



**FOOD SECURITY
CLUSTER**

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Cooked meal distributions in emergencies – practical guidance

This paper was developed by the PQWG upon request of global Food Security Cluster (FSC) partners, coordination teams and field staff.

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Rationale

Distributions of cooked meals are largely used in humanitarian contexts, in response to immediate food security needs and where uncooked food distributions would not be appropriate. They can also be implemented for populations in transit, as well as during periods of transition between different food security interventions or for a set time, until the food security of the affected population has been re-established.

Cooked meals are distributed around the world by humanitarian organizations, government bodies, and by local populations (families and individuals), in response to vulnerabilities due to events such as conflict, natural disasters and pandemics, as well as along migration routes. Cooked meal programmes very often target the most vulnerable, such as the dispossessed, landless/homeless people, migrants in transit camps, people in quarantine facilities, refugees and internally displaced people (IDP), as well as more generally those who have no means to store, transform or utilize dry foods. In some cases, cooked meals can also be used to help prevent and reduce the prevalence of undernutrition among certain groups (e.g. children, pregnant and lactating women, the elderly).

The global COVID-19 pandemic has caused many implementing organizations to consider whether and how to safely implement cooked meal programmes, with the goal of meeting nutritional needs as well as ensuring the principle of *Do No Harm*. While this guidance is prepared with the COVID-19 pandemic in mind, it is equally applicable for other shocks or issues of public health concern.

Objective

This guidance provides general operational direction to FSC partners and food workers for the implementation of cooked meals under emergency conditions, including but not limited to the novel coronavirus (COVID-19) pandemic.

This is not intended as a comprehensive guidance on the “how to” aspects of cooked meal provision; rather the goal is to highlight key considerations for food safety, nutrition and communicable disease prevention, in particular COVID-19, when planning and implementing a cooked meal programme and to provide practitioners with additional reference and resource materials.

Moreover, this document assumes that a thorough process was utilized to determine if cooked meals are the correct modality.¹ The Codex Alimentarius Commission has adopted several practical guidelines on how to apply and implement best practices to ensure food hygiene ([Codex General Principles of Food Hygiene, CXC 1- 1969](#)). These principles can be applied in all situations where food is being prepared for consumption, including cooked foods in emergency situations.

This guidance mainly focuses on “site distribution”; however, during emergencies food may be prepared, packed and distributed at/from/to sublocations and sometimes be distributed down to household level (through e.g. couriers, companies, incentive workers, volunteers, and/or community/civil society organisations). Hence, the humanitarian assistance process requires a strong monitoring and feedback systems, in place also to identify risks, deviation or misappropriation.

¹ See an example of decision tree [modality](#)

Key considerations

Distributions of cooked food in humanitarian response generally have a limited duration and are implemented as short-term measures. Cooked meals should not be viewed as a means of compensating inadequate general food rations. The objectives of the feeding programme should be realistic, achieved within a pre-determined timeframe, and strictly monitored during each phase. However, if emergency conditions persist, this modality can be extended until more stable and effective access to food is achieved. Cooked meals/wet food distributions may be advised:

- as an immediate **life-saving** food security activity, especially following an emergency (natural disaster, displacement, pandemic, etc.) or in case of health emergencies such as COVID-19 in isolation facilities;
- while the affected population or groups are **transitioning** into a **more stable situation** (e.g. displaced populations, populations in transit, etc.);
- if the **security situation** is poor and beneficiaries' protection risk increases with distributions of dry food rations;
- as **supplemental** assistance for vulnerable groups (e.g. the elderly, children, pregnant or lactating women, etc.), including school feeding programmes;
- to support **vulnerable groups** that cannot be reached through other interventions (including when government policies prohibit some forms of support);
- when there may be a **time gap** between the immediate food assistance needs of the population and a future planned integration into formal assistance channels;
- to **mitigate protection** issues in an unstable environment where people cannot utilize or store food for extended periods or access utilities or adequate cooking fuel to prepare it safely.

DON'T FORGET!

