A	C	T	S



Chapter 2

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I. LOGISTICS ASSESSMENT

Logistics has to do with the flow of goods and services from origin to destination. The basic components of a logistics plan should address transportation (both for receipt into the country and programming area, and dispatches to distribution points within the programming area), storage, communications, and information management.

CARE is usually part of a logistics network, which may involve other international agencies, host government counterparts and the private sector. The country office may be involved in managing the logistics network for food and supplies shipped from donor to recipient countries, purchased in neighboring countries, or landed at a regional port for inland delivery to other landlocked countries where CARE has programs. CARE may be involved at any point along the way, from receipt at port, storage, and delivery to distribution sites. It is important for staff to be aware of the entire in-country logistics network, the roles of other agencies along this network, and how CARE's activities fit into the system.

The logistics assessment must also include necessary cost analyses for all logistics operations and include options for overcoming logistical obstacles.

The logistics assessment should be conducted by local individuals and organizations who know the area and services available.

A. Port Capacities and Services

It is important to examine the port (or ports) before making other transportation calculations. Some countries have multiple ports, but only one with adequate capacity to receive anticipated tonnage levels. Even if a port is close to a targeted distribution area, it does not necessarily follow that cargo will be received in that port. Moreover, the quality of service offered by a port may determine where the food is discharged and affect other transportation arrangements.

In analyzing port capacity and services, consider the following issues:

Authority

- Governmental port authority, quasi-governmental, or private

Load and discharge port restrictions

- Maximum port draft (submerged depth) allowable when ship enters harbor
- Overall length of vessel and beam
- Locks/bar restriction
- Bridge heights
- Use, size, capacity, and age of lighters, if applicable
- Any special dues or taxes on vessels or cargo

Berth Restrictions

- Maximum draft allowable along loading/unloading facility (what size vessels can dock, will lighters be needed?)
- Berth length and beam allowable
- Heights above waterline (elevator spout interference)

Transshipment facilities, including barges, rail, or truck**Labor Practice**

- Normal working hours, overtime and holidays
- Labor wage rates
- Productivity (tons per hour) of cargo operations and stevedores

Types of cargo discharge and handling equipment

- Shore-based cranes and lift capacity
- Equipment for containers (discharging and loading onto ground transport)
- Vacuator equipment for removing bulk cargo from ships to port storage silos and accurate bagging machines
- Average discharge rates per shift or day
- Types of loading and discharging facilities (elevator loading and discharge, pneumatic or grab discharge)

Transit Sheds and Port Storage

- Types of storage capacity within the port (outside storage or open or locked warehouses)
- Is food stored separately in warehouses or mixed with cargo from other vessels?

Port Take Off

- Rail access directly to dockside
- Adequate space for trucks to maneuver within the port

Tallying Services

- Qualified tally and survey companies that can provide an out-turn report

Port Lighting and Security

- Flood lights
- Dependability of electricity supply
- Fencing to control access
- Security personnel and services.

This information is often available through the country's Ministry of Transport or Port Authority. Donors and NGOs who already use port services are a good source of information.

B. In-Country Transport

As part of the planning process, it should be determined whether CARE, the donor or a counterpart organization is responsible for transportation of food.

1. Roads

Road transport remains the predominant means of delivering food and other items within a country. The country/s network of primary and secondary roads, often with dirt trails leading to project sites, can be determined by consulting a good map and the Ministry of Transport. Information should be collected on the following:

- **Distances** from main and secondary ports of entry to primary warehouse and operating regions
- **Composition and seasonal condition** of primary and secondary roads and the type and size of truck or other modes of transportation (e.g., tractors, beast of burden) that can safely operate on each road
- **Turn-around times (TAT)** from the ports to warehouses, between warehouses and to distribution sites (see ***Food Distribution to Sites***)
- **Bridges and/or ferries'** condition and the weights they can accommodate. For ferries also regularity of service.

2. Trucks

When roads are in reasonably good repair, trucks are the most flexible way to move food. Trucks will play a role at some point in the logistics operation, either as long-haul (e.g., between ports and inland hubs), short-haul (e.g., from hubs to distribution sites), or for local handling (e.g., from port to warehouse, airport or railway station).

