



Working together to achieve SDG 12.3: CONCRETE ACTIONS PREVENTING FOOD WASTE



International Meeting organized by European Food Banks Federation
in collaboration with Fondazione Banco Alimentare Onlus.
with the technical support of FAO, and
under the patronage of Alleanza Italiana per lo Sviluppo Sostenibile

Wednesday, 15 May
14:00-18:30 | Sheikh Zayed Center



This event has received financial support from the European Union Programme for Employment and Social Innovation "EaSI" (2014-2020). For further information, please consult the EaSI website.
The opinions expressed during this event does not necessarily reflect the position or opinion of the he European Commission.



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



Food and Agriculture Organization
of the United Nations

Nudging University Students to Reduce Food Waste : The Case of Mae Fa Luang University, Thailand

Rosa Rolle, Team Leader, Food Loss and Waste

Guenter Hemrich, Deputy Director *a.i.*

Nutrition and Food Systems Division



Objective

- To shape habits and enhance knowledge about food waste in a college canteen, toward promoting behavior change.





An Awareness Raising Campaign Launched on The Campus



Campaign banners displayed in cafeterias
to create a social norm on campus





Collection of Baseline Data

- Establishing baseline parameters
- Identifying the categories of foods wasted.



Visual Inspection



Cue Cards Developed on the Basis of the Baseline Survey

Don't let it go to waste ...



The carbon footprint of 1 kg of beef
is equal to driving a car for 250 km.
ผลิตเนื้อ 1 กิโลกรัม ทำให้เกิดโลกร้อนเท่ากับ
ขับรถเป็นระยะทาง 250 กิโลเมตร
... อย่าทิ้งมันให้สูญเปล่า



SAVE FOOD MFU



Don't let it go to waste ...



It takes farmers 4 months
to grow rice. That is 1
semester!



SAVE FOOD MFU



Staple Food

Don't let it go to waste ...



We only drink 2-5 liters of water per day
but to get a cucumber over 100 liters is needed.
วันหนึ่งเราดื่มน้ำเพียง 2-5 ลิตร แต่กว่าจะได้
แตงกวา 1 ลูกมีการใช้น้ำไปกว่า 100 ลิตร
... อย่าทิ้งมันให้สูญเปล่า



SAVE FOOD MFU



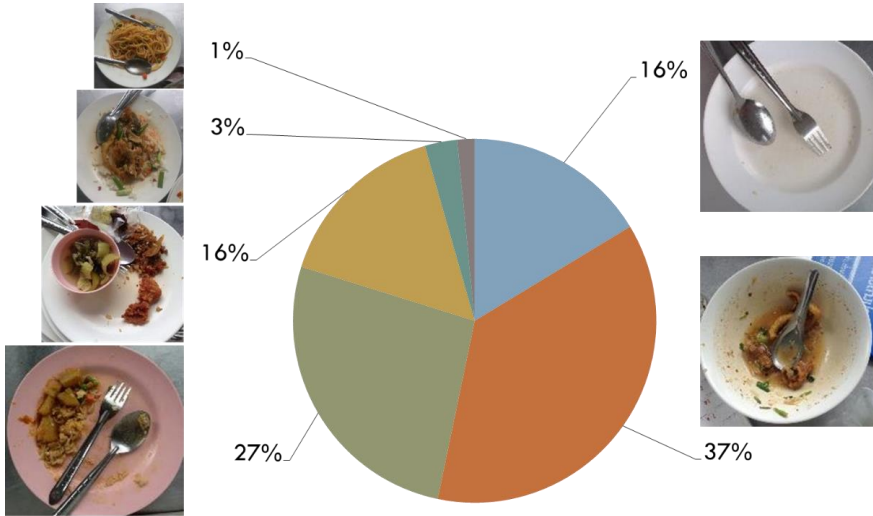
Condiment



Non-Intrusive Nudging: Cue Cards Placed on Canteen Tables



Breakdown of Food Waste At End of the Campaign



N = 148

Probability of the Occurrence of Different Types of Food Waste Before and After the Campaign