Local preferences and context must be taken into consideration², both in terms of dietary norms as well as bolstering rather than undermining traditional self-help mechanisms or community/host community support of the most vulnerable. Ideally, cooked meal programmes will be designed with potential linkages to other food security and food assistance interventions ongoing in the area. Efforts should be made to ensure that cooked meals are culturally acceptable to the targeted population.

COORDINATION

A cooked meal programme should be considered within the local context, both for suitability as well as for contribution to a coordinated humanitarian response: cooked meals programmes are normally run in parallel with other programmes (dry food distributions, cash distributions, etc.). Coordination is key to avoid overlaps, to fill critical gaps and/or complement other food security interventions. Coordination is also important to ensure that this modality mitigates (or at the very least does not exacerbate) identified protection risks.

Where at scale, with multiple agencies and stakeholder being involved, cluster coordination is key not only from a strategic point of view and response coordinatino, but also along the supply and processing flow to identify and support any necessary solution.

² See also: <https://spherestandards.org/handbook/editions/> (6.2 - Food quality, appropriateness and acceptability, p.201)

Planning and design

Establishment: design and facilities

- **LOCATION:** Food preparation, storage, distribution and eating areas should be located away from potential sources of contamination (e.g. pollution, pests, waste disposal, etc.). Separation and demarcation of these areas is key to keep hygienic standards and distributions' efficiency
- **SAFETY:** Measures should be in place in term of structure and access. Prevent potential health and safety incidents within, outside and around the facilities (e.g. exposition of poorly disposed garbage, exposed wires or dangerous objects as generators, etc.), including fire incidents.³
- **PREMISES AND ROOMS:** Food preparation, storage, distribution and eating areas should be functional, of a suitable size to avoid crowding and separate from one another, maintaining gender norms and protection measures. Facilities should be equipped with cleanable food contact surfaces, floors, and walls. Doors and windows should have screens to prevent dust, insects and other pests from entering. Lighting should be adequate for the tasks being performed. Entrance and Exit doors/paths separated when possible, spacing demarcated for physical distancing.
- **EQUIPMENT:** All equipment and utensils used in the preparation and distribution of food should be functional, fit for purpose and cleanable. Cooking and refrigeration appliances should be in good working order and able to maintain required temperatures to keep food safe. Waste containers should be available and identifiable. Utensils to be stored in clean and closed containers after use. Consider the impact of all equipment, including cooking fuel on the environment.
- **FACILITIES:** Adequate and regular supplies of clean and drinkable water (both hot and cold) for hand-washing, food preparation, and cleaning and sanitizing of utensils and equipment should be available. If ice is used and comes into contact with food, it should be made from potable water. The facility should be equipped with a cleaning and sanitation station area for equipment and utensils. Toilets and hand washing stations should be sufficiently available and separated from food storage/distribution. The facility should also be ventilated to control excess moisture and temperature.
- **FOOD LOSS & COMPOSTING:** Energy, food and water loss must be avoided. Wise handling, preparation and food storage needs always to be applied. Composting should be promoted where possible, instead of throwing away food scraps. Linkages with other humanitarian intervention (agriculture, etc.) should be explored.
- **WASTE MANAGEMENT⁴:** Waste disposal must be separated from food processing and storage areas; waste dedicated areas to be kept clean and waste containers need to be closed/covered and regularly emptied by dedicated and well equipped staff;

³ Particular attention to **fire risks**, premises needs to be secured: fire risk assessement, fire prevention measures/plans, training and equipment.

⁴ [FOOD LOSS & WASTE MANAGEMENT INFOGRAPHIC](#)

Cleaning procedures and methods:

- Washing and sanitizing: utensils such as cutting boards, bowls and knives need to be scraped to remove any food residue, thoroughly washed in warm soapy water, rinsed with water then sanitized through immersion in warm water containing a chemical sanitizer, used as per its instructions. Effective cleaning will remove most dangerous bacteria present on surfaces.
- Drying: all utensils must be dried before they are re-used. Air-drying is best but clean cloths can also be used.

