**Development of a Code of Conduct on Food Loss and Food Waste Prevention**

**Collection of contributions received**

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# Topic note

**Background**

The world is facing unprecedented global challenges that affect the sustainability of agricultural and food systems. These challenges include: natural resource depletion and the adverse impacts of environmental degradation, such as desertification, drought, land degradation, water scarcity and biodiversity loss; rapid urbanization and population growth and the associated changes in lifestyles and dietary habits; transboundary pests and diseases; and climate change. It is widely recognized that one of the key practical actions to address these challenges is to reduce food losses and waste (FLW). This is particularly true when FLW is addressed using a food system approach, as it can dramatically increase the sustainable use of natural resources and strengthen climate and food security resilience. The Food Loss Index measures the extent to which the world is making progress in reducing FLW as part of efforts to achieve the 2030 Agenda.

At its 26th Session of October 2018, the FAO Committee on agriculture (COAG) requested that FAO take the lead, in collaboration with relevant actors, to develop Voluntary Codes of Conduct (CoC) for the reduction of food loss and food waste for submission to the next session of COAG (COAG 27) in October 2020. In response to this request, FAO is planning to lead a global process that will engage different stakeholders to develop the CoC.

**Description of the CoC on FLW prevention**

The CoC will present a set of voluntary, global, internationally agreed, guiding principles and practices that different stakeholders can adopt and apply in order to achieve FLW reduction while yielding positive outcomes relative to the environment, natural resources, livelihoods, food security and nutrition in alignment with the 2030 agenda.

More specifically, it is envisaged that the CoC will:

* Provide a benchmark and framework against which countries can develop strategies, policies, institutions, legislation and programmes.
* Provide a set of global, internationally agreed-upon, locally adaptable voluntary practices that different stakeholders directly or indirectly involved with FLW might adopt.
* Provide guidance as to what constitute acceptable practices against which different stakeholders can gauge their proposed actions.
* Facilitate the harmonization of the approaches applied and the assessment of progress in the reduction of FLW.

The audience targeted as potential users of the CoC includes all the different stakeholders who deal directly or indirectly with FLW, namely:

* Government agencies, including relevant ministries and national and sub-national institutions;
* Food supply chain actors (including: small scale family farmers, herders and fisher folk; processors; SMEs and other agribusiness operating in the private sector; and consumers)
* Civil society organizations (CSO);
* Academic and research institutions;
* Bi- and multi-lateral development agencies, including international financial institutions;
* Philanthropic organisations;
* UN agencies and intergovernmental and regional organizations with a mandate related to FLW;

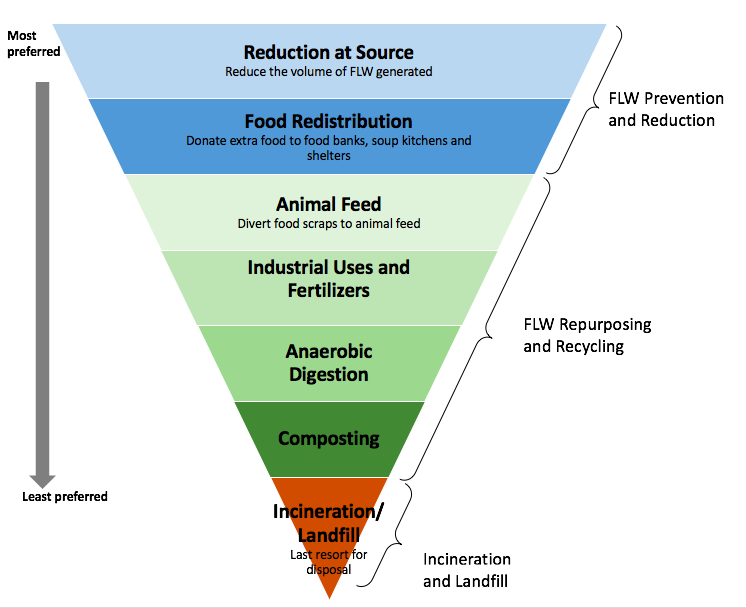
**Main sections of the annotated outline of CoC on FLW prevention**

The [**outline document**](http://www.fao.org/fsnforum/sites/default/files/files/159_Food_Loss_Waste/DraftAnnotatedOutline_CoC_FLW_EN.docx) presents the main parts of the CoC, which will comprise the following sections:

* an introductory section presenting the background, rationale, nature, scope, target audience and objectives of CoC
* the main body containing the guiding principles and practices to address FLW.

This section is broken into:

* General guiding principles
* Specific principles and practices addressed through a hierarchy approach, which prioritizes prevention and reduction at the various steps of the supply chain, followed by redistribution of food for human consumption, food loss and waste repurposing and recycling and ultimately disposal, as depicted in the following figure:



* Cross-cutting issues.

**Purpose of the discussion**

The e-consultation is launched and facilitated by FAO’s Food Systems Programme (SP4) in order to get feedback and suggestions on (i) the outline of the CoC and (ii) the content of the different sections. The recommendations of the e-consultation will contribute to the preparation of the Zero Draft of the CoC, which will be further discussed and refined through internal and external multi-stakeholder consultations. It is envisaged that a final version of the CoC will be presented for endorsement at the 27th session of COAG in October 2020.

**Questions**

1. With respect to the [**proposed outline**](http://www.fao.org/fsnforum/sites/default/files/files/159_Food_Loss_Waste/DraftAnnotatedOutline_CoC_FLW_EN.docx) and structure of the CoC:
2. Does the proposed outline of the CoC address the issues in an exhaustive and comprehensive way?
3. Are there any particular issues and aspects of importance that you think are not be addressed in the proposed structure?
4. Are there any disadvantages or gaps you see in the current structure?
5. With respect to the content of the different sections of the CoC:
6. What are the general guiding principles that you think are important for section 2.1?
7. What are the specific guiding principles and practices do you think are important for sections 2.2.1(a, b& c), 2.2.2 and 2.2.3?
8. Taking into account the need to foster FLW policy coherence, which cross-cutting issues are relevant to the FLW topic, as addressed in section 2.2.4?
9. Can you provide specific examples of policies, interventions, initiatives, alliances and institutional arrangements which should be considered as best practices in FLW prevention, reduction, food recovery, repurposing and recycling?
10. How could this Code of Conduct on FLW prevention and reduction be most useful for different stakeholders, especially at national and regional levels?

Thank you for your contribution!

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# Contributions received

## JC Wandemberg, Sustainable Systems International, India

Addressing COC

There are only three ways to manage people’s conduct:

1. By Coercion
2. By Collusion
3. By Inspiration

1. and 2. are rather simple to deal with through incentives, disincentives, and regulations.

Number 3 is the greatest challenge along with the implementation and enforcement of 1 & 2.

There is no greater inspiration than that of a brighter future for all involved based on moral authority, integrity, and transparency.

Addressing FLW

FLW happens for many reasons, inter alia:

* Some food prices are so cheap people don’t care about wasting them
* Inappropriate infrastructure to bring food from harvest to consumer
* Inappropriate storage

Adding a tax to cheap foods will address # 1. the tax collected can be used to help build better infrastructure and storage issues.

Best regards,

JC Wandemberg Ph.D.

Sustainable Systems International.Org

## Vethaiya Balasubramanian, Freelance Consultant, India

Food loss and wastes (FLW) are a serious problem worldwide.

The number one is Food Loss (FL) that occurs at every stage of the supply chain from field production to food on the table. Most of the food loss is due to two factors:

**Controllable management factors:**

* Right time and proper method sowing and other crop management operations including the harvest and post-harvest processing in the field.
* Inadequate infrastructure for transport, processing, and storage of foods. This is especially important for perishables where more than half of the produce is lost due to inadequate infrastructure and poor handling of the produce.
* Lack of education and technical support in field and the next steps in supply chain management.
* Soil conservation and soil health management is critical for sustainable food production in the field.
* Water resource conservation and management for food production is critical in water-limited areas.

**Factors beyond the control of individual players in the supply chain:**

* Climate change: Global warming, heat waves, cold waves, drought, flood, landslides, cyclones, etc. These factors must be tackled by government agencies and multinational organizations.
* Resource depletion and resource degradation: Again, we need action at the national, regional, and global level.
* Deforestation for farming and other purposes: A tenth of the greenhouse gas emissions comes for clearing forests for farming and other uses, and is responsible for loss of forests and natural biodiversity.
* Desertification: We need to take action at national, regional and global level to minimize and or to contain the expansion of deserts.
* Farm related pollution of soil and water resources in chemical intensive agriculture. We need to encourage farmers to move away from chemical intensive agriculture and to take up regenerative farming.

The number two is food wastage (W). This is a serious problem which is responsible for avoidable food wastes due to our affluence, lack of appreciation of how hard and resource demanding it is to produce that food, sheer negligence in handling food, and lack of awareness of people going to bed hungry due to poverty. We can see enormous amounts of foods wasted and thrown away in marriages and other social functions, in canteens of affluent colleges and schools, in high class restaurants, and in super markets. To reduce such food losses we need to do the following:

* Education and awareness creation of the public on how they throw away foods and what they can do individually and collectively to reduce food losses at home and in restaurants.
* Education of children in schools on food and nutrition and food losses in the supply chain so that they grow up as responsible citizens to minimize and or prevent food losses.
* Distribution of excess foods from social functions and restaurants to the hungry and poor through voluntary organizations involved in feeding and supporting the poor.
* Pricing of foods at the right level. In Coimbatore, Tamil Nadu, India, we have an organization called Shanti Social Services providing 15,000 to 20,000 excellent meals (breakfast, lunch and dinner) to people (rich and poor) at one fourth to one fifth of what it will cost in regular restaurants in the city. When they reduced this low price further by half, the amount of food wasted by customers doubled. As a result, they revised the price back to the original level to minimize food wastes. It is a strange behaviour of people to waste food when they get food at low price or free.
* Providing incentives at restaurants for not to waste food. Even in buffet system, people do waste a lot foods.

Hope it is helpful. Thank you.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Vethaiya BALASUBRAMANIAN

Thank you for your interesting contribution and the list of FLW determinants.

Among the examples you cite, the price of food can play a very important role in determining the amount of food waste at consumers’ level. The example you cite from Tamil Nadu is siginificative.

FLW is indeed a complex issue that depends on a number of causes ranging from biological, microbial, chemical, biochemical, mechanical, physical, physiological, technological, logistical, organizational, psychological and behavioural ones – including those induced by marketing, etc. The importance of these factors vary greatly according to the produce and the context, and the stage of the food chain considered (see for example the HLPE report http://www.fao.org/3/a-i3901e.pdf for reference). Aim of the Code of Conduct is to provide a benchmark and framework against which countries can develop strategies, policies, institutions, legislation and programmes and to provide a set of global, locally adaptable voluntary practices that different stakeholders directly or indirectly involved with FLW might adopt.

@ JC Wandemberg

Thank you for your contribution! As you mention, the involvement of all actors in the fight against FLW is pivotal and market-based instruments like taxes can be among the effective instruments to reduce FLW.

## Mahesh Chander, Indian Veterinary Research Institute, India

In fact, there should not be anything like food waste, if we know turning it into animal fed, manure or other uses!

Residue of lot many fruits and vegetables could be turned into silage to supplement animal feed. For instance, pineapple fruit silage could be excellent fodder source for livestock. We should document all possible uses of grains, fruits, vegetables & other edibles, how best we can make use of them under different circumstances.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Mahesh Chander

Thank you for mentioning animal feed as an important aspect in the fight against FLW. Animal feed is indeed included in the CoC as a possible option after prevention, reduction and redistribution of food for human consumption. Animal feed represent a good way to repurpose food no longer edible or no longer of good nutritious quality for humans.

## Hugo Alfonso Muñoz Ureña, Universidad de Costa Rica, Costa Rica

Original contribution in Spanish

Buenos días:

Revisando el documento sometido a consulta, se observa que el Código de Conducta podría dirigirse a varios destinatarios. Entre ellos, se destacan los Estados y las organizaciones internacioanles (incluidas, por ejemplo, la Comisión Mixta FAO/OMS del Codex Alimentarius).

En ese sentido, pareciera que el Código de Conducta (de naturaleza voluntaria) debe proponer a los Estados la adopción de ciertos instrumentos vinculantes (coercitivos), que apoyen el funcionamiento del mecanismo en su conjunto. Estos instrumentos tendrán una naturaleza jurídica (marco jurídico). En esta línea, comparto con ustedes un artículo de mi autoría (archivo adjunto <http://www.fao.org/fsnforum/sites/default/files/discussions/contributions/HMunoz%2C%20RegulacionDesperdicioAlimentario_2015-2016.pdf> ), publicado en 2015, en el cual hago algunas proposiciones de corte jurídico, que podrían enriquecer la discusión.

En la segunda parte del artículo (Los mecanismos para combatir el desperdicio alimentario) se explican con más detalle las siguientes propuestas, pero para facilitar su comprensión se enuncian de seguido:

**a)** Creación de una **obligación (jurídica) general** de reducción del desperdicio alimentario: se trata de una obligación genérica, dirigida a los operadores del sector agroalimentario (sector privado);

**b)** Creación de una **obligación específica de prevención del** ***riesgo* de desperdicio alimentario**. Sobre la base de la noción de riesgo de desperdicio alimentario, la cual se edificaría a la imagen de la noción de riesgo sanitrio, se establecería una dinámica de **gestión de los *riesgos* de desperdicio alimentario**.  Estos riesgos deberán gestionarse, al mismo tiempo que se gestionan los riesgos sanitarios. Deberán identificarse, entonces, los puntos críticos y establecerse medidas para limitarlos.

El Codex Alimentarius podría incluir estos riesgos en la getión realizada por medio del HACCP, así como en las propuestas de Buenas Prácticas. Como consecuencia, las medidas de  combate del desperdicio alimentario se incluiría en los procedimientos típicos de gestión de los riesgos (que son procedimientos normales en la elaboración de los alimentos).

Las empresas deberán demostrar que han puesto en marcha los respectivos protocolos para prevenir la realización de los riesgo del desperdicio alimentario, y hacerse de las evidencias nesarias (como sucede en los mecanismos de "autocontrol" existentes).