| Type of food waste | <i>p</i> before the campaign | <i>p</i> after the campaign | Chi-Square (df=1) | p-value |
|----------------------|------------------------------|-----------------------------|-------------------|---------|
| ➡ 1. Rice and noodle | 0.521 | 0.331 | 14.556 | 0.000 |
| ➡ 2. Meat | 0.186 | 0.088 | 7.395 | 0.007 |
| 3. Animal parts | 0.121 | 0.122 | 0.000 | 0.985 |
| 4. Bones and shells | 0.077 | 0.074 | 0.008 | 0.929 |
| 5. Main vegetables | 0.076 | 0.047 | 1.364 | 0.243 |
| ➡ 6. Side vegetables | 0.650 | 0.561 | 3.376 | 0.066 |
| 7. Peels and seeds | 0.022 | 0.007 | 1.427 | 0.232 |
| 8. Soup and sauces | 0.399 | 0.399 | 0.000 | 0.988 |



Summary

Findings

- Carefully designed information was effective in changing behaviors.
- The share of those who finished all of their food nearly doubled after the campaign.
- Food waste was significantly reduced in the food categories included on the cue cards

Conclusions

- Voluntary behavior changes are limited to actions requiring little additional effort.
- Other types of interventions such as rule-based measures, economic incentives and changes in physical settings and how food is served should be considered to further food waste prevention.
- Reuse and recycling options are needed for liquid foods and other unavoidable food waste.



Food and Agriculture Organization
of the United Nations

Acknowledgement

Measuring the Impacts of a Save Food Campaign to Reduce Food Waste on Campus in Thailand

Panate Manomaivibool^{*}, Chidsanuphong Chart-asa, Pattayaporn Unroj

Natural Resources and Environmental Management Research and Training Center (NREM),
School of Science, Mae Fah Luang University, 5th Fl. Building E3A, 333 Moo 1,
Thasud, Muang, Chiang Rai, 57100, Thailand

^{*} Corresponding author: Email: panate.man@mfu.ac.th

Article History

Submitted: 11 April 2016/ Accepted: 4 May 2016/ Published online: 1 July 2016



EU actions to facilitate food donation and fight food waste

Anne-Laure Gassin

Policy officer

Food information and composition, food waste (Unit E1)

Directorate-General for Health and Food Safety



European
Commission



**SUSTAINABLE
DEVELOPMENT GOALS**

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



SDG 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

13 CLIMATE
ACTION



2 ZERO
HUNGER



8 DECENT WORK AND
ECONOMIC GROWTH



*Health and
Food Safety*

In the EU...



Source: E.U. Fusions, 2016



Source: E.U. Fusions, 2016



43 MILLION PEOPLE
cannot afford a quality meal every second day

Source: ESTAT, 2018

EU food donation guidelines



On World Food Day the European Commission adopted guidelines to facilitate food donation in the EU.



#FoodDonationGuidelines #CircularEconomy #WorldFoodDay

Facilitate food donation: leverage learning and experience in the EU



Circulaire relative aux dispositions applicables aux banques alimentaires et associations caritatives (Belgian food safety agency)



Foodstuffs donated to food aid (Finnish food safety agency)



Guide des bonnes pratiques d'hygiène de la distribution de produits alimentaires par les organismes caritatifs (French Ministry of Agriculture, Agrifood, and Forestry)



Leitfaden für die Weitergabe von Lebensmitteln an soziale Einrichtungen – Rechtliche Aspekte (German Federal Ministry of Food and Agriculture)



Recupero, raccolta e distribuzione di cibo ai fini di solidarietà sociale (validated by the Italian Ministry of Health)



Food Donation Guidance to Charities and Businesses (The Food Safety Authority of Ireland)



Įsakymas dėl labdarai ir paramai skirto maisto tvarkymo aprašo patvirtinimo (State Food and Veterinary Service, Lithuania)



Coordinating Table for Food aid and fight against food waste

(art. 8 Law 166/16)