The following are important considerations for specific areas:

- * **Worker arrival/personal areas:** equipped with wardrobes, toilets and hand-washing stations
- * **Inventory receiving areas:** clean, well-organized, temperature appropriate and free from pests
- * **Food storage areas:** protected from moisture and pests, adequate refrigeration storage space and temperatures (<5°C) and separate from storage of chemicals and other potential hazards (see below link for additional checklist & details)
- * **Cleaning and sanitation areas:** hand-washing stations for food handlers and cleaning and disinfecting of utensils and equipment
- * **Food preparation areas:** provide adequate separation for primary treatment of raw materials, raw food, preparation and cooked food
- * **Meal packaging areas:** clean, well-organized and free from potential contaminants such as raw food, extraneous materials or pests. Assess the packaging waste generated by a single meal/portions to assist the planning of waste management.
- * **Distribution/delivery preparation areas:** temperature appropriate
- * **Eating areas:** equipped with toilets and hand-washing stations. Appropriate measures should be taken to design areas that ensure gender norms are respected and the most vulnerable categories such as infants, children, people with a disability and the elderly can have priority access to distributions and safe access to eating areas.
- * **Protect, preserve** the natural environment from further degradation, avoid loss of energy, food, water.

Staffing: personal hygiene considerations⁵

Organize staff into groups or teams to reduce interaction between groups (taking into consideration gender norms in terms of working together or supervisory structures). Staff need to be always informed about health regulations, and should adhere to it.

- Personal hygiene training: instruct staff on requirements (proper hand washing frequency and technique, etc.); behaviour (appropriate coughing and sneezing protocols, no chewing gum, etc.), and use and disposal of personal protective equipment (masks, gloves, etc.).
- Food hygiene and nutrition training: instruct staff on their responsibility to keep food safe and nutritious and on how to properly handle food for safety and nutrition. Limit the number of staff in a food preparation area.
- All staff, especially those involved in distribution and supervision of eating areas, should receive training on issues such as safeguarding (food for sex, etc.), prevention of sexual exploitation and abuse (PSEA) and protection.

For staff: illness in the workplace

- Ensure that those who feel unwell or have symptoms of infectious diseases (e.g. COVID-19) do not report to work, in order to prevent transmission to fellow workers.
- Staff should be aware of the symptoms of COVID-19 and the appropriate control measures to prevent the spread of infection.
- If staff develop symptoms while on site, consider a separate safe space to temporarily isolate the symptomatic individual until action is taken. Those who are ill should contact medical professionals, or report to their supervisor who can support and take action.
- Staff should be aware of expectations and compensation agreements around illness.

⁵ See also: <https://spherestandards.org/handbook/editions/> (Hygiene promotion, p.96)

- Consider establishing a procedure to allow staff to report illness by phone (or email).
- Develop an action plan to manage reporting illness and exclusion of ill workers and compensation.
- Ensure that all workers and those preparing or cooking meals wear a mask, gloves, and generally respect all measures taken by the organization to prevent disease transmission.
- Make safety and health promotion part of onboarding and regular staff discussion.
- Reference: [COVID-19 and Food Safety: Guidance for Food Businesses: interim guidance](#)

Distributions: managing crowds and waiting lines

Instructions and communication

- * Food distribution and eating areas, including where to queue for entry, should be clearly marked with relevant messaging and signs. Signs and posters should include clear images for non-literate populations.
- * Clearly mark entrance and exit points for beneficiaries, keeping crowd flow moving in a singular direction. Entrances and exits should be placed away from food receiving areas.
- * Crowd management should ensure that most vulnerable groups are prioritized (infants, children, people with a disability, the elderly) and that gender norms are respected in queuing and distribution.

Personal hygiene and waste management

- * Hand-washing stations equipped with soap and warm water, napkins and waste receptacles, should be located at the entry and exit of all communal feeding areas. Waste water from hand washing stations should be properly drained away from the food preparation, distribution and eating areas.
- * Guide beneficiaries to handwashing stations with appropriate signs, including on proper handwashing techniques and other personal hygiene measures (coughing and sneezing, personal distancing, etc.).
- * Facilities should provide adequate receptacles for food waste. Serving plated cooked meals can generate larger volumes of waste. Consider environmental factors for waste disposal, and re-use of materials where feasible. Limit use of plastic.