**c)** El reconocimiento de que el desperdicio alimentario puede constituir una forma de **Abuso de Derecho**, en relación con el ejercicio típico del derecho de propiedad que se tiene sobre los alimentos. Este uso abusivo del derecho, que implica el desperdicio de alimentos, constituiría una forma de *uso antisocial* de tales bienes, que provocaría un **daño difuso a la sociedad**. Este daño, en función de su magnitud, daría paso a una responsabilidad civil (delictual), que acarrearía la obligación de reparar o indemnizar a la sociedad.

Como indico arriba, los detalles de estas propuestas jurídicas, se incluyen en el artículo adjunto.

Deseando que las propuestas contribuyan a la reflexión, se despide,

Dr. Hugo A. Muñoz Ureña

Facultad de Derecho, Universidad de Costa Rica, Costa Rica

Chaire de recherche en Droit de la Diversité et Securité Alimentaires, Université Laval (Quévec), Canadá

English translation

Good Morning:

Reviewing the document submitted for consultation, I note that the Code of Conduct could be addressed to several recipients. Among them, States and international organizations stand out (including, for example, the Joint FAO / WHO Codex Alimentarius Commission).

In that sense, it seems that the Code of Conduct (which is of a voluntary nature) should propose to the States the adoption of certain binding (coercive) instruments that support the functioning of the mechanism as a whole. These instruments could have a legal nature (legal framework). In this context, I share with you an article I authored (attached file <http://www.fao.org/fsnforum/sites/default/files/discussions/contributions/HMunoz%2C%20RegulacionDesperdicioAlimentario_2015-2016.pdf>), published in 2015, in which I make some legal proposals, which could enrich the discussion.

In the second part of the article (The mechanisms to combat food waste) the following proposals are explained in more detail, but to facilitate their understanding I introduce them below:

a) Creation of a **general (legal) obligation** to reduce food waste: this is a generic obligation, aimed at operators in the agri-food sector (private sector);

b) Creation of a s**pecific obligation to prevent the risk of food waste**. On the basis of the notion of risk of food waste, which would be built following the model of the notion of sanitary risk, a **mechanism for the management of food waste risks would be established**. These risks must be managed at the same time as health risks. The critical points must then be identified and measures to limit them established.

The Codex Alimentarius could include these risks in the management made with HACCP, as well as in the proposals of Good Practices. Consequently, measures to combat food waste would be included in typical risk management procedures (which are normal procedures in food processing).

Companies must demonstrate that they have implemented the respective protocols to prevent the realization of the risks of food waste, and provide the necessary evidence (as it happens in the existing "self-control" mechanisms).

c) The recognition that food waste can constitute a form of **Abuse of Law**, in relation to the typical exercise of the right of ownership over food. This abusive use of the law, which implies the waste of food, would constitute a form of antisocial use of such goods, which could cause **diffuse damage to society**. This damage, depending on its magnitude, would give way to a civil (criminal) liability, which would entail the obligation to repair or indemnify society.

As indicated above, the details of these legal proposals are included in the attached article.

I wish that the proposals will contribute to the reflection.

All the best

Dr. Hugo A. Muñoz Ureña

Faculty of Law, University of Costa Rica, Costa Rica

## Hamza Aliodjibril, FAO, Niger

Original contribution in French

Bonjour,

Grand merci de me donner l'opportunité de contribuer à cet échange

- Par rapport au projet et à la structure proposés pour le CdC, il me semble que l'aspect changement climatique et ses effets ne soient pas suffisamment pris en compte.

Dans les pays où les systèmes de production sont traditionnels, les inondation et/ou les sècheresses sont cause de pertes importantes de productions agricoles et pastorales à la source.

- Par rapport au contenu des différentes sections du CdC:

Traiter de réduction des pertes et gaspillage des aliments, reviens après tout à promouvoir des comportements individuels et collectifs favorables à une utilisation rationnelle des aliments.

Ainsi, l'éducation des consommateurs et la mobilisation des associations des consommateurs me sembles être des pratiques applicables partout.

La conservation des aliments est souvent un grand défi chez les producteurs et les consommateurs dans les pays à climat chaud.

Faciliter l'accès au meilleurs moyens et méthodes de conservation grâce notamment à l'énergie solaire peut beaucoup aider à réduire les pertes.

Tout en respectant la diversité culturelle, la sensibilisation des consommateurs doit aussi s'intéresser aux meilleures pratiques culinaires (qui gaspillent moins) et les promouvoir.

English translation

Hello,

Thank you for giving me the opportunity to contribute to this exchange

- With regard to the proposed project and structure for the CoC, it seems to me that the climate change aspect and its effects are not sufficiently taken into account.

In countries where production systems are traditional, floods and / or droughts cause significant losses of agricultural and pastoral production at source.

- In relation to the content of the different sections of the CoC:

Dealing with the reduction of food waste and waste, requires first the promotion of individual and collective behaviours conducive to the rational use of food.

Thus, consumer education and the mobilization of consumer associations seem to me to be applicable everywhere.

Food preservation is often a big challenge for producers and consumers in hot climate countries.

Facilitate access to the best means and methods of conservation thanks to solar energy can greatly help to reduce losses.

While respecting the cultural diversity, the sensitization of the consumers must also take into account best culinary practices (which waste less) and promote them.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Hamza Aliodjibril.

Thank you very much for your contribution. Climate change is definitely a very important topic in relation to FLW. It could be considered and mentioned in the cross-cutting issues of the CoC as it has a number of repercussions, mostly at primary production level – (but also as you mention storage and preservation can be influenced by climate change).

Consumers’ education and the mobilization of consumers’ associations are of utmost importance to prevent and reduce food waste. The CoC aims at sensitizing and involving them as actors of change.

@ Hugo Alfonso Muñoz Ureña

Thank you for your contribution and the article you suggest. The aim of the CoC is to serve as an instrument of reference to help Member Countries establish or improve their legal and institutional frameworks on FLW prevention, reduction and management; it will establish guidelines and provide examples of good conduct with reference to FLW, but will not have a coercive nature.

Saying that food waste can represent a form of Abuse of Law is a very extreme position: especially when referring to consumers and the ethical issues connected to food waste, consumers should be sensitized to the topic (and also be asked by governments to pay taxes based on the amount of waste they generate), but can t be persecuted for generating food waste (freedom of choice should be anyway preserved).

I agree that legislation and the food safety risks connected to food waste generation should be kept into high consideration.

## Joy Muller, CERAH -- Geneva Centre for Education and Research in Humanitarian Action, Switzerland

Vethaiya's input was useful and it also set the scene for the discussion.

Thanks. Joy

## Md. Kamrul Islam, Cotton Development Board, Bangladesh

In my country, Bangladesh, food usually wasted when it is rotten. Food rotting initiates from cultivation practices. Harvesting of immature or over mature crops, unavailability of food processing centers at rural areas, under developed marketing system are most important factors responsible for food rotting followed by food waste. Thus, according to me, food waste prevention policy, strategy and guidelines should consider the food production system.

## Dick Tinsley, Colorado State University, United States of America

This is an interesting topic. I am not certain it is doable. What I would be concern with is that whatever is done has to be both financially viable and operationally feasible. Too often these are overlooks as we tend to make labor intensive innovations with the underlying assumption readily available and diets are enough to undertake the additional labor. Unfortunately, this is rarely the case for smallholder farmers. My prime example is that I would expect that composting crop residues would require more caloric energy then would be derived from the extra yield obtained. Calorie deficit is a major problem in most smallholder communities leading to major labor shortages. Please review the following webpages:

<https://smallholderagriculture.agsci.colostate.edu/calorie-energy-balance-risk-averse-or-hunger-exhasution/>

<https://smallholderagriculture.agsci.colostate.edu/ethiopia-diet-analysis/>

<https://smallholderagriculture.agsci.colostate.edu/1028-2/>

<https://smallholderagriculture.agsci.colostate.edu/affordability-of-improved-nutrition-while-optimizing-economic-opportunities/>

<https://smallholderagriculture.agsci.colostate.edu/organic-source-of-nutrients-some-simple-computations-please/>

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Dick Tinsley

Thank you very much for your inputs to the discussion. The Code of Conduct should definitely suggest actions and practices that have to be financially viable and operationally feasible (and also adaptable to different contexts). Thank you also for all the webpages you have sent: they are interesting food for thought and provide an added value to the consultation.

@ Md. Kamrul Islam

Thank you very much for mentioning food production systems. they are of utmost importance when we speak about food losses. Prevention and reduction policies should in fact start at the source.

## Germán Franco Díaz, FMC Corporation, Denmark

Dear Sirs,

My input about the Code of Conduct on Food Loss and Food Waste Prevention is as follows:

Consideration of the ethics and principles to minimize the market speculation and the equality of the product distribution.

Legislation regulating the fair price competition and alternative waste recycling (animal feed, industrial transformation).

Just at your disposal for further participation.

Kind regards,

Germán Franco Díaz

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Germán Franco Díaz

Thank you very much for your contribution. Policies, legislation (with reference to markets, food prices and products distribution) as well as ethical considerations and recycling options will be kept in high consideration during the development of the CoC.

## Aliyu Idris Muhammad, Bayero University, Kano, Nigeria

I am glad to be part of this discussion. Well from an African perspective, I believe FLW can be addressed through the processing of such foods by natural means (drying). Most African countries are blessed with abundant sunlight. Such free energy can be utilized to dry foods that are driable which can be later used for human consumption or incorporated into animal feed. This method can minimize microbial spoilage, reduced the weight and bulk volume of the food for easier handling. Subsequent handling operations such as size reduction (cutting or grinding) can be done to facilitate its utilization as animal feed or raw-material for animal feed formulation.

Another way in which FLW can be minimized is the collection of excess foods from the source (farm) process them into concentrates (as in the case of fruits) or functional foods.

## Cephas Taruvinga, Consultant, Zimbabwe

I think also there should be guiding principles or measures to be implemented by service providers (those outside the supply chain) who offer services to supply chain actors. Especially those who offer services or supply equipment/tools/pesticides to producers/farmers because usually producers do not have complete information about a product or a service being promoted or offered. For instance, I have seen farmers using sub-standard hermetic bags or a none-calibrated moisture meter. In both cases, it is not the fault of the farmer if the technology she uses fails and losses occur. If certain principles or standards guide the supplier of the technology or service, this can limit the acquisition by farmers of a substandard technology that cause losses. Upstream the story could be different because the chain actors are more informed, and most post-harvest services are provided in-house. Even then, services providers outside the supply chain get contracted like storage fumigators who are expected to follow certain principles. So in some ways, some key service providers outside the supply chain should be guided by certain principles, and these should be included in the CoC

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Aliyu Idris Muhammad

Thank you very much. Processing and handling of food are indeed central with regards to food loss reduction. Drying and size reduction can be good strategies to preserve food.

@ Cephas Taruvinga

Thank for your insight! We can consider to refer to the role of service providers in the CoC. The provision of information and appropriate pesticides, equipment and tools to producers/farmers is of great importance.

## Mhammad Asef Ghyasi, CAF (Care of Afghan Families), Afghanistan

Dear Moderator.

Greeting from Afghanistan,

I would like to suggest in order to prevent food loss,

1-The near to expire food have to be donate to poor people inside or outside the country , I remember one of my colleagues from France, was explained, in France one of the organizations was responsible to collect the near to expire food from market and distribute to needy people before expiration. Like this we can prevent food loss, any marker owner or supplier who are not informing their near to expire food they need to be under sanction. Based on low, or the near to expire food price have to be lower for consumers.

2- As according to researches over weight/ obese people are increasing in developed countries , and that is a public health problem and individual problem for human being, and a lot of money is spending on the prevention of obesity and overweight , and overweight population health care cost is very high, for each individual their need to be a low if gaining weight ,tax have to be increase based on their weight.

3- Good planning for food production is need for each country based on the consumption,

4- Those countries who are using food as a control or for political reasons of other poor countries, it need to recognize a international crime, and sanction have to be put on them.

Best regards

Dr. M .Asef Ghyasi

MD , nutrition diploma

CAF Senior Nutrition manager

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Mhammad Asef Ghyasi

Thank you for your contribution. Yes, food recovery and redistribution is important to reduce food loss and waste. When possible, food that is still edible and safe should be used for human consumption. Overweight and obesity are indeed critical issues not only with reference to food loss and waste but to the entire food system.

## Roderick Valones, Save the Children, Philippines

Thank you for initiating this. For now, I will only provide comment. Most often, a voluntary code is very difficult to enforce unless there is a change in the heart of (individual) people--that is be accountable to the Giver. Only by then they will do their responsibility to reduce food loss and food waste starting from themselves even without legal pressure.

## Adil Daniel, World Wide Fund for Nature (WWF), Pakistan

Greeting from Pakistan.

Thank you for this initiative on Food Loss and Waste. I would like to share few points related to FLW. In my region, food loss is the most prevailing issue due to bad logistics structure which drives from farmers to the market. A notable percentage to food is being lost which could be saved with slight changes in current logistics approach such as better storage during the transportation of food commodities. Moreover, lack awareness among the common masses also goes side by side in contrast to food wastage in hotels, restaurants, households, etc. during preparation and leftover handling. In continuation to that we should take the lead in saving the food by creating awareness among consumers, suppliers, farmers and other major stakeholders.\

## Silvia Gaiani, FAO, Italy and co-facilitator

@Adil Daniel

Thank you very much for your contribution. Logistics is a central issue in reducing food loss and waste, as well as raising awareness. As you mention, the fight against food loss and waste should involve everyone along the food supply chain.

@Roderick Valones

There are definitely a number of challenges in developing, launching and implementing a code of conduct for food loss and waste reduction.

We are aware it is not an easy task but we will do our best to develop it step by step and by creating global consensus around it.

## Selina Juul, Stop Wasting Food movement, Denmark

Dear Silvia,

Very good to see you here, hops all is well. I have input about the Code of Conduct on Food Loss and Food Waste Prevention:

It’s important to separate PREVENTION from REDUCTION.

The Prevention of food waste is for example the prevention of overproduction of food.

As for Reduction, it’s for example giving suplus food to charities.

Improving forecasting accuracy and planning process they actively increase the efficient utilization of food is Prevention.

It is good and important to donate the surplus food to the charities, but its dosen’t prevent the root cause: the overproduction of food. And it’s even more important to work on preventing the overproduction of food to begin with.

However sympathetic it is when a food producer donates five pallets of cookies to the local refugee center, it does nothing about the root of the problem - overproduction. Systematic symptom treatment has become a green sleeping pad.