An Italian experience

Renato Dagostino

Member of Table for Food Aid and fight Food
Waste MIPAAFT, Ministry of Economy and
Finance, Italy



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

Coordinating table for food aid and fight against food waste

**PRODUCERS
PROCESSORS
RETAILERS**



PUBLIC ADMINISTRATION



CHARITY ORGANIZATIONS



Source: Banco Alimentare, 2017



Fiscal Barriers to Food Donations

PRODUCERS
PROCESSORS
RETAILERS



VAT – INCOME TAX



CHARITY ORGANIZATIONS



Fiscal Barriers to Food Donations

PRODUCERS
PROCESSORS
RETAILERS



NO VAT
NO INCOME TAX



CHARITY ORGANIZATIONS





Escuela REAGRO 2018

Lisa Moon

President & CEO, Global FoodBanking
Network, USA



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



Escuela REAGRO2018

Programa de Recuperación de Excedentes Agrícolas a través de los Bancos de Alimentos de Colombia

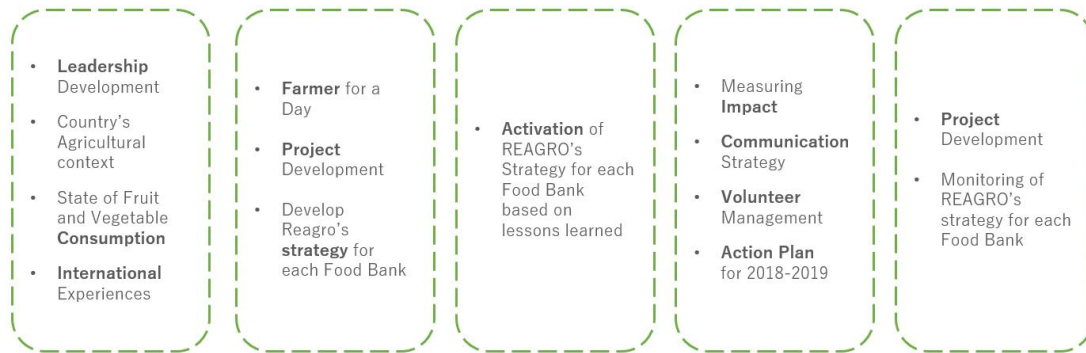


- 17 Food Banks
- 32 Participants
- 70 Training Hours
- 60 tons of products rescued during field visits
- 21 Facilitators
- 120 Baskets Delivered
- 3 Regional Work Teams



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)





Figures in Tons



Donations Directly Managed by Badea

↑ 11.96%

2018:
24,442

2017:
21,807

REAGRO

↑ 16.2%

2018:
4,914

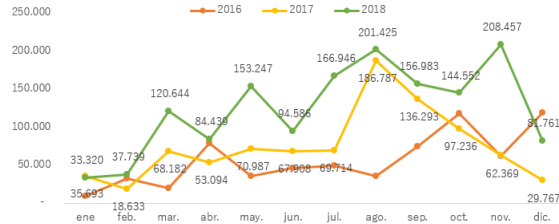
2017:
4,119

Difference:

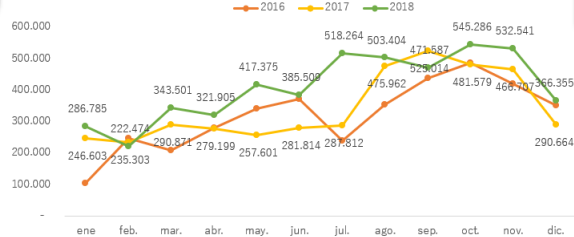
795 tons

31,750 people benefited per month on average

REAGRO Results for 2016, 2017, and 2018 without SACIAR



REAGRO Results for 2016, 2017, and 2018 with SACIAR



Food Banks without SACIAR

↑ 65.5%

2018:
1,484

2017:
896

Difference:
587

SACIAR

↑ 6.5%

2018:
3,431

2017:
3,222

Difference:
208



The Global
FoodBanking
Network®
CERTIFIED MEMBER

ABACO
Asociación de Bancos de Alimentos de Colombia



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)





MESA BRASIL Sesc



Karla Feijão

Coordinator of Serviço Social de
Comércio (SESC) – Mesa Brasil



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

MESA BRASIL SESC

Volunteering

Source of
donation

OPERATION

Education
actions

What can be
donated

Beneficiaries



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

RESULTS IN 2018

NATIONAL

40,5 million kg
of food distributed;
5.500 Educational actions;
529 employees;
700 volunteers;
5.890 assisted institutions;
310 partner companies.