CARE or its counterpart should first try to use government or commercial trucking fleets where available and feasible. There are a number of commercial transportation options:

- **Common Carriers:** In many countries, a mix of large to medium sized trucking companies, either private or state-owned, and single truck owner-operators, are available for transport.
- **Contract Carriers:** Trucks that serve a particular company, such as logging companies, mining companies, or agro-businesses, are often only occupied in one direction, i.e., from the mine to the port, and can be contracted to transport food on the back-haul portion of their trips. Contract carriers often have lower rates, as the trucks have to return anyway, although they may not be willing to go where needed by CARE, unless it is close to their base of operations.
- **Private Carriers:** Road transporters that only haul for a specific purpose and company. CARE fleets would be classed in this category, as would the fleets of other NGOs and the local military. These fleets are normally not in the business of carrying cargo for others, but could be used in emergencies.

a. Building a Trucking Capacity

Only in emergencies or other unique circumstances should CARE develop its own trucking capacity. The purchase of trucks is a very costly capital expense that imposes many unanticipated burdens. Management is time-consuming and resource-intensive, and may distract staff from fulfilling programmatic objectives.

Management responsibilities include:

- Obtaining required government permits and licenses
- Maintenance facilities and experienced mechanics
- Insurance
- Driver selection and discipline
- Eventual disposition of the trucks
- Fuel supply
- Spare parts.

CARE should only consider establishing its own trucking fleet if:

- There is no reliable commercial trucking in-country
- There is no government fleet available for use.

An interval of six to nine months is typical between the time the decision is made to order trucks to the time they can be used for food deliveries. Although in some cases emergency funding can be quickly mobilized to speed up the procurement process. However, because of the uncertain nature of most donor approval and capital purchasing procedures, expedited procurement of vehicles should not be expected.

b. Types of Trucks

If CARE decides to lease or purchase trucks, project managers must take into consideration: the size of trucks, condition of the roads, required food mix, the storage capacity of the receiving warehouses, and ruggedness of the terrain.

Long-haul transport: It is more economical to move cargo over great distances in trucks with a gross carrying capacity of 35 MT. An additional trailer with a gross capacity of 12 MT can be pulled behind the truck.

Short-haul transport: Short-haul trucks carry approximately 8-10 MT of cargo and are generally used to transport food from the main warehouse to site-level centers. Because many food programs operate in remote rural areas, four-wheel drive is essential.

3. Fuel

Fuel is generally the responsibility of the transporter and is factored into the transport price. Contracts for the provision of fuel must be entered into between CARE and the suppliers. Inconsistent fuel availability could lead to late or missed deliveries to project sites and therefore adversely affect project goals. In order to insure that enough fuel is available to meet

distribution schedules, fuel can also be stored by CARE and issued to trucks, or a commercial filling station can be contracted to issue fuel to agency or contracted trucks.

An inventory of fuel distribution and supply points should be taken. In many countries, import and supply of fuel is managed by the government. Where fuel provision is in private hands, there are usually a limited number of companies involved.

The following information should be collected and maintained:

- Location of fuel importation points
- Location of refineries
- Location of bulk storage facilities
- In-country distribution of fuel around the country (road tanker, rail tankers, pipelines) and deliveries to filling stations or other retail outlets
- Fuel storage areas that may have large tanks and pumps for receiving, storing, and disbursing fuel.

If CARE has its own fuel supply, it must be protected and secured from blowing dust, sun, theft, and misuse. Further, a plan should be developed to transport and store fuel in remote operating areas.

4. Other Modes of Road Transport

Local modes of transport, such as carts, pack animals (donkeys and camels) and bicycles, can move food into remote areas. Sometimes recipients travel long distances by foot to pick up food and transport it back to their families.

Country Example

Many of India's 14,000 distribution sites are located in areas inaccessible to motorized vehicles. In Rajasthan, camels are an economical, efficient, and common form of transportation, even on paved roads. Camels are a convenient mode of transporting food from block warehouses to ICDS distribution centers.

5. Rail Capacities and Services

Railroads can move larger amounts of food than either trucks or inland waterways. It is often the cheapest means of internal transportation. Sometimes railroad authorities transport donated food free of charge or at reduced rates. Rail transport, however, is less flexible than other types of overland transport. In many countries rail infrastructure has been neglected, rendering service and equipment unreliable. Also, road transport is often needed to complete final delivery, increasing the possibility of handling losses.

Sometimes rail is the only means of access. During a flood, the roads may be underwater. Loaded trucks can be placed onto rail cars, transported through the flood zone, and then unloaded to continue their journey to final destination.