Nevertheless, our ingenuity is primarily for symptom treatment in all kinds. Even with the gradually free food waste prevention tools that can be implemented in the country's canteens, you sometimes hear from the canteens that it is too difficult and time-consuming to initiate the actual transformation process to prevent the waste. Then it is easier and faster to convert the canteen food waste to biogas.

When a food manufacturer distributes five pallets of cookies that it cannot sell to the local refugee center, it creates far larger headlines in the local newspaper than if the company had optimized its production to completely prevent the waste.

It creates good images on local TV and sympathy on social media, where happy people praise the initiatives - because now the food waste, according to the media mention, has stopped. Yes, maybe it's stopped on the short lane. But the problem is not solved at the root. There is still overproduction and thus waste.

Massive prevention is the way forward to achieve UN SDG 12.3 by 2030, and I think that there should be focus on Prevention vs. Reduction in the Code of Conduct on Food Loss and Food Waste Prevention.

Sincerely yours,

Selina Juul

Chairman of the Board and Founder of Stop Wasting Food movement

## Fidelis Eyoh Ukume, ILO, Switzerland

Question 2c

2.2.4. Cross-cutting Issues:

In addition to the one's already mentioned, the FLW CoC should also address vulnerability status of populations. This is inline with food redistribution to food banks given that most beneficiaries from these banks are vulnerable, especially persons living with a disability.

Question 2a.

2.1. General Guiding Principles:

Another principle that can be relevant here is that of international solidarity among states. This guiding principle services to encourage states with surplus (even after carefully reducing production at source) production to redistribute to states with low food sufficiency.

Question 1a

It would also be interesting if the guideline can provide cases of how strategies/approaches that have been applied by governments at local or national level to either encourage or enforce the application of FLW policies, CoCs or laws.

## Zoltan Kalman, Permanent Representative of Hungary, Italy

Dear Dr. Silvia Gaiani,

Dear Ms. Maryam Rezaei,

Congratulations for the work done so far. I wish to submit some remarks regarding the serious issue of food waste, prevalent in particular in the developed countries.

I have not seen comments related to the main drivers of food waste. If we want a significant improvement, it would be essential to address all these drivers. These are rather complex and would need a holistic approach and would require structural changes in our current food systems.

Let me mention just two of these drivers.

1. The impacts of low food prices on the consumers' behaviour, including their buying preferences. In particular, I wish to refer to the food prices which are kept artificially low. The situation of “low food prices” seem to be the result of competition among retailers and as such they are apparently positive and useful. In reality, the prices are frequently kept artificially low; they do not reflect the real costs of production. Food industry suppliers are often under serious pressure by the retailers, and consequently, many times they are constrained to bring their costs further down, also by lowering the quality of the food they produce.

These low food prices seem to favour the poor people, but in reality, the poor suffer the consequences of this low food price policy, because low food prices regularly linked to low quality of food. These low quality, ultra-processed (frequently junk) food have serious consequences on the nutrition status of the poor populations, many times leading to obesity and overweight.

The artificially low food prices do not reflect the actual costs of production, due to our broken food system. The indirect or “hidden cost” are not paid by those who produce the food, they are paid by the wide public, the consumers. These are the so-called environmental and social externalities and there are many studies available related to this issue. Among these studies, I can mention the one prepared by the KPMG international audit company: <https://assets.kpmg/content/dam/kpmg/pdf/2014/10/a-new-vision-of-value-v1.pdf>. The KPMG study itself is much broader than food systems. On page 10 there is a graph, showing that the cost of environmental externalities is about 224 (!!!) % of the profit of industrial food production. It is only the industrial food production where the value is higher than 100%... The social, and in particular the public health externalities mean an even more serious and much higher “hidden” costs, including costs of treating malnutrition, obesity, and diseases like diabetes, cardiovascular and other non-communicable diseases. In this regard the TEEB AgriFood (a UNEP institute) has prepared some studies, including a report here: <http://teebweb.org/agrifood/home/scientific-and-economic-foundations-report/> . Another article related to the topic: <https://futureoffood.org/cheap-food-aide-memoir/> . These studies confirm the need to involve health and finance ministers in shaping the national food policies...

It should also be mentioned that IPES Food has interesting and relevant studies on the industrial vs agroecological farming and food production: http://ow.ly/V4O730lBbmW or <http://www.ipes-food.org/images/Reports/UniformityToDiversity_FullReport.pdf?platform=hootsuite> .

FAO had some papers as well related to true cost accounting: <http://www.fao.org/family-farming/detail/en/c/436356/>. Unfortunately, more recently I have not seen any similar documents from FAO.

The general conclusions of these studies clearly demonstrate that true cost accounting does provide appropriate scientific evidence and guidance and this guidance should be duly taken into consideration while transforming our broken food system.

Finally, and most importantly, artificially distorted, low food prices have a strong impact on the consumers. If food is cheap, it conveys the message that it does not represent a real value. Therefore, consumers will care much less about throwing food away. Higher food prices (reflecting the true costs of food) would discourage consumers to buy more than they effectively need. Realistic prices of food do not imply generally high food prices. Only those (ultraprocessed, junk) food prices would go up which do not internalize the environmental and public health externalities. Prices of locally produced, fresh, healthy, unprocessed (whole) food would become more competitive. For the benefit of all the population. Obviously, necessary measures would include decent wage level as well, but the costs of these measures are much less than the benefits of saving great amounts of health care expenditure.

As Pope Francis said, “Wasting food shows a lack of concern for others”. He also said: “When financial speculation manipulates the price of food, treating it as just another commodity, millions of people suffer and die from hunger.”

2. The other issue I wish to mention comes from the question of “cui prodest”? We need to understand who are interested to prevent food waste and who benefit from wasting food. In our world where “money makes the world go round”, all stakeholders along the food supply chain are clearly interested to decrease food waste, with one exception. The big multinational food retail chains can maximize their profit through increasing their sales volumes. This is why these retail chains regularly apply large-scale sales promotions (discounts, pay 2 – get 3, etc.) strongly encouraging consumers to buy food products (because prices are attractive...) even if they do not really need those products, and buy big quantities, much more than they really need. Big retailers do not care about food waste. On the contrary, the more food is wasted by consumers, the higher of their volume of sale will be…

At the same time, we need to acknowledge that there are efforts by some of the big retail chains to exercise for example “corporate social responsibility” (although it is considered another form of promoting image to increase sales…). Some of the retailers are even involved in actions of donations of unsold food to the poor through food banks. Some others are making real efforts to decrease the quantities of unsold food, in collaboration with the national legislators, through the development of markets for substandard products, amending food labelling regulations and establishing policies and legislation to facilitate food donation. Some others again, as also suggested by the proposed outline, do capacity building in inventory management and waste audits and measurement, and use differentiated pricing for products near the use-by date.

By putting all the above in evidence I had no intention to point fingers on the retail chains as the only player responsible for the problems. I am just proposing to do appropriate analysis of the role of all involved stakeholders, including the retail chains.

Regarding the measures above I consider them extremely important, but I think they do not address the root causes of the problem. For real improvements, we would need deeper, more targeted measures. Including the Development of a Code of Conduct on Food Loss and Food Waste Prevention.

As far as the transformation of the food system is concerned, structural, systemic changes are required, based on the scientific evidence provided by true cost accounting. Respecting the principles of sustainability is essential, paying due attention to the (so far neglected) environmental and social dimensions. Obviously, the economic dimension should be considered as well. However, we should also keep in mind that economic sustainability is nothing else but the result of the national and international "economic environment", in particular the financial policy incentives. In this regard, national legislators have enormous responsibility in providing the appropriate policy incentives to those food systems which are really sustainable.

Best regards,

Zoltan Kalman

Permanent Representative of Hungary

to the Food and Agriculture UN Agencies in Rome

## Christian Ciza, Democratic Republic of the Congo

Original contribution in French

Bonjour!

C'est bon d'avoir réfléchi à la surconsommation et le gaspillage des produits agroalimentaire. De ma part je crois que la stratégie prise touche à tous les niveaux du problème. Sauf qu’au niveau du consommateur c'est pas bien spécifié.

Je voudrais ajouter qu'on peut faire des sensibilisations aux consommateurs en les invitants à une consommation utilitaire et pas acheter des choses qui finirons dans la poubelle. Et insiste aussi sur le fait d'avoir des animaux domestique comme les monogastrique (poules, porc,...), pour la valorisation des déchets.

Merci

English translation

Hello!

It is great to have thought about the over-consumption and waste of agri-food products. Personally, I believe that the strategy adopted concerns all levels of the problem. But it is not well specified at the consumer level.

I would like to add that we can raise consumers' awareness by inviting them to buy utilitarian consumption and not buy things that will end up in the garbage. It is also important to insist on having domestic animals such as monogastric animals (chickens, pigs,...) for waste recycling.

Thank you

## Lisa Kitinoja, The Postharvest Education Foundation, USA

Re:

b) Are there any particular issues and aspects of importance that you think are not be addressed in the proposed structure?

c) Are there any disadvantages or gaps you see in the current structure

I think the outline needs more emphasis on the costs and benefits, since the economics in each nation or region, or food crop/product will determine what is possible in terms of options for reducing and preventing FLW. It may be necessary for each nation to assess the various options in terms of economic feasibility as a first step.

Dr. Lisa Kitinoja

The Postharvest Education Foundation

## Silvia Gaiani, FAO, Italy

@ Fidelis Eyoh Ukume

Thank you very much for your contribution. Yes, we are going to include best practices promoted by countries to reduce FLW, so any contributions provided by this e-consultation in this sense is more than welcome. Redistribution of safe and nutritious food among countries is an option, but economic and environmental sustainability should be also taken into account when implementing such an action. The most preferable option would be to redistribute food without involving long and extensive transportation (that also requires energy consuming cold chains to keep the food safe and air mileages).

@ Selina Juul

Dear Selina, we will definitely keep your comment into consideration. Prevention is in general the best preferred option and we agree that it should happen before reduction.

The topic of FLW is in general a very complex issue which touches upon production and distribution mechanisms, but also has implications on food safety, food quality, food preservation, etc…

We agree with you that the root causes of FLW should be identified and addressed and that food donation and redistribution poses a number of questions regarding the structure of the food system in general.

## Silvia Gaiani, FAO, Italy

@ Zoltan Kalman

Thank you for your contribution!

Yes, we intend to mention the major drivers of FLW and definitely the price of food is central for the generation of food waste at consumers’ level. Food is available and often very cheap and this leads to a de-valuation of food and to many important questions regarding its nutrients. FLW have indeed economic, environmental, social, nutritional and moral implications.

We agree that when, analysing FLW, we should use a food system approach that takes into consideration technical and economic feasibility, food quality and safety requirements, social acceptability and environmental sustainability.

## Silvia Gaiani, FAO, Italy

@ Lisa Kitinoja

Thank you for your contribution! FLW reduction and prevention do imply costs for countries and stakeholders along the food supply chain and we agree that a costs/benefits analysis should be carried out before deciding which measures should be implemented.

In theory, actors in the food supply chain should take rational decisions regarding the level of food loss and waste they can tolerate.

@ Christian Ciza

Thank you for your contribution! Yes, consumers’ awareness on FLW should be raised and concrete tips on how to reduce food waste should be provided. Domestic animal feed could also be taken into consideration, but in developed countries only an extremely limited number of households may have chickens and pigs to feed.

## Moussa Na Abou Mamouda, ENDA TM, Senegal

1) With respect to the proposed outline and structure of the CoC:

· a) Does the proposed outline of the CoC address the issues in an exhaustive and comprehensive way?

The outline should be comprehensive enough to capture the attention of any reader from the first sentence. It has to give the rational behind the development of internationally agreed and locally adaptable CoC.

· b) Are there any particular issues and aspects of importance that you think are not be addressed in the proposed structure?

The proposed structure should recall the problem, its seriousness and observed social and economic consequences all in terms of numbers. The outline should include what-if situations with regard to FLW

· c) Are there any disadvantages or gaps you see in the current structure

The process leading to the CoC should be bottom up and not top down as it seems to be the case in your proposed structure. Instead of starting from the global level (your level), why not staring from the grassroots and then informing the global level? There may be a cultural issues and gaps to be addressed when talking about FLW since the problem is perceived differently across cultures and level of welfare.

2) With respect to the content of the different sections of the CoC:

· a) What are the general guiding principles that you think are important for section 2.1?

Is it possible and useful to set up guiding principles for each of the various steps of the supply chain?

· b) What are the specific guiding principles and practices do you think are important for sections 2.2.1(a, b& c), 2.2.2 and 2.2.3?

The best specificity of the guiding principles should be culturally sensitive and as such, should be defined locally according to the realities of the context.

· c) Taking into account the need to foster FLW policy coherence, which cross-cutting issues are relevant to the FLW topic, as addressed in section 2.2.4?

Sound legislations are required to locally address the issues of FLW. Involvement of parliamentarians in setting up adequate laws is key for success.

3) Can you provide specific examples of policies, interventions, initiatives, alliances and institutional arrangements which should be considered as best practices in FLW prevention, reduction, food recovery, repurposing and recycling?

In Niger, the government is encouraging the creation of agro food enterprises and it appears that most of these enterprises are directly or indirectly using dried foods as a way for adding value on foods especially cereals and fruits and vegetables produced in huge quantities during harvest periods but very rare just few months after. In order to adopt drying as measure against FLW, one major challenge to addressed is related to the availability of adequate and affordable equipment as well as human resources for providing trainings to users. In collaboration with Abdou Moumouni University of Niamey, ENDA Energy is setting the scene for locally designed dryers. See our recent publications on the issueshttps://www.scirp.org/Journal/paperinformation.aspx?paperid=92849

<http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=169&doi=10.11648/j.ijrse.20190802.12>

4) How could this Code of Conduct on FLW prevention and reduction be most useful for different stakeholders, especially at national and regional levels?

The CoC would be most useful if fully communicated and owed by all stakeholders. This could be done through consultations in which all voices could be heard.

## Teale Yalch, Gain, United States of America

Hello,

Thank you for sharing the Draft Outline for the CoC on Food Loss and Waste Reduction. I think it looks like a great outline. Below I’ve added a few comments and suggestions for your consideration.

While the ultimate objective for policy makers and development organizations may be promoting food security, this might not be enough incentive for private sector businesses that work along the supply chain and can contribute greatly to the reduction of FLW. It will be important to incentivize these stakeholders by highlighting how reducing FLW can improve their profitability.