Meal service

- * Ensure that there are separate entrance and exit points in the distribution area and maintain a smooth flow of beneficiaries in a single direction. Beneficiary entrances and exits should be located away from the facility's receiving area.
- * Depending on the size of the distribution area, consider using multiple stations to serve food to maintain steady beneficiary flow.
- * If temperature control is necessary, food service areas should have storage containers where prepared food can be staged prior to distribution. Source insulated containers with a simple racking system capable of loading trays or plates.
- * Clearly mark designated areas for queuing, entering, eating and exiting.
- * Encourage beneficiaries to leave immediately after collecting and eating their meals.
- * Provide designated areas for beneficiaries with specific requirements, cultural relevance, or protection concerns, including:
 - gender-separated areas
 - breastfeeding or nursing areas
 - unaccompanied minors

- the elderly
- people with a disability
- sick people (in case of COVID-19 see box below)

For beneficiaries: COVID-19 and infectious disease control

Screening and follow-up

- Allow areas for health/temperature checks by local public health officials (if required)
- Individuals with fever (temperature > 37.5°C) should be directed to a sheltered area for follow-up by local government or health officials. These beneficiaries should be informed that they are still entitled to receive rations regardless of the results of health screenings.

Control

- Ensure sufficient control measures, for example at the entrance; position handwashing stations and awareness posters for information.
- Establish measures to respect recommended spacing between people in queues to reduce transmission. If someone presents symptoms, isolate them and provide a mask.
- Establish measures in case of a health emergency/incident (loss of consciousness) and have emergency contingency plans (key contacts, links with health workers, etc.).

Operational planning

- Where possible, food should be delivered to COVID-19 affected households to avoid public gatherings. The delivery person must use sanitizer when handling food and maintain physical distancing during delivery.
- Establish a reception point, identity verification point, food collection point and exit to channel traffic and allow for personal space of at least 1-2 metres between each beneficiary.

Food preparation and nutrition

Food is one of the basic human needs, required for normal bodily functioning and healthy growth and development. A lack of appropriate nutrients in sufficient amounts can lead to a number of health problems. Provision of cooked meals should promote a **balanced diet**, defined as containing carbohydrates, proteins, fats, dietary fibers, vitamins and minerals in the right proportions.

- **Plan:** a meal plan can contribute to healthier cooking and save time and resources.
- **Supply:** consider and plan for the food supplies in order to ensure food safety⁶ and cooking cycles.
- **Localize:** always consider availability of locally-produced food first – this is the best option in many contexts and has numerous positive outcomes.
- **Culture and habits:** consider the culinary habits of the population being served, especially if refugees.
- **Health:** minimize the use of salt, sugar, chemical additives (e.g. sauces), processed food with high concentration of preservatives.
- **Waste:** recycle where possible, minimize use of plastic and other high-polluting materials, compost organic waste when possible.

⁶ Important to rely on food processors and retailers able to track food sources and ingredients.

- Labour: ensure that gender norms are respected and that child labour is not used in food cooking/preparation.

Control of operations for preparation, cooking and storage of safe food

Food hazards (microbiological, chemical and physical) should be controlled by using Food Safety Management Systems (FSMS) based on Hazard Analysis and Critical Control Points (HACCP) principles. Depending on the food products being prepared and the processes being used, critical processing steps must be identified, and appropriate and effective control measures implemented and monitored. Periodically, and if the food or process changes, control measures should be reviewed to ensure they remain effective. When appropriate, the monitoring of processing control measures and incoming materials should be recorded and retained for documentation and traceability purposes.