DISTRITO FEDERAL

1million Kg of food
distributed;
31 Educational actions;
16 employees;
300 volunteers;
217 assisted institutions;
50 partner companies.



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



REACH OF MESA
BRASIL:
547 CITIES
90 FOOD BANKS



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

MealConnect

Feeding America's food waste intervention

Claire Babineaux-Fontenot
CEO Feeding America, USA



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

The Problem: Food Waste in the United States

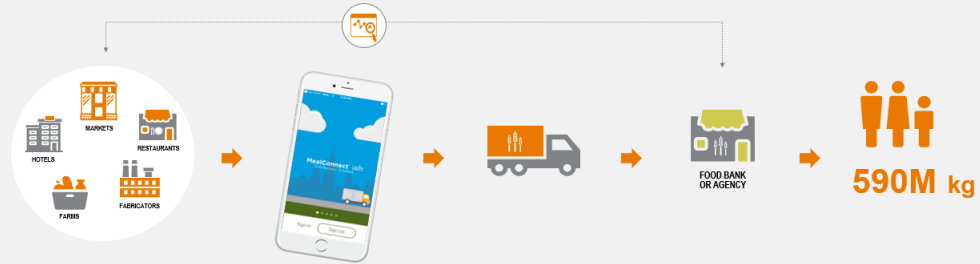
Nearly 80% of food waste comes from nutritious, perishable foods including meats, fruits, vegetables and dairy.



* The United States Department of Agriculture estimates that one meal is equal to 1.2 lbs of food.



Feeding America's Food Waste Intervention: MealConnect



How it works

A food company offers excess food; the MealConnect algorithm match the donation to a frontline organization; the organization accepts and picks up the donation; **food is delivered to people who need instead of a landfill.**



Our Vision

Less
wasted
food



more food for people
facing hunger



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



Bella Dentro

Luca Bolognesi

Co-founder, Bella Dentro, Italy



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



- **45%** of fruit and vegetables produced is wasted
- More than **40%** is lost during harvest due to cosmetic and dimensional standards



This loss causes:

- unacceptable food waste
- serious **economic damage** to farmers



Bella Dentro is an alternative
end-to-end system that gives **FAIR VALUE**
to imperfect produce and to its farmers