Under 1.4; Bulletpoint B – establishing guidelines for measuring FLW will also be important. There’s still a huge gap in data for FLW along supply chain, particularly for nutritious perishable foods in developing countries.

While the code is meant to be used more globally, will it be accompanied by guidance documents that will provide guidance for stakeholders on how to actually abide by the code in a specific country, industry and/or commodity? These are often the most helpful documents for actually implementing the code.

Under 2.1 – If the objective is to improve the supply of “healthy food”, it will be important to emphasize the need to focus on perishable nutritious foods (fruits and vegetables, animal source proteins, etc) and to integrate food safety practices (which are often linked to PHL reduction practices) where ever possible.

Under 2.2.1 –

Improving access to market information to ensure farmers respond appropriately to consumer demand.

Review of state policies that may prohibit or reduce access to equipment that could help businesses reduce loss (e.g. cold chain or processing equipment)

Biofuel is also a repurposing option for some foods

Under cross cutting theme, suggest including: Climate change, food safety, improving the availability and affordability of nutritious foods

Thank you and please let me know if you have any questions.

Best,

Teale

Teale Yalch

Programme Lead

Postharvest Loss Alliance for Nutrition

Marketplace For Nutritious Foods (Interim)

## FAO Publications

Here is a selection of titles proposed by FAO Publications for forum participants who would like to read more on food loss and waste.

[FOOD LOSS AND WASTE AND THE RIGHT TO ADEQUATE FOOD: MAKING THE CONNECTION](http://www.fao.org/3/CA1397EN/ca1397en.pdf)  
This publication focuses on the need to develop sustainable global consumption and production systems to help realize the right to adequate food, while arguing for a human rights-based approach to tackle food loss and waste.

[GENDER AND FOOD LOSS IN SUSTAINABLE FOOD VALUE CHAINS: A GUIDING NOTE](http://www.fao.org/3/I8620EN/i8620en.pdf)  
This guidance note on integrating gender concerns into food loss responses proposes an approach that consists of value-chain mapping, identification of constraints and solutions, and social risk assessment.

[HOW ACCESS TO ENERGY CAN INFLUENCE FOOD LOSSES: A BRIEF OVERVIEW](http://www.fao.org/3/i6626en/i6626en.pdf)  
This report identifies the main stages of the food value chain where increasing access to energy can play a dominant role in reducing food losses directly (by making food processing possible) as well as indirectly (by influencing the rate at which cooling technologies are adopted).

[SAVE FOOD FOR A BETTER CLIMATE: CONVERTING THE FOOD LOSS AND WASTE CHALLENGE INTO CLIMATE ACTION](http://www.fao.org/3/a-i8000e.pdf)  
This paper identifies ways and enabling factors to reduce food loss and waste as part of the collective effort to enhance ambition for climate action while simultaneously delivering the other objectives of the sustainable development agenda.

Further reading

[GLOBAL INITIATIVE ON FOOD LOSS AND WASTE](http://www.fao.org/3/a-i7657e.pdf)

[FOOD LOSSES AND WASTE IN THE CONTEXT OF SUSTAINABLE FOOD SYSTEMS − A REPORT BY THE HIGH LEVEL PANEL OF EXPERTS ON FOOD SECURITY AND NUTRITION](http://www.fao.org/3/a-i3901e.pdf)

[FOOD LOSS ANALYSIS: CAUSES AND SOLUTIONS − THE REPUBLIC OF UGANDA: BEANS, MAIZE, AND SUNFLOWER STUDIES](http://www.fao.org/3/ca4524en/ca4524en.pdf)

[OECD−FAO GUIDANCE FOR RESPONSIBLE AGRICULTURAL SUPPLY CHAINS](http://www.fao.org/3/i6074e/i6074e.pdf)

[CASE STUDIES ON MANAGING QUALITY, ASSURING SAFETY AND REDUCING POST-HARVEST LOSSES IN FRUIT AND VEGETABLE SUPPLY CHAINS IN SOUTH ASIAN COUNTRIES](http://www.fao.org/3/I8616EN/i8616en.pdf)

[DEVELOPING GENDER-SENSITIVE VALUE CHAINS − GUIDELINES FOR PRACTITIONERS](http://www.fao.org/3/I9212EN/i9212en.pdf)

[DIGITAL TECHNOLOGIES IN AGRICULTURE AND RURAL AREAS: STATUS REPORT](http://www.fao.org/3/ca4985en/ca4985en.pdf)

[WATER FOR SUSTAINABLE FOOD AND AGRICULTURE](http://www.fao.org/3/a-i7959e.pdf)

[FAO: CHALLENGES AND OPPORTUNITIES IN A GLOBAL WORLD](http://www.fao.org/3/ca4305en/ca4305en.pdf)

## Silvia Gaiani, FAO, Italy

@ Moussa Na Abou Mamouda

Thank you very much for your contribution. Yes, the CoC should attract attention and at the same time suggest valuable, useful and practical guidelines.

The process to develop the CoC will be a mix of bottom up and top down approaches, as governments, policy makers and different institutions should be included in its establishment. The aim is to provide global guidelines that could be adapted to local contexts as well – therefore when possible keeping local culture and economic/political conditions into account.

Guidelines will be suggested for each step of the food supply chain. We are also planning to launch regional meetings and webinars to involve as many actors as possible and receive feedbacks and contributions.

Thank you for providing a very practical and useful example from Niger!

## Silvia Gaiani, FAO, Italy

@ Teale Yalch

Thank you for your contribution.

The involvement of the private sector is definitely important in the fight against FLW.

Standards and methodologies for FLW measurements are fundamental: FAO has been developing a Food Loss Index while UNEP is at the moment working to establish a methodology to measure food waste.

We agree that the focus should be on the most perishable nutritious foods (fruits and vegetables, animal source proteins, etc). All the cross cutting themes you mention will be kept into consideration.

## Murillo Freire Junior, Brazilian Agricultural Research Corporation, Brazil

I have been part of the initial discussions in the preparation of this document and I understand that the proposed outline and structure of the code of conduct are quite appropriate.

If adopted or followed by countries and different actors in the supply chain, we will make great progress in mitigating food insecurity and hunger in the world, with positive effects on environmental sustainability and climate change.

It will be a great legacy for future generations.

Congratulations to the whole team.

## Patricia Mathabe, Agricultural Research Council, South Africa

2.2.4. CROSS CUTTING ISSUES

In this section, I believe that emphasis should be made on the need for the Agri Industry, Researchers and government to collaborate and recognize the need and the importance of innovations to prevent/reduce post harvest losses. More so the funding of these novel technologies. Technologies developed, should be applicable and affordable to both the commercial and small scale farmer.

## Maria J.I. Briones, Universidad de Vigo, Spain

I feel that there are additional issues to address in the outline:

1) Food processing: besides reducing packaging, retailers should seek for better ways to keep food fresher for longer periods without using more chemicals. One of the reasons why consumers waste food is that it goes off before they can eat it. When food are obtained directly from the farms it last longer!

2) Food distribution/retailing: Supermarkets and shops should stop advertising big savings for big buys.

3) Food redistribution: Some places have implemented an application for mobile phones so that restaurants offer reduced prices for food that is about to expire.

4) Food recycling: green bins for organic wastes should be allocated in schools, Universities, working places... Not only consumers eat at the bars and cantees in their working places but also bring food to work and the waste ends in the "general waste" bin.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Maria J.I. Briones

Thank you very much for your contribution. Retailers play an important role in food waste reduction and all the points you mention (food preservation, marketing strategies, food redistribution and separate collection) are relevant and will be mentioned in the CoC.

@ Patricia Mathabe

Thank you for your input which highlights the importance of innovation and technologies for food loss and waste prevention and reduction!

@ Murillo Freire Junior

Thank you so much! Our aim is to develop a practical and useful CoC for FLW reduction and prevention which, if adopted by States and by food chain actors, will have positive and direct outcomes in the next coming years.

## Susan Kevork, Nestle, Switzerland

Private Sector intiatives to address food waste : At Nestlé we have estimated our own losses along our entire value chain at 12%.This includes the losses upstream of the raw materials that we buy, and the losses in manufacturing, distribution and at the consumption stage. For example reducing milk losses We are measuring the milk loss from farm to factory gate in 30 countries in our dairy supply chain. We have already implemented actions to reduce losses, including improved collection systems. As a result, milk losses from farm to factory in 2018 were measured at just 0.3% of production.

Examples of policies, interventions, initiatives, alliances and institutional arrangements which should be considered as best practices in FLW prevention, reduction, food recovery, repurposing and recycling :

Partnering to reduce waste :Nestlé Nordic has joined the Denmark Against Food Waste initiative, which brings together manufacturers and retailers to reduce waste in Denmark by 50% by 2030. The first step has seen participants commit to measuring and publishing progress on food waste annually.

In Latin America and the Caribbean we also partnered with the Inter-American Development Bank and supported by other major food and technology companies ,to support its #SinDesperdicio (‘without waste’) initiative where we used food date labels to help prevent food being discarded when it is still good to eat. Taking a holistic approach, it aims to fight back against the 127 million tons of food lost and wastedevery year in Latin America and the Caribbean.

In 2018, Nestlé UK and Ireland worked with other members of the IGD and WRAP Food Waste Measurement Task and Finish Group to develop guidance on measuring and reporting food loss and waste.Nestlé UK and Irelandalso launched an initiative that aimsto redistribute meals across the UK. Delivered in partnership with Company Shop and WRAP, the Waste Not, Want Not methodology will assess the main causes of food waste within food operations and reduce them at source where possible. By 2019, any surplus food should be redistributed to commercial and charitable organizations rather than being used for animal feed or anaerobic digestion, and the project aims to redistribute 2 million extra meals. The approach has already been tested at several Nestlé factories.

We are also measuring the environmental and nutritional impact of food loss and waste, key measurements that are too often overlooked.

Reporting food loss and waste: Since 2016, we have been reporting the food loss and waste generated in our factories according to the World Resources Institute’s Food Loss and Waste Protocol.

## Mariola Kwasek, Institute of Agricultural and Food Economics, Poland

Dear Colleagues,

The paradox of the contemporary world is that, more than 820 million people do not have enough to eat and 1,3 billion tonnes of edible food per year, i.e. 1/3 of produced food is wasted. Food losses and waste are so high that they should be treated as a global problem prevalent throughout the agri-food chain, i.e. “from farm to table”, in both developed and developing countries. All participants in the agri-food chain are responsible for food losses and waste: producers, processors, suppliers, traders, sellers, restaurateurs and consumers. Therefore, everyone must also take action to prevent food waste and waste on both the supply and demand side, as well as to reduce it.

Therefore, development of a Code of Conduct on Food Loss and Food Waste Prevention is a great idea. The proposed structure of CoC is quite appropriate. Below I added a few suggestions to consideration.

All actions to reduce food losses and waste should be undertaken, including:

Support for initiatives of cooperation between different stakeholders: food producers, retail chains, government representatives, NGOs, international organisations and scientific research institutes. The combination of knowledge and skills can contribute to a significant reduction in food losses and waste.

Modification of requirements for food quality standards in terms of the size, shape and colour of fruit and vegetables to enable the sale of less aesthetic products. Food products, which are rejected by retail chains due to non-compliance with quality standards, should be sold at lower prices or forwarded through the Food Banks to those in need.

The European Union should support actions to redistribute food to people in a difficult financial situation, and to support the provision of milk and milk products to pupils, and actions as part a programme promoting the consumption of fruit and vegetables in schools.

Information campaigns in many countries to raise public awareness of food waste consequences. In Poland, the Federation of Polish Food Banks runs numerous information campaigns for both food producers and consumers. Established to prevent food waste and to reduce malnutrition areas, the Federation of Polish Food Banks brings together 32 Food Banks that operate throughout the country.

Development of financial incentives for entrepreneurs that pursue policy to reduce food waste.

Allowing for taking an uneaten meal home from a restaurant.

Use of edible by-products as e.g. pet food.

Introduction of educational programmes on nutrition at all levels of the education system to explain how to store and prepare food, and how to dispose of leftovers.

It is necessary to educate consumers about food packaging information on the expiration date of food: (1) ‘use by’ for perishable food products and (2) ‘best before’ relating to the minimum durability of food products which are safe for the health of consumers. Consumers often do not distinguish between these terms and discard food with ‘best before’ information on its packaging. The ‘use by’ date refers to food security and the ‘best before’ date – to food quality.

Interdisciplinary actions should be undertaken with respect to food production, food quality and security, nutrition rationalisation, health promotion and raising consumers’ awareness of nutrition and health.

Implementation of food redistribution programmes that allow for reducing prices of food products with a close ‘use by’ date. It would prevent massive discarding of food and, at the same time, would enable low-income people to buy food.

Developing a uniform methodological framework that would provide reliable estimates of food loss and waste, which would allow for more accurate tracking and detection of links in the agri-food chain where food loss and food waste arise. This would allow the introduction of appropriate strategies targeted at specific recipients that would be aimed at preventing and reducing food loss and waste.

Constant monitoring of food losses and waste throughout the agri-food chain.

These actions will bring numerous economic, social, health and environmental benefits to not only the present world population, but also to future generations.

In Poland, the Act of July 19, 2019 on Counteracting Food Waste was adopted. This Act stipulates that stores over 250 sq. m., whose half of the revenues come from the sale of food, will have to conclude agreements with non-governmental organizations for the free transfer of unsold food. It is primarily about products that have been discontinued due to defects in their appearance or packaging.

The law provides for symbolic fees – for 1 kilo of wasted food, the seller will pay 0,10 PLN. These funds are to support non-governmental organizations in further food distribution, including support the development of infrastructure necessary to provide food to those in need. Stores will also be required to run, together with non-governmental organizations, at least once a year, educational and information campaigns in the field of rational food management and prevention of food waste.

Best regards

Mariola Kwasek, PhD, Hab. Associate Professr

Institute of Agricultural and Food Economics

National Research Institute

Warsaw

## Lisa Johnson, North Carolina State University, USA

Food Loss and Waste Heroes at FAO,

It is great to see more important work in this area. The outline has covered important topics.

One thing that I thought may be missing, potentially a cross-cutting issue, is some kind of investigation of the unintended consequences of preventing and reducing food loss and waste. The emergency food system is one part of our food system that I can think of that already struggles when supply chain stakeholders improve their efficiency. Please let us know how the Code of Conduct develops.