In reviewing the rail capacity and operations, the following information should be collected:

- Tonnage capacity per train
- Number and condition of wagons and locomotives available
- Port to warehouse rail capacity
- Possibility of vessel discharge directly into rail wagons
- Frequency of train departures
- Transit time to destinations
- Condition of bridges and/or tunnels to destination
- Labor and equipment required for loading/discharge of the wagons
- Payments terms, demurrage charges and facilities for loading and unloading
- Reliability in terms of promptness and losses
- Availability of transit sheds for short-term storage
- Documentation and control of wagon deliveries
- Security of cargo and railroad's responsibility to safeguard the cargo
- Clearance restrictions of the cargo along the route.

6. River and Coastal Transport

River or coastal transportation is less expensive for large quantities of food. It is sometimes used for transshipment and movement of food into primary warehouses, or from intermediate warehouses to distribution sites.

Consideration should be given to the following:

- Types of vessels, including self-propelled vessels, tugs, and barges
- Condition of mooring facilities, wharves, unloading facilities, and storage capacity at ports
- Seasonal considerations, including flooding and the dry season
- Transport schedules.

7. Air Transport

Air transport should only be considered as a last resort for a short-term emergency operation, such as during a civil war, where ground access is impossible due to security constraints, or where extensive flooding has caused bridges to collapse. It is usually only possible to move limited quantities of food by air, and the cost is always very high.

a. Aircraft Companies

It is generally best to work with local air charter companies in an emergency situation, as there are no registration problems and maintenance costs are either avoided or greatly reduced. The following information should be collected:

- Type and number of aircraft
- Cargo carrying capacity of each aircraft
- Type of fuel required for each aircraft
- Minimum landing strip requirements for each aircraft in terms of length and composition
- Ability of the charter company to contract additional aircraft, if required.

b. Airports and Airstrips

The following information can be obtained from the Ministry of Transport, Office of Civil Aviation, or local air charter companies:

- Location of airports/strips and the areas to be served by each one
- Distance from the main airport to each air strip in terms of air miles and/or flight time
- Storage facilities, such as transit sheds
- Handling equipment, such as containers and/or tarps, forklifts, conveyors
- Fuel storage, such as below-ground tanks, tanker trucks, hand pumps
- Ground support at each airport
- Condition, length, and composition of the landing areas.

c. Airdrops

Airdrops have been used in situations where aircraft cannot land. It can be difficult to maintain any accountability for goods air-dropped into an area. Once the decision to use airdrops has been made, consider:

- Altitude of the drop
- Whether the drop will be made with parachutes or free-dropped
- Packaging to limit losses upon impact
- Controls on the ground to prevent people from being injured by rushing into the drop zone as cargo lands.

Such operations should be closely coordinated and controlled. Constant access to communications is essential.

C. Landlocked Countries

When the country of operation is landlocked, without direct access to ocean transport, all possible modes of transportation should be evaluated. The cost, efficiency (including administrative and customs procedures), security, and overall, year-round reliability of the transport route options must be carefully evaluated and periodically reviewed. Often there will be no means of transportation that meets all criteria.

- One route may be relatively safe, yet involves a prohibitively long transit time.
- Another route may be inexpensive but risks considerable losses.

In these cases, project management must set priorities and agree with donors on the method of transportation selected.

D. Locating Storage Facilities

In assessing the availability of adequate storage facilities, the following should be taken into consideration:

- Access: The storage facility should be accessible to trucks, ideally along an all-weather road.
- Proximity to target population: This becomes more important after food leaves the central warehouse and is stored in secondary warehouses or near distribution sites.
- Drainage: The warehouse should not be located in a low area subject to flooding.
- Space: There should be sufficient space to allow trucks to maneuver within the warehouse compound.
- Crowd control: Fencing or wide ditches around the compound such that entry and exit can be managed and controlled.
- Warehouse structure: Is the floor solid and in good condition? Are pallets available, or do they need to be procured? Is the roof sound with no evidence of leakage? Are there sufficient windows to allow for light and ventilation? If so, are windows secured with bars or grating to prevent break-in? Does the warehouse have electric lighting for night work? Are any simple repairs needed?
- Loading doors: How many loading doors are available? How many trucks can be loaded/discharged at one time?
- Capacity: Is the warehouse large enough to store a significant amount of food? One large warehouse is simpler than several small warehouses, in terms of control, coordination and supervision.

- Cost: Is the rent reasonable and/or supportable by the project budget?
- Security: Large amounts of food stored in an insecure location could actually invite attacks on local population or warehouse personnel.

See ***Storage and Handling***, for more information.

II. ASSESSING COSTS

Food aid programs are costly, and it is critical that CARE and counterparts integrate rigorous cost analyses into all programming decisions in order to use resources effectively and efficiently, and country offices should pay careful attention to whether they will carry out activities directly, form partnerships or contract out services.