FARMERS'
NETWORK



PURCHASE OF
IMPERFECT PRODUCE



TRANSPORT AND
WAREHOUSING



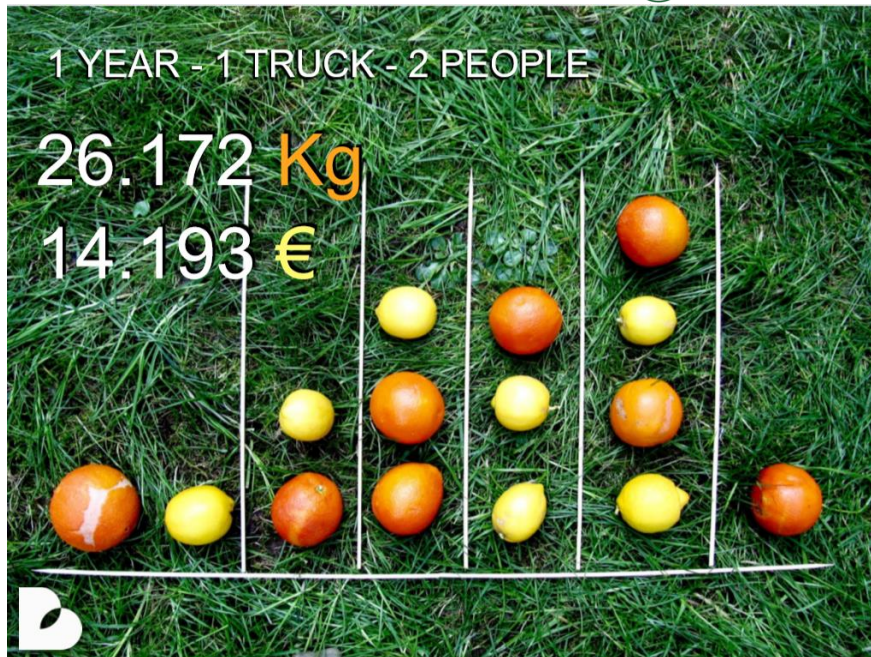
MOVING SALE
ON CUSTOM TRUCK



AWARENESS

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION





Converting wonky fruits and veggies into cooked / canned / frozen meals

Lithuanian solution preventing food waste

Kristina Tylaite

Deputy Director, Maistobankas, Lithuania





Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



Monthly results:

- **2,4 t** of fruits and veggies processed
- **1572 meals** of cooked / canned / frozen food produced





FONTANETO

Federica Calcagno

Food Technologist, Fontaneto S.r.l, Italy



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

Fontaneto's goal is to reduce food loss and minimize waste

- ✓ Careful selection of raw materials
- ✓ Accurate Production planning
- ✓ Employees training
- ✓ Waste management indicators
- ✓ LEAN /SMED PRODUCTION guidelines
- ✓ Company sustainability



Fontaneto Waste Indicators

1. Calculated for each production line

$$\frac{\text{amount of waste (kg)}}{\text{products total amount (kg)}}$$

2. Calculated during the packaging process

$$\frac{\text{trashed packaging amount (kg)}}{\text{packaging used (kg)}}$$

3. Calculated in the refrigerated warehouse

$$\frac{\text{item total sold with promotional methods (kg)}}{\text{item total (kg)}}$$



Following the indicators results it's imperative that we
optimise our production planning and minimise the
setup timing



THE SOLUTION IS KARG-THOMPSON ALGORITHM



avoiding excess stock and unsold items
reducing batch dimensions





Bring the Food SITICIBO Banco Alimentare

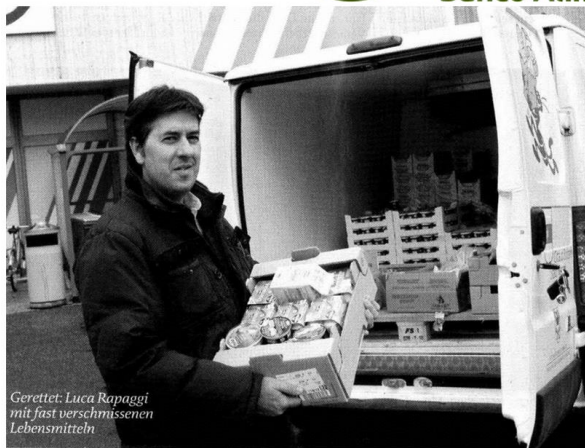


Food and Agriculture
Organization of the
United Nations

Roberto Scarpari

Responsible Siticibo Programme, Banco
Alimentare Trentino-Alto Adige, Italy

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



DESPAR
EUROSPAR
INTERSPAR



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



In 2018 we recovered from
Retails: 454 tons



In 2018 we recovered from
Food service: 36 tons



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)





"QUELLO CHE FACCIAMO
È SOLO UNA GOCCIA
NELL'OCEANO,
MA SE NON LO FACESSIMO
L'OCEANO AVREBBE
UNA GOCCIA IN MENO."

MADRE TERESA

IL BANCO ALIMENTARE
DEL TRENTO ALTO ADIGE — ONLUS

SEDE REGIONALE DI TRENTO
VIA MANTOVANI, 20 — 38021 TRENTO
TEL. E FAX 0461 — 994500



DONARE CIBO
NON È MAI STATO
COSÌ FACILE!