Lisa Johnson

## Brandon Eisler, Nutritional Diversity, Panama

I contribute this to the FAO realizing the idea may be oriented for a more technical type, but it seems most effective still from my position to harp on food waist inside of the [individual sustainability](https://wp.me/p7Dx4z-1gn) model because it is this model that work in the end (in [many ways](https://nutritionaldiversity.com/rotational-re-visit-style-permaculture/)), long after thousands of words and protocols and booklets. I think the **nature** model concept, is really the importance moving forward in all of these many issues the forum addresses primarily, proper food waist handling.

**Nature is** [**self sustainable.**](https://wp.me/p7Dx4z-1gn)

The individual nature of today's culture is not sustainable. It does not have to be that way. [Individual sustainability](https://wp.me/p7Dx4z-1gn) should be our very priority, and the [re-education of sustaineable and natural importance](https://www.patreon.com/educationinpermaculture) will rectify most that is wrong today, and provide that we can survive as a large population. The possibility of what kind of people culture we can be is very dynamic, and it is very much up to us at an individual level.

Should we take our examples to live from nature rather than from ourselves, these techno-monkeys that know better; whala ! self sustainable culture of people.

[Individual sustainability](https://nutritionaldiversity.com/rotational-re-visit-style-permaculture/) has a secondary importance and that is the individual's causation of death, or suffering and the footprint left by the life of the individual. Our footprint in the world and our waist management. Part of becoming a dynamic population that supports or ecology rather than destroys it will be learning dynamic principles in the importance of individual sustainability.

We even find that natural selections (plant life of ecology) are even more than self sustaining but actually pull more than just their own weight. Permaculture observed this, and stresses the repetition of it. Individual sustainability for future generations can be achieved by the modern worker too, using rotational re-visit farms, method.

Culture Conflict

Culture among humans is an interesting, dynamic thing. We can have all sorts of wild things in culture that are as unnatural as can be. Stay natural as can be, and take your model from nature should be our motto moving forward.

We can have a culture were abusing children is ok, but in reality this is not ok. Today (English speaking cultures) - we have a culture of using children for money, for control, and many are willing to abuse kids in order to abuse an an ex or gain monetarily, cause total life destruction and tell the worst lies to cause it. Millions of children are lied to, cut off from one parent, brainwashed, something the famous Dr. Phil has called the "Ultimate Form of Child Abuse," and is clinically known as " Parental Alienation," but really is parental kidnapping and child brainwashing.  It is a deep rooted emotional molestation and this is all incentivized by the system. This is okay in current people culture, it's normal, there are millions of cases. In reality this is not okay. It does cause damage, it does cause suffering, it leaves huge lasting effects on the world and others.

Many worlds today see leadership that says one thing and does another. Many workers see their 'elected', or non-elected officials live the lives of kings making decisions for struggles they do not know. How this structural manifest became the true reality in so many places, under so many titles is beyond me. But natural I can tell you it is not.

I use these example above because it is one cultural model of many, like mono culture farming, that is just so insane, and so damaging that we have to now really take the idea of looking to nature for our advancement seriously.

At the end of the day we cultivate in the root of all evil, we get what is to be expected.

Nature exists in a perfect......  balance.

Coherent Culture

Intentional Community has been an idea for ages. It's hard to start over without the skills, and the experience to stand on. The 60's cats developed a good couple of shoulders to stand on though with [Permaculture](https://nutritionaldiversity.com/permaculture/) and the Permaculture Manual.

Today even the hippies are selfish, egotistical and fascist.

The difficulty I have seen in most intentional communities are concerns in what permaculture calls "fair share,"  ownership, work value mostly remains in the existing structure of the one with most money owning everything and being metaphysically, then physically unable to actually provide a completely fair opportunity. Where the reality is once they are done dragoning over that one farm, they may mind other farms, and it is possible to leave these farms with [excellent natural food forrest management](https://nutritionaldiversity.com/rotational-re-visit-style-permaculture/),  [management opportunities for others](https://nutritionaldiversity.com/nd-university/permaculture-costa-rica/), production and vibe. See [Guerilla Permaculture](https://nutritionaldiversity.com/guerrilla-permaculture/).

[Nutritional Diversity Study in Panama](https://nutritionaldiversity.com/biodiverse-food-study-panama/) has found a way to achieve, much more than before, optimal performance results from natural diet practice. This is information gathered over a better part of the last decade,  they are compiling into a [Human Optimizing, Nutritional Diversity Guide](https://nutritionaldiversity.com/complete-human-optimization-manual/).

Self Sustainability

It's interesting. Sure it will be hard to change the world. We see more and more people who are thinking about these ideas, and here moving to Central America.

To simplify the coherent focus; is for each one of us, or each community of us, to be self sustainable, through technologies that don't drastically effect the earth with pollutants, or other possible negatives. The foot print of humans can be as harmful to the world as the footprint of any other animal should we choose to go off of a natural example rather than an unnatural one.

To Be Useful

If we are going to pull more than our own weight and take care of plenty of stuff we are going to need skills above all other thing. Thanks to modern culture (again), we need a focus point of skill learning in the community.

Energy production and waist management are both optimized when combined. For example the permaculturist's humanuer, or animal manure, work's well to produce plant life on the farm.

The simple realization that the farm, at this point likely is the most important component to success for a group of persons - and we are back to the new type of agriculture skills point again.

Organic Waist Management

At the smallest levels, seeds, beet and carrot tops, can be removed and replanted. Bulk food material should composted.

Small home composting is easy, and there are plenty of ideas and inventions to speed up timing and concentrate tees.

In urban areas, people have now converted shipping containing to solar powered sat composers, making them possibly some of the best things that could happen to an urban ghetto. I imagine given there due time needed, they can compost in human waist in areas where that is an immediate concern.

Human urine is highly potent foliar feeder by itself for plants, and the charger for bio-char.

Non -Organic Waist Management.

Plastics and metals need to be dealt with in alternative forms.

There are [plastic](https://nutritionaldiversity.com/plastic-water-contamination/) fuel theories, and there is valid plastic bottle wall construction that has been done by groups all over the world now. This method could be a great answer, could be done well and could provide jobs fabricating bottle-made wall panels. We have a close model around the world now to this concept known as 'coventech' or 'M2'. I highly recommend the idea of local plastic bottle wall construction panels, straws and bags in the bottles -everything washed.  This is a solid waist management protocol that can be exercised immediately.

When a business depends on the waist, it will clean up the waist.

Recycling as a business is not as wide spread as it should be, and that could be because of the effectiveness of it's process currently. Functional clean up technology could be a high demand idea if we had incredible plastic.

Metals are easy to figure out in a conscious coherent direction.

I hope for a world with a more self sustaineable attitude, and I believe it will be at this level , and through this type of coherent mentality in culture that we will turn the page into a page of life. A concentration on [Nutritional Diversity](https://nutritionaldiversity.com/) and it's principles as a doctrine will undoubtedly be a precise force of effective application in that direction.

Respectfully,

## Nicola Pisano, Freshfel Europe, Belgium

Dear Divine Njie,

Freshfel Europe, the European Fresh Produce Association, endorses FAO’s initiative to develop a Code of Conduct on Food Loss and Food Waste with a food systems approach for the reduction of food loss and food waste globally. Freshfel Europe would like to outline the following aspects for consideration regarding the development of this Code of Conduct (CoC) on Food Loss and Food Waste Prevention.

First, the proposed outline and structure of the CoC is comprehensive and covers all necessary elements for a non-sector specific code of conduct. Freshel Europe would like to reiterate that the guidelines remain voluntary and non-binding to reflect the wide diversity of food loss and waste measures already in place throughout the agricultural sector. In Section 1.2 Freshfel Europe would like to highlight the importance of including clear and precise terminologies. Detailed and specific terminologies are essential in avoiding misinterpretation of the CoC, which will be used by a wide variety of actors and stakeholders. Freshfel Europe would also like to stress the need for a carefully planned and implemented monitoring system, which clearly indicates necessary inputs and how these will be collected.

The three pillars of sustainability are a necessary inclusion in Section 2.1 as are the relevant Sustainable Development Goals. Freshfel Europe agrees that priority should be placed on food loss and waste prevention measures at source where possible and to focus repurposing and recycling on circular activities.

In regards to Sections 2.2.1, 2.2.2 and 2.2.3, FAO should refer to the recently formulated (2019) UNECE ‘Code of Good Practice for reducing losses in fruit and vegetable trade’, which provides an in depth overview of recommended measures to be taken across the whole fruit and vegetable supply chain for the reduction of food loss and waste. This Code of Good Practice also includes policies, interventions and initiatives for food loss and waste prevention and reduction. For example for Section 2.2.1(a) in relation to the fruit and vegetable sector the following good practice examples are included in the UNECE Code of Good Practice:

* Prevention of food waste by bringing to market products that meet consumers’ needs. This can be achieved by planning production on market knowledge on consumption patterns and trends and new application opportunities.
* Reduction of food waste through immediate transportation of harvested products to market, with exception of those that can be stored without loss of quality in optimal circumstances.
* Prevention of food waste through the use of post-harvest handling and treatment protocols.

This CoC would be most useful at all governance levels if it addressed food loss and waste prevention and reduction measures from a supply chain perspective with all actors including producers, wholesalers, packers, traders and retailers. This should also incorporate measures at consumer level where education is essential in understanding food waste prevention and reduction in the home. This includes but is not limited to meal planning, storage practices and comprehension of date marking.

Thank you for this opportunity to contribute to the development of the CoC and please do not hesitate to contact me if you have any queries.

Kind regards,

Nicola Pisano

Freshfel Europe Policy Advisor & Communications Manager

## Jessica Sinclair Taylor, Feedback, United Kingdom

**1. With respect to the proposed outline and structure of the CoC:**

**a. Does the proposed outline of the CoC address the issues in an exhaustive and comprehensive way?**

**b. Are there any particular issues and aspects of importance that you think are not be addressed in the proposed structure?**

**c. Are there any disadvantages or gaps you see in the current structure?**

Feedback recommends that the structure needs to recognize that different sectors of the supply chain affect each other – for instance, as noted below, retailer policy can have significant effects on both their suppliers and their customers’ food waste levels. Therefore, Feedback suggests that each section in 2.2.1 includes recommended measures not just that States and businesses in the sector can take, but that actors in other stages of the supply chain can take which affect that sector.

**2. With respect to the content of the different sections of the CoC:**

**a. What are the general guiding principles that you think are important for section 2.1?**

One of the most important guiding principles should be the recommended scope of SDG 12.3. The Champions 12.3 document Guidance on Interpreting Sustainable Development Goal 12.3 (Hanson, 2017) includes the vital recommendation that “one should apply the “halve per capita” in practice to food losses [i.e. pre-retail food waste], as well, not just to food waste” – and that this should cover “from the point that crops and livestock are ready for harvest or slaughter through to the point that they are ready to be ingested by people”. Thus, nation states should set targets to reduce food waste by 50% from farm to fork by 2030, including edible food left unharvested in the fields. Food left unharvested in the fields is currently excluded from compulsory measurement under the Food Loss Index, despite studies (including the FAO’s) revealing that in both richer and poorer countries some of the highest levels of waste occur at this stage. To facilitate its measurement, the FAO should urgently develop a recommended methodology for nation states to measure this food waste, as a means of creating baselines to enable targeted reduction of 50% by 2030.

Hanson (2017) also makes the vital recommendation that food is still counted as waste towards SDG 12.3 if it is used below the point of animal feed on the food waste hierarchy – the FAO should make it clear in their recommendations that sending food to AD, compost or below on the hierarchy does not count as reduced towards SDG 12.3. Ideally, Feedback would recommend that countries are even more ambitious than this for food that is edible to humans – only counting this as reduced if it is prevented or sent to human consumption. However, efforts to reduce food waste by 50% by 2030 should be complemented by efforts to move food waste up the food up the food waste hierarchy.

Feedback recommends that the distinction between food “loss” and “waste” is removed, in favour of the term “waste” being used regardless of which stage of the supply chain food is wasted at. The loss vs. waste distinction implies that developing countries experience primarily food loss in their supply chains as a result of poor technical infrastructure and developed countries primarily experience food waste at retail and consumer level because of wasteful consumer habits. However, retail food waste is generally small, and pre-retail food waste e.g. in agriculture is usually high – in both the Global North and South, as is revealed by the FAO’s own data (FAO, 2011). Moreover, “food loss” implies a technical cause unrelated to human agency. However, Feedback has found evidence that food is often

waste in both the Global North and South due to factors related to unequal power balances in supply chains – particularly within rich countries where the retail sector is concentrated compared with their suppliers, or where farmers in the Global South export to the Global North. Factors such as cosmetic outgrading, overproduction as a result of power relations, and Unfair Trading Practices like last minute order cancellations, often result in large levels of food waste in suppliers. See, for instance (Colbert and Stuart, 2015; Colbert, 2017; Bowman, 2018).

**b. What are the specific guiding principles and practices do you think are important for sections 2.2.1(a, b& c), 2.2.2 and 2.2.3?**

Section 2.2.1(a)

It is vital to recognize that retailer policy (and the policies of intermediaries) often has a considerable impact in causing food waste in their suppliers, and therefore to provide suggestions for improvements in retailer policy which can reduce food waste between primary production and retail

Examples of measure States could take to minimize the effects retailers have on their suppliers’ food waste are:

· Introduce robust Unfair Trading Practices legislation, to protect suppliers from practices like last minute order cancellations or tightening of specifications which lead to waste. A regulator should be established for this which has adequate powers of enforcement.

· Set up some form of cross-supply chain mediation to explore problems and find solutions.

Examples of measures retails could take to reduce their suppliers’ food waste are:

· Recognise their shared responsibility for the food waste in their suppliers.

· Relax cosmetic standards on core product lines to ensure that no/minimal edible food is rejected on the basis of cosmetic qualities like size, colour or shape. Actively promote diverse produce sizes to customers to reduce fussiness. Do change cosmetic standards at the last minute as an excuse to cancel or reduce an order.

· Do not punish cases of undersupply in suppliers where this has stemmed from natural variation in the weather – as this leads suppliers to routinely overplant to avoid being fined or delisted, leading to gluts and price crashes in good years and much produce being ploughed back in.

· Make efforts to flexibly market gluts of produce when weather leads to unexpected gluts.