The following are important considerations in the control of operations:

- Time and temperature control of cooking, cooling, processing and storage. Should take into consideration the nature of the food, its shelf life and how it is prepared.
- Avoid cross-contamination: harmful pathogens can be transferred to food from other foods, food handlers, food contact surfaces and the environment. Raw and prepared food should be separated and surfaces, gloves and utensils should be clean and dedicated for use with either raw or prepared foods.
- Avoid physical and chemical contamination: potential contamination of food by extraneous materials and chemical (glass, metal, wood, harmful fumes and chemicals) should be controlled. Stored foods should be covered.
- Incoming material requirements: raw materials and ingredients should come from reputable sources and be inspected prior to use. Only sound, suitable ingredients should be used.
- Safe energy and fuel along all phases and processes: preparation, cooking and storage; capacity building/ training initiatives on SAFE (Access to Fuel and Energy) can be considered

WHO Five Keys to Safer Food Programme

1. **Keep clean:** wash hands before and often during food preparation. Wash and sanitize all surfaces and equipment used for food preparation and protect preparation areas and food from insects, pests and other animals.
2. **Separate raw and cooked foods:** raw meat, poultry and seafood should be kept separate from other foods and prepared using dedicated equipment (knives and cutting boards). Raw and prepared foods should be stored in separate containers to avoid contact between raw and prepared foods.
3. **Cook food thoroughly:** in particular meat, poultry, eggs and seafood must be cooked well. Soups and stews should be brought to a boil and chilled foods need to be reheated thoroughly.
4. **Keep food at safe temperatures:** promptly refrigerate all cooked and perishable foods and do not leave cooked food at room temperature for more than two hours. Cooked food should be served hot. Do not thaw frozen foods at room temperature.
5. **Use safe water and raw materials:** if water is not safe, it must be treated. Select fresh and wholesome foods and foods that have been processed for safety (i.e. pasteurized milk). Wash fruit and vegetables and do not use food beyond its expiration date.

Cooking tips for nutrition

Cutting vegetables into small pieces and exposing them to air before cooking may result in loss of vitamins, especially vitamins C and B-complex. Correct preparation can lead to increased nutritional properties. Practical tips include cooking larger pieces immediately after cutting and just until cooked to preserve nutrients.

Rice should be washed with minimum water and cooked in just sufficient amounts so that all water is absorbed and no nutrients are discarded with excess liquid. To remove debris and prevent clumping, rinse rice 2-4 times prior to cooking.

Repeated heating of oil and fat for frying may lead to the formation of certain toxic substances in the oil. Do not use the same oil for refrying foods. Fortified vegetable oils are recommended (e.g. canola and olive oil).

Steaming vegetables is a healthier option than boiling: contact with water during cooking removes water-soluble nutrients from food, which leach out of the food into the water. Steaming also consumes less water. When cooking leafy vegetables, leaves can be torn rather than cutting with a knife to preserve vitamin C content.

Food preparation: safe water use

- Only potable water should be used in food preparation (food handling, processing or as an ingredient). Safe water supply can be assured through proper boiling and disinfection procedures.
- Non-potable water can be used if it does not come into contact with food (for example in fire control, steam production, refrigeration or other purposes where it would not contaminate food). Non-potable water should have a separate system so that it cannot contaminate the potable water source and be properly identified to avoid misuse.
- For further information, see [Environmental health in emergencies and disasters: a practical guide \(WHO, 2002\) Chapter 7: Water supply](#)

ANNEXES

ANNEX I – Carbohydrate, fat and protein sources

Carbohydrate sources	Fat sources	Protein sources
Cereals ✓ Maize, all types ✓ Sorghum ✓ Millet ✓ Rice ✓ Wheat, all types Tubers ✓ Cassava ✓ Potatoes, all types ✓ Yam ✓ Taro Pulses ✓ Beans ✓ Lentils ✓ Peas Sweet foods ✓ Sugar ✓ Honey ✓ Fruit	Vegetable products ✓ Oil (Soya, palm, sunflower, peanut, olive) ✓ Nuts (walnuts, peanuts, sesame...) ✓ Avocado Animal products ✓ Butter ✓ Milk ✓ Egg ✓ Lamb, mutton ✓ Beef ✓ Salmon ✓ Sardines	Meat, all types Fish, all types Peanuts Soya Pulses (beans, peas, lentils) Insects Rodents Eggs Dairy products (milk, cheese, yogurt) Poultry Wild birds