A CHI È RIVOLTO

- BAR
- PIZZERIE AL TAGLIO
- MENSE
- PICCOLA RISTORAZIONE

COME SI SVOLGE

1 ALLA SERA TI AVANZANO
PANINI, BriocheS TRANCII DI
PIZZA ECC...

2 METTI LA DONAZIONE
SULL' APPLICAZIONE

3 IL MATTINO SEGUENTE
SITICIBO PASSA A RITIRARE

4 ENTRO LE SUCCESSIVE 8
ORE IL CIBO DONATO È
SULLA TAVOLA DI CHI HA
BISOGNO

COME UTILIZZARLO

1) INVIO I MIEI DATI A

info@bringfood.org

- RAGIONE SOCIALE
- INDIRIZZO
- P.IVA
- INDIRIZZO MAIL

2) RICEVO I DATI D'ACCESSO

3) SCARICO L'APPLICAZIONE
DA INTERNET

ristorazione.bringfood.org

4) POSSO COMINCIARE A
DONARE CIBO



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



FoodCloud

Emma Walsh
COO, FoodCloud Hubs, Ireland



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)





Impact



FoodCloud helps
over **9,100**
charitable groups
get surplus food in
Ireland and the UK

We've helped ensure **50 Million Meals**
have gone to people
and not to waste

We move **28 Meals**
every Minute
24/7

That's over **22,000 tonnes** of food
saving charities an approximate
€68.1million!

72,727 Tonnes of
CO²
in carbon savings



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



**“Our vision
is for a world where
no good food goes
to waste”**





fa bene. S-NODI

Tiziana Ciampolini
CEO di S-NODI, Caritas Italiana, Italy



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)



Basic goods - Relational goods

Reciprocity

Co-creation



12 RESPONSIBLE CONSUMPTION AND PRODUCTION





Community Engagement

Circular Welfare Model

Systemic approach



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

FOOD FOR GOOD

From meetings to solidarity

The meeting industry's social
commitment



Federica Lucini

Marketing & Promotion Manager, Italian
Exhibition Group SpA, Federcongressi, Italy



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

01 FOOD FOOR GOOD: HOW IT WORKS



1 Tell Federcongressi&Eventi about your event



4 The non-profit organization gives instructions to the catering service



2 Based on the location, we alert Banco Alimentare or Equoevento



5 The non-profit organization collects the food and delivers it to charity



3 The non-profit organization identifies the nearest charity location



6 The food is eaten!



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

02 FOOD FOOR GOOD: CASE HISTORY



PALACONGRESSI DI RIMINI

Since February 2015 **over 30,000 meals** donated to Opera Sant'Antonio Charity



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

03 THE ITALIAN MEETING INDUSTRY SOCIAL COMMITMENT



February 2018

**Food for Good project is included in the EU Platform
on Food Losses and Food Waste**



The figures since 2015

109,000 ready meals collected

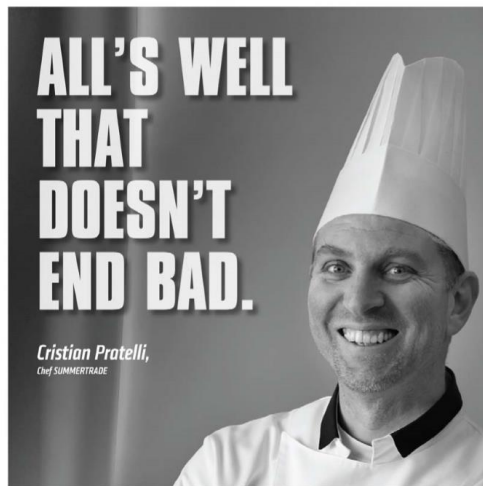
5,900 kg of bread and fruit donated



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

04 FOOD FOR GOOD: THE CAMPAIGN



FOOD FOR GOOD is an initiative aimed at recovering excess food from events. It was devised by FedercongressiEventi, in partnership with the non-profit organisations Banco Alimentare and Equoevento.