· Minimize their practice of Unfair Trading Practices, in compliance with and cooperation with the State regulator

Section 2.2.1(b)

It is vital to recognize that retailer policy often has a considerable impact in causing food waste in their suppliers, and therefore to provide suggestions for improvements in retailer policy which can reduce food waste between primary production and retail

Examples of measures retails could take to reduce their suppliers’ food waste are:

· Recognise their shared responsibility for the food waste in their customers, since their policies usually have a large effect on these.

· Extend Best Before Dates where it is possible to do so within a safe level, to prevent edible food being discarded by consumers while it is still safe to eat.

· Sell produce loose where selling it in bags is liable to cause consumers to overbuy and waste the excess

· Sell perishable foods which are likely to be eaten across multiple meals such as salads in resealable packaging where appropriate.

Section 2.2.1(c)

· Food waste prevention should always be prioritized over charitable food waste redistribution, so the two should be listed in different categories.

· Voluntary food redistribution is ultimately a superficial solution to both food waste and food poverty, and ultimately the aim should be to design both out of the system in the first place. As many food poverty academics have observed, some problematic aspects of voluntary food redistribution which have been identified include them being under-resourced, socially stigmatising, patchy in coverage, and vulnerable to fluctuating food stocks according to the availability of food surplus. Most importantly, food redistribution charities do not have the power to guarantee universal access to affordable nutritious food – as embodied in the Human Right to Food enshrined in the International Covenant on Economic, Social and Cultural Rights – and is sometimes used by governments to plug gaps in welfare and employment systems, potentially easing pressure on government to guarantee safety nets.

Section 2.2.2

· There should be a very clear distinction drawn between sending food to animal feed, and sending it to AD and compost. Sending food to AD or compost should not be counted as reduced towards SDG 12.3 under any circumstances, since it is too far down the food waste hierarchy. Sending food waste to animal feed is generally considered as no longer food waste under SDG 12.3 – however, countries should be encouraged to prevent food waste as a priority or send food to human consumption if it is edible. Animal feed and AD/compost should therefore be split into two clearly distinct categories.

Examples of measures to be taken by States include:

· Scale up the amount of unavoidable surplus food which is sent to animal feed. Ensure that it is legal to feed all safely-treated surplus food containing meat to omnivorous non-ruminants like pigs and chickens, once it has been subjected to a safe heat-treatment complemented with acidification in rigorously regulated off-farm processing facilities. For more info, see (Luyckx et al., 2019)

c. Taking into account the need to foster FLW policy coherence, which cross-cutting issues are relevant to the FLW topic, as addressed in section 2.2.4?

National governments:

· Adopt binding statutory targets to reduce food waste by 50% from farm to fork by 2030 (not just to reduce consumer and retail waste by 50% and more vaguely reduce food “loss”). Binding measures should be taken in preference to voluntary agreements.

· Integrate food waste reduction efforts into Intended Nationally Determined Contributions (INDCs) and emissions reduction plans.

· Measure food waste annually at all stages of the supply chain, from the point food is mature enough to harvest through to consumer level – to create baselines for targeted reduction.

· Introduce legal requirement for businesses over a certain size to measure and report their company’s food waste figures, on an individual company basis

· Adequately fund the above measures.

**3. Can you provide specific examples of policies, interventions, initiatives, alliances and institutional arrangements which should be considered as best practices in FLW prevention, reduction, food recovery, repurposing and recycling?**

· EU Directive 2019/633 introduced an obligation on EU member states to ban 16 Unfair Trading Practices, and to set up regulators to ensure this code is followed. It protects all suppliers in smaller size categories than their buyers, and protects both suppliers within the EU and suppliers exporting to the EU. Other States should move to introduce such legislation, and ensure that the regulatory authority is given sufficient power and funding to effectively enforce the law.

· WRAP’s Food Waste Roadmap provides a good example of ambitious interpretation of SDG 12.3 – targeting a 50% reduction of food waste from farm to fork by 2030. Signatories to the voluntary commitment also individually report their food waste, rather than at an aggregate sectoral level, providing a greater level of transparency, and to reduce their own food waste by 50% by 2030. However, WRAP do not expect 100% participation in this agreement until 2026. Strengthening the voluntary agreement by upgrading it to a regulatory requirement to ensure 100% participation in measurement, reporting and targets would significantly speed progress.

· Japan produces “eco-feed” for pigs by taking surplus food and subjecting it to a safe treatment process (heat-treatment combined with acidification), in specialist well-regulated treatment facilities. EU REFRESH outlines how, with some regulatory strengthening, this system could be adapted to Europe – and to other countries (Luyckx et al., 2019).

· Retailers in the UK have launched a variety of wonky fruit and vegetable ranges. For instance, Tesco report that since launching their “Perfectly Imperfect” line, the proportion of their producer’s apples they can take rose from 87% to 97% (Gilbert, 2016). Morrisons launched a wonky fruit and veg range (Pullman, 2015) – a move which was immensely popular and led to increased sales (Butler, 2018). However, ideally supermarkets should use wonky fruit and vegetable ranges to test their customer’s levels of acceptance of cosmetic variety, with a view to eventually relaxing cosmetic standards on core product ranges.

**4. How could this Code of Conduct on FLW prevention and reduction be most useful for different stakeholders, especially at national and regional levels?**

Feedback recommend that the Code of Conduct on FLW prevention and reduction be used primarily as a means of encouraging States around the world to adopt ambitious food waste reduction legislation and regulation, to ensure they reduce food waste by 50% from farm to fork by 2030, in line with SDG 12.3. Clearly recommending the scope of SDG 12.3 should also be a priority.

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## Silvia Gaiani, FAO, Italy and co-facilitator

@ Lisa Johnson

Thank you very much for your contribution and for pointing out the relationship among food waste, the efficiency of food system and food emergency systems. We will let you know how the CoC develops!

@ Mariola Kwasek

Thank you very much for your comprehensive contribution. All the aspects you mention (i.e. support for initiatives of cooperation between different stakeholders, food redistribution, fiscal incentives, etc..) are all fundamental to reduce food waste and will be included in the CoC.

Thank you also for providing information about the Federation of Polish Food Banks and the Act of July 19, 2019 which looks like a very important step to reduce and prevent food waste at distribution/retailers’ level.

@ Susan Kevork

Thank you for illustrating what Nestlè does to reduce food loss and waste. Very interesting initiatives!

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Jessica Sinclair Taylor

Thank you for your very detailed contribution.

What Feedback recommends will be definitely kept into consideration for the development of the CoC on FLW reduction and prevention.

Specifically, we will stress how the different sectors of the supply chain affect each other (and we will therefore highlight which prevention and reduction measures can be implemented by all actors of the supply chain).

We agree that nation states should set targets to reduce food waste by 50% from farm to fork by 2030 – following SDG 12.3-  and FAO and other UN agencies are working on sound measurement methodologies.

Thank you also for providing interesting examples of policies and best practices and for having included a relevant  bibliography.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Nicola Pisano

Thank you for your contribution and for the CoC endorsement by the European Fresh Produce Association.

We agree that terminology is important in avoiding misinterpretation of the concepts of food loss and waste of the CoC, and that data collection and monitoring systems are vital to understand how data are collected and analyzed.

Thank you also for mentioning the (2019) UNECE ‘Code of Good Practice for reducing losses in fruit and vegetable trade’, which recommends measures to be taken across the whole fruit and vegetable supply chain for the reduction of food loss and waste.

## Felicitas Schneider, Thünen-Institute of Market Analysis, Germany

Dear SP4 team,

thanks for sharing the draft document of the CoC with us. I think it is a good idea to have a sum-mary of guiding principles although there is already a lot of information out there which could be implemented. Experiences show that global guidelines are often too general to be implemented on a local or regional basis, thus I keep my fingers crossed that you will find an appropriate way to address the different scales within one CoC. Related to your questions, please let me raise your awareness to some points:

1a and b.) I miss the urgency of data collection in order to fulfil the tasks which are mentioned within the outline. In order to highlight the economic advantages related to FLW prevention to stakeholders or to calculate the basics for public awareness raising campaigns – you always need a good data base which fits specifically into the region.

1c) There should be a section about the interrelation among stakeholders of different levels to raise awareness on that topic, too. Fostering cooperation between levels of the food supply chain is very important to reduce FLW in total and not shifting FLW only from one level to another. At the end of the report, I miss the conclusions or overall recommendations – like a starting signal for the reader to go into practice right now.

2a.) It is good to read that not only SDG 12.3 is mentioned here but also the interconnected goals as this leads to a more holistic approach than other approaches. As often only legal definitions are used to define food waste, the overall goal of conservation of resources and reduction of environmental damage is completely lost.

I see the responsibility of the public sector also in setting framework for effective FLW data col-lection, provide resources to collect data and analyse them and to facilitate further activities based on already available outcomes.

2b.) From my point of view, it is very important to recognize the difference between FLW prevention at source and other activities which just try to make the best of already surplus food. There should be more emphasis on prevention at source although it will not be possible to reduce FLW to zero. I recommend not to rank composting and anaerobic digestion against each other – the most appropriate process for a specific situation/region depends e.g. on the characteristics of the FLW stream and the available infrastructure but I do not think that there is a proven outcome available that AD is always more preferable than composting, is it?

In sections 2.2.1 – 2.2.2 the issue of data availability and reliability should be mentioned. In sec-tion 2.2.1a primary production, pre-harvest losses should be included as they are – among other influencing reasons – partly a product of the current food system (including UTP) and contribute to ineffective use of resources. In order to see the whole picture, human mankind has to include pre-harvest losses to be able to rethink the system and adapt it to current conditions and sustainable practices. Examples of measures should also be given for 2.2.1c.

2c.) Policy coherence is very important but not mentioned as such in section 2.2.4 as only specific examples are mentioned in the draft. Having the whole system in mind is important in order not to miss external effects of business operations and societal activities, too.

Best wishes and all the best for further work,

Felicitas

## Patrick Mink, Federal Office for Agriculture FOAG, and Co-Lead of the One Planet (10YFP) Sustainable Food Systems Programme, Switzerland

With respect to the [proposed outline](http://www.fao.org/fsnforum/sites/default/files/files/159_Food_Loss_Waste/DraftAnnotatedOutline_CoC_FLW_EN.docx) and structure of the CoC:

b) Are there any particular issues and aspects of importance that you think are not being addressed in the proposed structure?

While the draft annotated outline does refer to the 2030 Agenda, it lacks a specific reference to SDG 12.3. The CoC should be designed as a tool to support countries and other stakeholders to achieve SDG 12.3.

One critical aspect in that regard is the lack of a baseline. Concretely, governments need to know how much FLW is currently being generated within their countries, in order to measure their progress towards achieving SDG 12.3. They need to be able to develop an evidence base to measure progress towards SDG 12.3. This requires also the application of a sound methodology for measuring FLW that allows for comparisons across countries.

It could therefore be useful if the CoC would also include a section with guidance on how to quantify FLW in order to measure countries’ progress towards achieving SDG 12.3.

c) Are there any disadvantages or gaps you see in the current structure

In addition to the point mentioned under b) above, maybe it could be useful to place the cross-cutting principles and measures (currently 2.2.4.) before the guiding principles that are specific to different stages of the food value chain (2.2.1-2.2.3). This may simplify the flow from the more general to the more specific.

With respect to the content of the different sections of the CoC:

a) What are the general guiding principles that you think are important for section 2.1?

The general guiding principles that are currently proposed are all important and seem fine, overall. In particular, we welcome the inclusion of the three pillars of sustainable development, the hierarchy approach and the food systems perspective.

In the first bullet point, we would like to suggest to include “including through the reduction of GHG emissions” after “prevent environmental degradation”, and to include a specific reference to SDG 12.3 in addition to the reference to the SDGs in general.

In the third bullet point, we would like to suggest to add “and consumption” after “sufficient supply”. Providing for sufficient supply of sustainably produced food will not be enough to ensure that this food is actually being consumed; other factors such as, inter alia, infrastructure, education and awareness raising play an important role. In addition, we would like to suggest to consider exchanging the word “healthy” with “nutritious”; alternatively, the term “healthy and sustainable diets” could be used instead of “healthy food”.

Regarding the fourth bullet point, we would like to suggest to bring it more in line with the recent UNEA-4 resolution “Promoting sustainable practices and innovative solutions for curbing food loss and waste” (see: <http://wedocs.unep.org/bitstream/handle/20.500.11822/28499/English.pdf?sequence=3&isAllowed=y>), including by: changing the first sentence into “Responsibility of the public sector for *providing an* effective *enabling environment for* food systems activities”; adding “campaigns” before “education and training”; and add best practices and applied research as separate sub-bullets. In fact, we feel that FAO and UNEP should collaborate very closely, both in developing the CoC as well as in the implementation of the UNEA-4 resolution on FLW, as the two processes are very closely linked.

b) What are the specific guiding principles and practices do you think are important for sections 2.2.1(a, b& c), 2.2.2 and 2.2.3?

The guiding principles should be based on and in line with previous work undertaken by FAO, UNEP and other relevant actors, including the guidance on Prevention and reduction of food and drink waste in businesses and households (see: <http://www.fao.org/fileadmin/user_upload/save-food/PDF/Guidance-content.pdf>) and the HLPE report Food losses and waste in the context of sustainable food systems (see: <http://www.fao.org/3/a-i3901e.pdf>).

c) Taking into account the need to foster FLW policy coherence, which cross-cutting issues are relevant to the FLW topic, as addressed in section 2.2.4?

In line with the point mentioned under 1. b) above with regard to generating data to provide the evidence base, this should also include the evidence base to measure progress towards the achievement of SDG 12.3.

An additional example of a cross-cutting issue that is not currently listed, are stakeholder dialogues to co-develop nationally and locally adapted solutions for FLW reduction at different stages of the food value chain.

Can you provide specific examples of policies, interventions, initiatives, alliances and institutional arrangements which should be considered as best practices in FLW prevention, reduction, food recovery, repurposing and recycling?

At the global level, we would like to highlight in particular the Sustainable Food Systems (SFS) Programme of the United Nation’s 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP) as a best practice example of a multi-stakeholder initiative. Reducing FLW is one of the SFS Programme’s focus topics, under which FAO and UNEP are co-leading a joint core initiative entitled “[Delivering SDG Target 12.3 on food Loss and Waste Reduction](https://www.oneplanetnetwork.org/initiative/delivering-sdg-target-123-food-loss-and-waste-reduction-core)”. This core initiative consists of the following main activities: expansion of the [Community of Practice on food loss reduction](http://www.fao.org/food-loss-reduction/en/); development of a community of practice on food waste; and development of a methodology for measuring food waste in the context of SDG 12.3. In addition, this core initiative promotes outreach and awareness raising activities on food waste prevention. The core initiative will make available a globally accessible platform on food waste and loss for experts and help advance the methodology required for measuring the food waste element of SDG 12.3.