ANNEX II – Vitamin and mineral sources

Vitamin sources		Mineral sources	
Vitamin A -Red fruits and vegetables: papaya, mango, guava, carrots, pumpkin, zucchini... -Pulses and green leafy plants: spinach, salads, broccoli, avocado, lentils -Butter, eggs, whole milk -Liver -Fish oil -Sweet potatoes Vitamin C -Herbs and green leafy vegetables -Red fruits	Vitamin B -Grain germ, wholegrains -Pulses -Mushrooms -Dried vegetables -Green vegetables -Potatoes -Green leafy plants -Liver -Dairy products -Eggs -Meat -Fish Vitamin D -Fish oil -Oily fish (tuna, sardine) -Eggs -Liver -Dairy products	Iron -Pulses -Green leaves -Oil seeds plants -Dried fruits -Liver -Meat Calcium -Dairy products (except butter) -Green leafy plants -Pulses -Tubers -Fruit (citrus) -Fish Magnesium -Oil seed plants -Pulses -Whole grains -Chocolate Potassium	Zinc Pulses Wholegrains Liver Meat Cheese Iodine Seafood Iodized salt Copper -Oil seed plants -Pulses -Green leaves -Wholegrains

Vitamin E -Vegetable oil -Oil seed plants -Green vegetables -Butter -Oily fish -Eggs		-Oil seed plants -Pulses -Dried fruits -Bananas -Potatoes	
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ANNEX III – Benefits of cooked food and risk of nutrient loss

Benefits of cooking food	Nutrient loss during cooking
<p>Although cooking results in the loss of some nutrients, it can also convert other nutrients into a form that would otherwise not be used by our bodies. Cooking also kills harmful bacteria, and produces the desired texture, flavour and palatability of food.</p> <ul style="list-style-type: none"> • Starchy foods such as potatoes, corn, beans, and lentils are made more digestible by cooking. The nutritive value of the protein in legumes such as soybeans, lima beans, lentils and chickpeas is also improved by cooking. Heating these foods destroys substances that would otherwise interfere with the digestibility of the protein. • Adequate cooking is particularly important when the food comprises the main source of protein. Particularly kidney beans, but also cannellini, fava and green beans, lentils and soybeans, must be boiled for 30 minutes prior to consumption to destroy a naturally occurring toxin. • Cooking can also deactivate harmful micro-organisms. • Blanching and steaming can preserve nutrition 	<p>Loss of protein and carbohydrates during cooking are generally minimal.</p> <ul style="list-style-type: none"> • The amount of fat in food may be either reduced or increased depending on the method of cooking. Generally, grilling will lower the fat content and frying will increase it. The smaller the size of the pieces being fried, the greater the amount of fat that will be absorbed. • The greatest vitamin loss during cooking is usually due to destruction of vitamin C, and to a lesser extent vitamin B-1 and other water-soluble vitamins.

References

[Codex general principles of food hygiene](#)
[Codex code of hygienic practices for meat](#)
[Guidelines for the application of general principles of food hygiene to control viruses in food](#)
[Review of cooking systems for humanitarian settings](#)
[COVID-19 and food safety: Guidance for food businesses](#)
[FAO and PAHO/WHO food handlers' instruction manual](#)
[Protection guidance manual \(WFP\)](#)
[Food safety guidance in emergency situations \(FAO\)](#)
[COVID-19 and food safety: Guidance for national food safety control systems](#)
[Mitigating the effects of COVID-19 on the food and nutrition of school children](#)
[FOOD LOSS AND WASTE DATABASE](#)
[COVID19- Waste management - Factsheet- UN Environment](#)
[Reducing food loss and waste: ten interventions to scale impact](#)
[SAFE - Fuel & Energy](#)
[SAFE Handbook](#)
[SPHERE STANDARDS - CHS. Protection and In particular FSN standards & WASH](#)
[FSC Programme Quality WG webpage](#)

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