Signing up to the initiative is simple, entails no cost or commitment, and is in compliance with the "Gadda" social solidarity law.

Contact FEDERCONGRESSIEVENTI to find out how to support this initiative.

www.foodforgood.it

[f @ProgettoFoodforGood](https://www.facebook.com/ProgettoFoodforGood)





Partnership between French Food Banks & Costa Crociere

A concrete example of fight against food waste



Jacques Bailet

President, Fédération Française des Banques
Alimentaires, France



Food and Agriculture
Organization of the
United Nations

With the technical support of the Food and Agriculture Organization of the United Nations (FAO)

Key figures



130 000
volunteers for the
National Food
Collect

6,154
volunteers &
530 employees



113 000 tons
of food collected
for free



2 million
supported
people



Of which **73 000**
tons saved from
destruction



226 million
of distributed
meals



Costa Croisières
- **3 Food Banks**
- **4 charities served**
- **+500 beneficiaries**



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



4GOODFOOD: Costa Crociere and FEBA

Objective: to donate surplus food from Costa Crociere to the French Food Banks

- July 2017 : beginning of the partnership in Italy in Savone
- May 2018 : launch of the project in France in Marseille with the local Food Bank
- December 2018 : two new steps in Guadeloupe and Martinique
- Type of products : “ready to eat” food, not served to guests, and delivered in accordance with food safety regulations



To date the project is implemented in 9 European harbours and has rescued over 100,000 portions.

The project on the ground



FEED FROM FOOD

Innovative and Benefit start up

Marta Castrica

CEO, Feed From Food S.r.l, Italy



F A concrete solution:
Feed from Food s.r.l.



Innovative and Benefit start up



**FEED
FROM
FOOD**

CHAMPIONS 12.3

**SDG TARGET 12.3 ON FOOD LOSS
AND WASTE: 2016 PROGRESS REPORT**

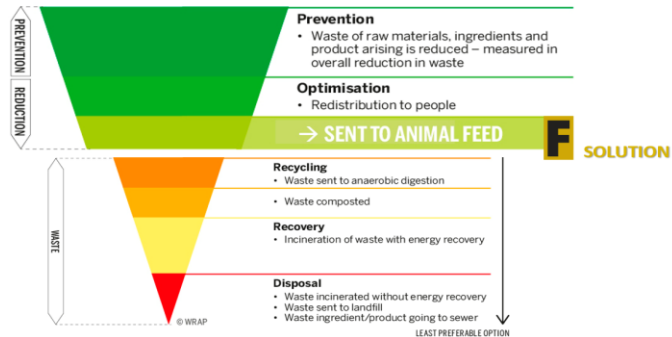
An annual update on behalf of Champions 12.3

**12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION**



https://champions123.org/wp-content/uploads/2016/09/sdg-target-12-3-progress-report_2016.pdf





FEED FROM FOOD OFFERS:

A NEW SERVICE TO THE COMPANIES



The service offered by **Feed from Food** fully responds to the growing demand for solutions aimed at improving the efficiency and sustainability of the agri-food supply chain, providing an innovative and alternative solution.

ONE PRODUCT: PET FOOD



The final product can be used as feed (ingredient and/or pet food and/or snack) for pet animals. **Feed from Food** product has a high nutritional quality and is in accordance with food and feed safety aspects required by the EU legal framework.



INNOVATIVE

Creation of a **“New”** supply chain and a product that currently does not exist. (Patent Pending for both the technology and the final product).



REPICABLE

The **Feed from Food technology** is scalable, is able to process different food matrices and quantities and can be exported in whatever other countries.



IMPACT

The construction of a **Feed from Food system** can take place inside closed spaces because there are no problems of emissions and requires little construction space and has a low energy consumption.



CURRENT

Feed from Food has just completed the installation of the first pilot plant and is testing the first productions.



FEED FROM FOOD

**We are able to transform
Food Waste into a Resource!**

CONTACTS

martacastrica@feedfromfood.com
commerciale@feedfromfood.com