At national level in Switzerland, the government organized a series of stakeholder and research dialogues, with the aim to develop policy recommendations and to co-develop long-term solutions for the reduction of food waste. More information (in French) on this good practice example is available here: <http://2015.agrarbericht.ch/fr/lhomme/societe/dechets-alimentaires>

How could this Code of Conduct on FLW prevention and reduction be most useful for different stakeholders, especially at national and regional levels?

Providing targeted guiding principles and measures for specific stakeholders at each of the stages of the food value chain should substantially increase the usefulness of this CoC for different stakeholders. It will be important to include examples from different world regions and agro-ecological zones, as the cultural, climatic, economic and many other circumstances that influence levels of food loss and waste, may vary considerably and thus require different types of solutions.

To facilitate its uptake and implementation, the CoC should be aligned with other relevant international commitments, decisions and processes that require implementation at regional, national and local level, including among others: the 2030 Agenda; the United Nation’s 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP); the UNEA-4 resolution “Promoting sustainable practices and innovative solutions for curbing food loss and waste”; and the [CFS Voluntary Guidelines on Food Systems and Nutrition](http://www.fao.org/cfs/home/activities/nutrition/en/) that are currently being developed.

In the context of the above, we would like to suggest to add references to the [Ministerial Declaration of the 2018 High-level Political Forum on Sustainable Development](https://www.un.org/ga/search/view_doc.asp?symbol=E/HLS/2018/1&Lang=E) (see para 26 on page 7, “We call upon all stakeholders to adopt a sustainable food systems approach and to develop effective strategies and innovations to reduce food losses and waste.”), the [10YFP](https://www.oneplanetnetwork.org/) and the UNEA-4 resolution in paragraph 2 on page 1 of the draft annotated outline, and to add a reference to the process for the development of the CFS Voluntary Guidelines on Food Systems and Nutrition in paragraph 5 on page 1 (1.3.) of the draft annotated agenda.

## A C Baker, The Vegan Society, United Kingdom

Good evening,

I am delighted to contribute our feedback, on behalf of The Vegan Society.

Development of a Code of Conduct on Food Loss and Food Waste Prevention

The world is ALREADY producing enough food for 10 billion people. Some people are going hungry because other people are actively preventing the food from reaching everyone who needs it. Some of the hungriest people are small food producers, who are forced to 'bake the loaf of bread to get the money to buy one slice."

## Dieudonné Ouedraogo, Direction de la Protection des Végétaux et du Conditionnement, Burkina Faso

Original contribution in French

1) Par [rapport au projet](http://www.fao.org/fsnforum/sites/default/files/files/159_Food_Loss_Waste/DraftAnnotatedOutline_CoC_FLW_FR.docx) et à la structure proposés pour le CdC:

a) Le projet de CdC proposé traite-t-il les questions de manière exhaustive et globale?

Non.

Le projet de CdC doit non seulement se préoccuper de la prévention mais aussi tenir compte de la gestion des pertes et gaspillage alimentaires.

Propose le titre suivant :

Élaboration d’un Code conduite sur la prévention et la gestion des pertes et du gaspillage alimentaires

b) Y a-t-il des questions et des aspects particuliers importants qui, selon vous, ne sont pas abordés dans la structure proposée?

OUI

A l’échelle d’un pays où se situe le point d’entrée ?. Qui est le Chef de file ?

c) La structure actuelle présente-t-elle des inconvénients ou des lacunes?

OUI

D’abord faire la part entre pertes et gaspillage alimentaire.

La perte peut souvent être admise pour des raisons culturelles et traditionnelles

Les principes directeurs généraux qui sont importants pour la section 2.1 sont les suivants :

Principe d’harmonisation : rapprochement des législations des Etats en matière de prévention et de gestion des pertes et gaspillage alimentaires ;

Principe de libre adhésion :

Principe de reconnaissance mutuelle et d’équivalence :

Principe de reconnaissance des normes internationales

Les principes directeurs et les pratiques spécifiques qui sont importants pour les sections .2.1 (a, b et c), 2.2.2 et 2.2.3 sont les suivants :

* évaluation des pertes et gaspillages alimentaires par chaque pays (situation de référence mondiale, régionale et nationale) ;
* élaboration de politiques et stratégies ;
* proposition et mise en œuvre des technologies éprouvées pour la réduction des pertes et gaspillages alimentaires ;
* mise à échelle des technologies éprouvées ;
* intégration dans les curricula de formation.

English translation

1) In relation to the proposed project and structure for the CdC:

(a) Does the proposed draft CdC address the issues in a comprehensive and holistic manner?

The answer is NO.

The CoC project must not only focus on prevention but it must also take into account the management of food loss and waste.

Development of a Code of Conduct on the Prevention and Management of Food Loss and Waste

(b) Are there any important specific issues and aspects that you feel are not addressed in the proposed structure?

The answer is YES

On a national scale where is the entry point located? Who is the leading player?

(c) Does the current structure have any disadvantages or gaps?

The answer is YES

First of all, we must distinguish between losses and food waste.

The loss can often be admitted for cultural and traditional reasons

The general guidelines relevant to section 2.1 are as follows:

Principle of harmonization: alignment of national legislation on the prevention and management of food losses and waste;

Principle of free adherence:

Principle of mutual recognition and equivalence:

Principle of acknowledgement of international standards

The specific guidelines and practices relevant to sections .2.1 (a, b and c), 2.2.2 and 2.2.3 are as follows:

* assessment of food losses and waste by each country (global, regional and national baseline situation);
* policy and strategy development;
* proposition and implementation of proven technologies to reduce food losses and waste;
* scaling up of proven technologies;
* mainstreaming in training curricula.

## Raquel Diaz, Ministry of Agriculture, Fisheries and Food, Spain

**COMENTARIOS DE ESPAÑA AL ANTEPROYECTO ANOTADO DEL CÓDIGO DE CONDUCTA SOBRE LA REDUCCIÓN DE LAS PÉRDIDAS Y DESPERDICIO DE ALIMENTOS**

**En relación con el proyecto y estructura propuestos para el CdC.**

**¿Aborda el proyecto propuesto del CdC las cuestiones pertinentes de forma detallada y completa?**

El proyecto en general tiene una estructura coherente y correcta, en la que se puede incluir mucho contenido. No obstante, sugerimos que, al inicio de cada uno de los apartados destinados a eslabones concretos en los apartados 2.2.1 (a), (b) y (c) se incluya un apartado con información sobre las principales causas del desperdicio y las pérdidas de alimentos para ese eslabón de la cadena de suministro, así como el detalle de los impactos en la sostenibilidad a los tres niveles (social, económico y medioambiental) para que los interesados tengan un primer acercamiento a prácticas que pueden estar causando este problema. De ese modo en el apartado siguiente ya se puede entrar a hacer recomendaciones.

**¿Tiene la estructura actual alguna desventaja o laguna?**

En nuestra opinión sería más interesante que se separasen los eslabones de la restauración y del consumidor, puesto que las prácticas de ambos son diferentes, y las recomendaciones y buenas prácticas también han de ser distintas.

Además, en el apartado 2.2 se incluyen los usos industriales al mismo nivel que la alimentación animal. Habría que distinguir entre usos industriales para alimentación humana (por ejemplo la transformación de excedentes en otros productos de consumo como zumos, salsas, mermeladas, etc.) de la transformación en usos técnicos (como colorantes, colas y pegamentos, etc.). En ese caso, la transformación en otros productos alimentarios estaría en el primer eslabón como “reutilización para consumo humano”.

En esta línea, en la pirámide de usos se indica uso de “desechos” en alimentación animal. Insistimos en la necesidad de definir claramente “desperdicio”, “pérdida”, “residuo o desecho”, para que no haya confusión, teniendo en cuenta la traducción del inglés a otros idiomas.

**En lo que respecta al contenido de las diferentes secciones del CdC:**

**¿Qué principios rectores generales son importantes para la sección 2.1?**

Podría hacerse más referencias a la sostenibilidad económica en el texto, puesto que se menciona en el primer punto del apartado 2.1 pero no vuelve a aparecer. Esta puede ser una motivación muy potente.

Quizá debería incluirse la mención a que la reducción del desperdicio es algo fundamental para la supervivencia de las sociedades, y no sólo algo que podemos hacer de manera voluntaria.

Se podría incluir un punto de “Desarrollo (por parte de la Administración Pública pertinente) de un documento público (estrategia, programa o texto legislativo, entre otros)” en el que se indiquen las acciones a desarrollar. Así como la necesidad de hacer un seguimiento del desarrollo de la aplicación de ese documento.

Se podrían especificar los aspectos que se van a tener en cuenta a la hora de analizar el efecto de la PDA en materia de sostenibilidad (social, económico y medioambiental), así como los recursos naturales que se van a tener en cuenta en las evaluaciones de impacto.

**¿Qué principios rectores y prácticas específicas considera importantes para las secciones 2.2.1 (a, b y c), 2.2.2 y 2.2.3?**

En el apartado 2.2.1 (a) se podría hacer referencia a la adaptación a las condiciones edafoclimáticas de la zona de producción, así como a las mejores técnicas disponibles de cultivo, como buenas prácticas para optimizar el uso de los recursos.

Se podrían también incluir, en las prácticas de las asociaciones industriales, el facilitar la aplicación de buenas prácticas a los socios procesadores de pequeño tamaño.

En el caso de la distribución, los actores de la cadena deberían comprometerse a realizar buenas prácticas en las relaciones con sus proveedores y clientes, evitando las prácticas desleales.

Además, se podría incluir, como recomendación para los Estados y en todos los eslabones, el facilitar la donación de alimentos. Y en el caso de los operadores, se podría incluir la recomendación de tener acuerdos con entidades de redistribución y organizaciones benéficas para dar salida a los excedentes.

En el apartado 2.2.1(b) se podría cambiar el término “modificar las normas” por “revisar las normas”, puesto que puede que las normas sean correctas y no necesiten ser modificadas.

Se podrían incluir las siguientes recomendaciones para la distribución:

Tener acuerdos con entidades de redistribución y organizaciones benéficas para dar salida a los excedentes y a los productos próximos a la fecha de consumo preferente o de caducidad.

Facilitar la venta de productos “feos” o próximos a la fecha de consumo preferente o de caducidad a precios diferenciados.

Implantar buenas prácticas y formación a los trabajadores para garantizar la mayor vida útil de los productos.

Formar a sus trabajadores para que puedan sensibilizar a los consumidores-clientes sobre las pérdidas y desperdicio de alimentos, dando opciones y consejos para su reducción.

Las asociaciones empresariales podrían apoyar en la diseminación e implantación de buenas prácticas en empresas pequeñas.

Como recomendaciones a la restauración, se podrían incluir el sensibilizar a los consumidores, facilitar a los consumidores el adecuar las raciones al apetito y facilitar que se lleven las sobras a casa, así como tener acuerdos con entidades de redistribución y organizaciones benéficas para dar salida a los excedentes.

En el apartado 2.2.1(b) se podría incluir la importancia del equilibrio nutricional de los alimentos redistribuidos en el caso de dietas a personas desfavorecidas.

**Teniendo en cuenta la necesidad de fomentar la coherencia normativa en materia de PDA, ¿qué cuestiones transversales mencionadas en la sección 2.2.4 son relevantes para la PDA?**

Se consideran adecuadas las que se identifican en el documento.

**¿Cómo podría ser este Código de Conducta sobre la prevención y reducción de la PDA más útil para las diferentes partes interesadas, especialmente a nivel nacional y regional?**

En nuestra opinión, el documento podría mejorar con las siguientes aportaciones:

Sería interesante que en el apartado 1.2 Justificación, se definiese claramente los términos pérdida de alimentos, desperdicio de alimentos y residuos de alimentos, para establecer un marco claro que permita la comparación con sistemas de medición diversos. De ser posible, ser tendrían que utilizar términos diferentes para estos conceptos en todos los idiomas, para evitar confusión.

En el apartado 1.5 sería interesante que se incluyese:

Cómo se va a hacer el seguimiento de la aplicación y ejecución del CdC (entendemos que mediante el uso de indicadores).

Cómo se va a publicar la información sobre los avances realizados para que el público en general también tenga conocimiento.

Madrid, 16 de agosto de 2019

## Angela Frigo, European Food Banks Federation, Belgium

Dear FAO’s Food Systems Programme,

thank you for sharing the Draft Outline for the CoC on Food Loss and Waste Prevention and giving us the opportunity to contribute to this on-going work.

We would like to share three main points:

1) First of all, we believe that it is essential to structure the document with a clear distrinction between food loss and food waste.

2) Then it is crucial to consider that et European level there are many initiatives on Food Loss and Waste Prevention that should be taken into consideration in order to avoid any duplication and building on exisiting experience and expertise (e.g. EU Platform on Food Losses and Waste, EU guidelines on food donation, European and national legislation, etc.). Moreover the EU Platform on Food Losses and Waste coordinated by the DG Health and Food Safety, European Commission is drafting key reccommendation for future actions preventing food losses and waste.

3) Finally, we agree with the approach to follow the food and drink waste hierarchy, however it is important to consider that this is a document providing general principles and practices. If the document goes into too much detail it may lose its added value and overall view. Moreover, food redistribution should be considered as an activity which takes place whithin the food supply chain (agricultural, processing, distribution, and food service sectors) and not as a separate initiative.

We are at your disposal for any furthe rinformation.

Best regards,

Angela Frigo

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Patrick Mink

We are grateful to receive a very detailed contribution by theS wiss Federal Office for Agriculture (FOAG) to the CoC. We agree that the CoC should be designed as a tool to support countries and other stakeholders to achieve SDG 12.3 and that the guiding principles should be based on and in line with previous work undertaken by FAO, UNEP and other relevant actors, including the guidance on Prevention and reduction of food and drink waste in businesses and) and the HLPE report Food losses and waste in the context of sustainable food systems. It will also align with the 2030 Agenda; the United Nation’s 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP); the UNEA-4 resolution “Promoting sustainable practices and innovative solutions for curbing food loss and waste”; and the CFS Voluntary Guidelines on Food Systems and Nutrition that are currently being developed. The CoC should represent a practical and comprehensive guidance to prevent, reduce and manage FLW across the food supply chain.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Felicitas Schneider

Thank you for providing you interesting inputs! FLW prevention at source will be highlighted as the most preferable option, although as you mention it will not be possible to reduce FLW to zero. Thanks for raising the point to not rank composting and anaerobic digestion against each other – as you write, the most appropriate process for a specific situation/region depends e.g. on the characteristics of the FLW stream and the available infrastructure. Data availability and reliability remain central to reduce FLW.