Costs will vary depending upon program size, method of distribution, feeding schedules, and the local infrastructure available for project operations. Funds will be required for supervision, warehouse storage and handling, monitoring, and overall management and administration. In addition, costs are associated with survey design and analysis, training, personnel, transportation, and beneficiary selection. All these costs are borne by the donor, CARE, the recipient government and project participants either through cash or in-kind support. See **Attachments** for an example of a worksheet that could be used for estimating costs.

Cost analyses should be conducted. Some examples include:

- Costs per ration (e.g., total costs and logistics, direct and indirect program costs as a percent of total ration costs)
- Costs per metric ton
- Costs per beneficiary
- Direct operational costs of CARE as a percent of total program cost
- Local cash and in-kind contributions as a percent of total program resources
- Cash and in-kind contributions by communities and/or beneficiaries as a percent of total program resources.

Food aid projects are expensive, require considerable manpower, and are cumbersome to manage. In developing a food aid project, country offices must be prepared to justify each cost element.

Project Resource Requirements

Program Elements	Required Inputs
Targeting	Systems to gather and analyze information collected on the target population Ration cards or registration procedures
Pre-Shipment	Staff to determine: <ul style="list-style-type: none"> • Total tonnage to be transported/delivered • Breakdown of tonnage by delivery location • Time frame required to complete each delivery • Expected duration of the program • Agreements with the host government, donor, counterparts, transportation companies, clearing and forwarding agents, storage facilities, and project participants
Documentation	Preprinted multiple copy issue (waybills) and adjustment vouchers Storehouse ledgers
Management Arrangements	Organizational structures and clear assignment of responsibilities Both formal and on-the-job training Initial and periodic systems analysis to insure: <ul style="list-style-type: none"> • Proper authorizations • Accountability • Checks on the recording of transactions • Regular stock reports • Limited access to assets • Separation of duties Staff rotation
Procurement (many of these costs are borne directly by the donor, but should be considered in the overall cost of food aid projects)	Office material and equipment Vehicles for monitoring and management Freight forwarder Systems in CARE country office, local donor office, CARE Atlanta, donor headquarters office to process calls forward and purchase food Processing and packaging, if required Pre-shipping storage and handling Ocean freight Overland transport to the border in landlocked countries
Port Charges	Landing charges other fees Charges for movement of cargo from storage area and loading on forwarding transport (includes labor) Demurrage charges for not clearing food out of port warehouses on a timely basis Survey charges for inspection of the cargo prior to discharge to fix responsibility for any damages en route.

Internal Transport, Storage and Handling	<p>Adequate discharge, storage, and off-take facilities at port, including stevedores, supervision, transit sheds and port storage</p> <p>Ex-tackle, ex-shed, and discharge surveys</p> <p>Staff and scales to collect sample weights of the food</p> <p>Reconstitution costs, including extra bags, labor, stitching machines and scales</p> <p>Local clearing and forwarding agent fees</p> <p>Adequate means of inland transport to central warehouses</p> <p>Adequate central warehouse facilities, including space, fumigation and reconstitution</p> <p>Warehouse equipment, pallets, scales, locks</p> <p>Reliable communications network</p> <p>Vehicles or transport costs to distribution points</p> <p>Regular fuel supplies</p> <p>Anticipation of seasonal constraints and other problems, and backup plans and reserve capacity to minimize delays in distribution</p> <p>Insurance, such as bonding of warehouses and employees</p>
Delivery Schedules/Distribution Plan	<p>Scheduling of the distribution</p> <p>Contingency plans for ration deliveries</p> <p>Training and arrangements for distribution at the sites</p>
On-Site Feeding	<p>Local inputs, such as spices or other foods</p> <p>Cooking utensils</p> <p>Materials for complementary activities, such training guides, growth charts, health posters and vaccines</p>
Monitoring and Evaluation Systems	<p>Systematic monitoring and evaluation of:</p> <p><u>Process indicators:</u></p> <ul style="list-style-type: none"> • Cleanliness of facilities • Stock balances at distribution sites • Validation of inventory records from port to end-use sites • Ration size • Distribution procedures and amount of food distributed • Review of beneficiary lists <p><u>Impact indicators:</u></p> <ul style="list-style-type: none"> • Progress of interventions in meeting final and intermediate program goals • Status and needs of the affected population • Effectiveness/impact of food assistance • Status of livelihood systems in a targeted area, including market prices, production, livestock and socioeconomic conditions <p>Periodic audits and internal reviews</p>