@ A C Baker

Thank you for mentioning important topics such as farming animals, food security and sovereignty and the power to make better food choices, with less waste in the household. We agree that empowering small food producers might be one fo the key aspects in reducing food losses.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Raquel Diaz

We are grateful to receive a very detailed contribution by the Spanish Ministry of Agriculture, Fisheries and Food. The causes of FLW are central in order to understand the FLW phenomenon and will therefore be included in the CoC. We will separate food waste at consumers’ level and at catering level as he causes and solutions are different. We will also differentiate between industrial uses and animal feed. Your suggestion to include a section on “Development of the CoC” (for Public Administration) is well received and will be kept in high consideration.

@ Dieudonné OUEDRAOGO

Thank you for your very interesting contribution. FLW management will be included in the CoC, although the main focus of the document will be on prevention and reduction and will follow a food waste hierarchy to prioritize actions with regards to FLW.

Thanks for mentioning specific and relevant principles (such as evaluation of national situation, elaboration of strategies, importance of technologies and education) which will be highly kept into consideration when formulating the CoC.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Angela Frigo

Thank you very much for your contribution.

Yes, the idea is to distinguish between food loss and waste and provide examples for FLW prevention and reduction at each step of the food supply chain.

Thank you for mentioning the current ongoing initiative at EU level and especially the EU Platform on Food Losses and Waste coordinated by the DG Health and Food Safety, which is drafting key recommendations for future actions to prevent food losses and waste.

Food redistribution will be considered as an activity which takes place within and along the food supply chain. As long as food is edible and safe it should be directed to human consumption.

## Cindy Hidalgo Víquez, Universidad de Costa Rica, Costa Rica

Excelente este tipo de iniciativas. Desde mi experiencia en la parte de consumo y PDA, con respecto a las observaciones que hemos realizado cuando medimos desperdicio de alimentos en servicios de alimentación me parece importante que se evidencie en el documento la necesidad de ligar la sesibilización por parte de servicios de alimentación y sus usuarios a tamaños de porción más adecuados a las necesidades nutricionales.

En muchos casos vemos que se sirven porciones muy grandes de algunos alimentos (en Costa Rica lo hemos visto con arroz y frijloles), entonces es adapatar las porciones a las necesidades nutricionales de las personas, quizá esto se puede manejar desde guías alimentarias, sensibilizando sobre la necesidad de pedir las porciones que requiere. En algunos casos he escuchado expreciones relacionadas con disminución de PDA indicando que "hay que comerse lo que sirve", pero el enfoque desde mi perspectiva debe quedar claro en cuanto a que no es comerse lo que se sirve, es servirse las porciones que requiere.

Saludos

## Brighton Mvumi, University of Zimbabwe, Zimbabwe

Some of the aspects might have been captured somewhere in the framework but I think they need to be more pronounced or visible under the sections indicated below.

Under Section 2.2.2, consider adding the following aspects:

Use insects and other organsims to decompose food waste to generate both organic fertilisers and livestock feed.

Safety of food waste for repurposing eg livestock feed or for decomposition by insects and other organisms

Under Section 2.2.4, consider adding the following aspects:

Institutional arrangement and policies

Scaling-up of FLW reduction innovations

Viability of FLW reduction innovations

Standardisation of Procedures

Information and experience sharing mechanisms

Stakeholder engagement/participation

Standardisation of Procedures

ISO certification

Capacity Development at various levels

Addressing Climate Change issues in FLW prevention and reduction

## María Fernanda Jiménez Morales, Tecnológico de Costa Rica, Costa Rica

**+ En relación con el proyecto y estructura propuestos para el CdC**

Considero que el proyecto en cuestiones pertinentes sobre la temática que engloba las el CdC sobre la reducción de la pérdida y el desperdicio de alimentos. Personalmente daría principal énfasis a la temática de recuperación y manejo responsable de los productos aún consumibles. Los temas de valorización del residuo (cuando ya no son de consumo humanos) es importante mencionarlos como solución a la disposición final de algo que ya no se pudo aprovechar como alimento, pero creo que en esta temática hay bastantes organizaciones trabajando, e incluso normativas y reglamentos que ya los solicitan como obligación de una operación, pero el tema de consumo responsables y manejo de alimentos que aún pueden ser consumidos es el problema que se debe atacar concretamente y la conducta en la que nos debemos enfocar, pues es la que desencadena una serie de problemas que se pueden ver impactados positivamente, si logramos hacer modificaciones de conducta global en función al trato adecuado de los alimentos.

**+ En lo que respecta al contenido de las diferentes secciones del CdC**

Con respecto al 2.1 no tengo comentarios. En el punto 2.2.3 específicamente haría mención a una disposición final o DEPÓSITO EN VERTEDORES, sin mencionar la incineración, pues a nivel de Latinoamérica en algunos países, esto ha sido un tema de discusión y existen posiciones radicales sobre su aceptación y por un tecnicismo de esos sería muy penoso que no tuviera aceptación.

Sobre cuestiones transversales mencionadas en la sección 2.2.4, que son relevantes para la PDA, creo que el empoderamiento de las naciones en la temática, es algo importante de contemplar, con el fin de generar soluciones que sean ajustables a las realidades de cada zona, y no sean dependientes de las soluciones estandarizadas, pues más adelante amparados en ausencia de fondos capacidades o conocimientos se podría aducir no seguir con la iniciativa , pero si están empoderados, solucionan el problema desde sus capacidades y su realidad generando experiencias exitosas.

**+Ejemplos concretos de políticas, intervenciones, iniciativas, alianzas y acuerdos institucionales que deberían considerarse como las mejores prácticas en materia de prevención y reducción de la PDA y recuperación, reutilización y reciclado de alimentos**

Red PDA – Costa Rica, las iniciativas de plato lleno (caso Costa Rica), bandera azul eventos especiales estrella morada (reducción PDA), valor agregado a remanentes de producto (Ingeniería en Agronegocios TEC- CR), Política Nacional de Producción y Consumo Sostenibles Costa Rica, podrían ser ejemplos de apoyo y sensibilización en la reducción de PDA.

**+Cómo podría ser este Código de Conducta sobre la prevención y reducción de la PDA más útil para las diferentes partes interesadas, especialmente a nivel nacional y regional**

En este caso me gustaría referirme específicamente al sector privado, la industria alimentaria para ser exacto. Considero que es uno de los sectores de mayor importancia en esta temática, por lo que considero que estar cerca de ellos es clave. Esto se puede realizar mediante consultas abiertas o re direccionadas a actores clave (cámaras, asociaciones o agremiaciones). Además, considero que el código NO debe de ser de obligación (jurídica) ni una obligación genérica, dirigida a los operadores del sector agroalimentario (sector privado); ya que este sector en su operación cumple con mucha reglamentación y normativa y el agregar una más puede generar resistencia, y con el tiempo descuido. En cambio, si se trabaja en cuestiones más motivadoras sensibilizas y de común acuerdo, con algún reconocimiento de importancia (no tiene que ser económico), será más sencillo que estas acciones se adopten y sean sostenibles en el tiempo, pues lo que buscamos es un cambio sostenible y la modificación de una conducta, y no el castigo. A nivel de Latinoamérica, el problema no es la capacidad de generar obligaciones jurídicas, sino ejecutarlas.

## Laura Brenes-Peralta, TEC / CR Food Loss and Waste Network, Costa Rica

1) The presented outline would suggest the achievement of a CoC that entails most relevant aspects to tackle FLW, in my opinion it is comprehensive and exhaustive. However, following the LAC strategy, I believe aspects regarding governance (not only legal frameworks) and awareness can still be a bit further developed. Of course, one would understand that there are such particularities in terms of governments, governance and policy frameworks that this two aspects cannot be standardized. Still, emphasizing on the fact that FLW is a multisectoral/multidisciplinary/ multistakeholder problem, the CoC can also strengthen the need to approach this matter in the same multistakeholder way through prevention, assertive communication and commitment. Alliances are most needed to address FLW. Examples of some possible aspects to be added are ahead:

1.1-include on-going strategies as an example in local and regional levels to get the audience motivated or illustrated through practical cases, it could be in an annex section and not exactly art of the code

1.2-include food security definition, as well as many others you are already probably considering (edible, non-edible, different definitions for FLW, nutritional losses, etc).

1.3-academia and research centres are missing from this targeted audience

1.4-try to include also a focus on knowledge, practices, methods and enabling platforms to effectively reduce FLW, and not only legal frameworks which has proved resistance in some sectors.

1.5-illustrating possible road-maps to follow in order to implement the Code and the adoption in different countries, regions or sectors can help.

2) In regards to the content:

a) Section 2.1 includes very relevant aspects; however it can also include the perspective of responsibility from the private sector, consumers and active society, so that actions do not rely only on the institutional commitment.

b) In my opinion, all aspects presented for 2.2 are relevant and required,. This section has a logical distribution according to the hierarchy of FLW management: prevention, reduction, repurposing and recycling, and incineration-landfilling. Some aspects seem to have a strong focus on regulation or legal backgrounds, which are indeed needed, but can also be addressed through economic and efficiency scopes to draw attention and positive perception from the private sector, farmers and agro-industries of all sizes.

2.2.1(c) can still include a nutritional-sensitive approach, besides the administrative and hygienic aspects.

2.2.4 Cross-cutting issues can be improved by specific tools and methods like Life Cycle Assessment (explicitly), and Lean Manufacturing as already adopted mechanisms by the industry, which may have not been directly applied to FLW but have enormous potential for impacts, hotspots and trade-off understanding, as well as improving process efficiency. Communication and awareness can have a particular section, as well as a review on quantification methods and index development, linking it to already existing guidelines and publications.

3) Examples:

a) The Costa Rican FLW Network would be happy to share some of our experiences (mostly good but our constraints as well), where we have been working in a voluntary platform including institutional, private, academic and civil actors. This has allowed to understand part of the needs, concerns and opinions from actors within the food system. We have come to the conclusion that data, knowledge, and research are very important to provide support to future actions, while commitment and awareness is the starting point to get sector “on board” whether they can act from policy making, commercial or productive activities, or more social-oriented approaches. Financial support for those in the productive side and the articulation of strategies has been a constant challenge, and the respect for each institutional role together with the will, commitment and innovative ways to act have been key in moving forward. While we develop our activities we have become aware of national, and regional actions which can fit in this “good practices” category, such as:

b) Integrated Waste Management (a national plan and law was established in Costa Rica since 2010, aiming at setting the extended responsibility from the generator, as well as enabling the reduction, separation and valorization from the source before any other waste management considerations, which is consistent with the FLW hierarchy. We are currently evaluating from the academic perspective, the different impacts of FW valorization options to support future policies or projects).

c) Policies: National Plan for Decarbonization, Sustainable production and consumption National Policy, SAN-CELAC National Plan (the creation of both policies were conceived within a participatory approach. The second was adopted in the country -as well as most LAC countries after the CELAC committed to move forward into the achievement of the SDGs, including a specific target on FLW. Being covered by a national plan or policy, all institutions related to food production, processing, and distribution, environment, economy and health would have a link to the topic at some point).

d) Food redistribution and productive actions (we have met national and regional actors directly working on redistribution of food surplus with a strong emphasis on nutrition, food safety and education, one example is Plato Lleno. Others are tackling directly FLW in their operations through measurement, innovation, marketing, examples are taken from Organic Farm La Pavilla, Unilever, hotels and restaurants within the National Sustainable and Healthy Gastronomy Plan.)

e) Academic and sector engagement (different educational networks and chambers related to the touristic and gastronomic sectors have adopted activities in FLW, by presenting the topic in their seminars or national congresses, establishing educational or research FLW activities, embracing awards like Bandera Azul Ecológica, and considering a joint creation of guidelines to quantify and prevent FLW).

4) The dissemination of the code at all its stages (consultation, validation, implementation) to different sector would be a good starting point to make it useful, since different points of view will be included and the diversity of factors and solutions can be represented in the Code up to some level. This will allow the empowerment of the actors. A box of good practices and practical examples on each section, or a parallel publication can help the target audience to picture the execution of the CoC on each level.

kindest regards,

Laura

## Silvia Gaiani, FAO, Italy and co-facilitator

@ Laura Brenes-Peralta

Dear Laura, Many thanks for your additional contribution. The CoC will use a multidisciplinary approach to FLW and will therefore focus on a multi-stakeholder way through prevention, assertive communication and commitment.

We agree that alliances are fundamental to address FLW and that the CoC should include best practices and practical cases and support Member Countries in developing road-maps to reduce, prevent and manage FLW. Thank you for mentioning the interesting case of Costa Rica and of the Costa Rican FLW Network. We would be glad if you could share experiences with us.

@ Brighton Mvumi

Thank you for your contribution and for mentioning organic fertilisers and livestock feed.

All the aspects you refer to (institutional arrangement and policies, innovations, standardisation of procedures, information and experience sharing mechanisms, etc…) will be kept in high consideration.

## Silvia Gaiani, FAO, Italy and co-facilitator

@ María Fernanda Jiménez Morales

Thank you very much for your contribution. The CoC will definitely not be a binding instrument, but it will simply provide guidance and practical hints for FLW prevention, reduction and management. The aim is to provide a useful tool for governments and food supply chain actors. We will try to provide not only standardized solutions, but also solutions which could be adapted locally.

Food recovery and responsible management of products that are still edible will be included in the CoC. The empowerment of nations in the subject is something important to contemplate, in order to generate solutions that are adjustable to the realities of each area. , and are not dependent on standardized solutions,

@ Cindy Hidalgo Víquez

Thank you for your contribution. Portions and nutritional aspects do play an important role that should be kept into consideration when referring to food waste.

## Silvia Gaiani, FAO, Italy and co-facilitator

Thank you very much to everyone who contributed to the e-consultation regarding the development of the CoC on FLW prevention and reduction.

All the comments you provided represent valuable inputs and will be highly kept into consideration.