#### Introduction:

According to the Food and Agriculture Organization of the United Nations (2009a, 2009b) the world produces more than 1 1/2 times enough food to feed everyone on the planet. That's already enough to feed 10 billion people, the world's 2050 projected population peak. Therefore there is already enough food on the planet, but the big question is why is there such a thing as global hunger. Global hunger is a complex topic; it doesn't just refer to the lack of food, it is defined as a short-term physical discomfort as a result of chronic food shortage, or in severe cases, a life-threatening lack of food. (National Research Council, 2006)

**World hunger** refers to hunger aggregated to the global level. Related terms include food insecurity and malnutrition. Food insecurity refers to limited or unreliable access to foods that are safe and nutritionally adequate (National Research Council, 2006). Malnutrition is a condition resulting from insufficient intake of biologically necessary nutrients (National Research Council, 2006). Although malnutrition includes both overnutrition and undernutrition, the focus for global hunger is undernutrition.

For this challenge we will be focusing on the topic of reducing food waste and ensuring people are properly nutrition, that before we try a go explore life on other planets (like mars) and forgetting about the one we already have (earth), same thing with food, before we try and create more food, lets see whats happening with the food we have currently:

#### What is food waste

**Food waste** refers to **food** appropriate for human consumption being discarded, whether or not after it is kept beyond its expiry date or left to spoil. Often this is because **food** has spoiled but it **can** be for other reasons such as oversupply due to markets, or individual consumer shopping/eating habits. The causes of food waste or loss are numerous and occur throughout the food system, during production, processing ,and distribution.

### What are the causes of food waste:

It's kind of a funny thing in a sad way because the agricultural industry is put under a lot of pressure to produce more food where ½ of the food that is produced ends up as waste, in terms of statistics this is 1.6 billion tons a year. There are various causes to food waste, but the main causes are lack of appropriate planning on the consumer's part, many people have rather large fridges and compare to a fridge that existed 20 years ago to the fridges that exist today have doubled in size. People now suffer from the empathy syndrome that they can not stand it that there is open spaces in their fridge.





# A fridge today

a fridge in the 2000

Many people stock up their fridges because they plan on using it or say you never know, therefore many of these food items stay until there is an off smell.

- -Purchasing and preparation of too much food- food is also wasted when one purchases or prepares too much food than needed. Alternatively, the partially used food is at times put at the back of the fridge and is never reused.
- -Consumer behaviour -Different customers have different preferences and this highly influences consumer purchasing behavior on food items. Particularly, the consumer behavior on focus here is the tendency of having a keen insight for good judgment which results in those who only prefer unblemished vegetables and fruits, and the restrictive must display for shelf-life dates. We often say we should be all inclusive and not judge people, but when we go to supermarkets we judge the produce that we buy because it doesn't look perfect.
- Mangering, financial, and technical constraints: This is mainly a challenge contributing to food wastage in developing countries. The wastage takes place because of the challenges to do with a lack of proper management, inadequate finances, and technical difficulties in the lines of harvesting methods, storage, and cooling problems in adverse weather conditions, processing, packaging, infrastructure, and marketing systems.

What are the effect of food waste

Food wastage impacts on biodiversity loss at a global level. In order to maximize agricultural yields, farmers have increasingly invaded wild areas in search of more fertile lands which has led to the loss of biodiversity. Agricultural practices such as mono-cropping have also compounded biodiversity loss. Wastage of ½ of the world's fertile land areas the world is wasting 30 percent of the world's fertile land which could be used for other meaningful purposes such as environmental research. Blue water footprint: the volume of water used in agricultural food production is immense. Therefore, if 30 percent of all the food produced went to waste, then it means that more than 30 percent of freshwater used in the production and processing of food also goes to waste. This contributes to blue water footprint which refers to the amount of consumed surface and groundwater resources that goes to waste. There is also an increased carbon footprint and the acceleration of climate change. The amount of wasted foods is equal to 3.3 billion tons of greenhouse gas emissions and is the biggest emitter of greenhouse gases. The primary uses of fossil fuels in food production and lastly economic challenges.

What is that situation on a continent bases and in specific centuries, in terms of global hunger and food waste and their food policies:

#### -The United states:

Boys, Kathryn A., and Bradley J. Rickard. "Examining Food Loss and Food Waste in the United States."

"Food that is lost before it reaches the consumer, and food that is wasted by
the consumers, has been estimated to account for as much as 40% of the
total food produced in the United States. This represents losses of important
resources - including water, chemical inputs, and labor - as well as unused
nutrients for consumers"
"The behavior and incentives of a variety of food system stakeholders
including producers, market intermediaries (including retailers), and
consumers are considered[there are a] upstream issues of food loss
proceeding through downstream topics such as household decisions
concerning when to discard food."
"Plate waste for all vegetables and all subgroups of vegetables exceeded
35%, and in many cases was greater than 60%. Waste levels across
vegetable subgroups varied widely, with the least waste associated with

potatoes and beans and the most waste with dark green and red-orange vegetables"

Evans, Alexandra I., and Robin M. Nagele. "A LOT TO DIGEST: ADVANCING FOOD WASTE POLICY IN THE UNITED STATES."

	"An estimated 31% of the food grown, produced, and transported in the United States is wasted annually. This waste translates into 96 billion pounds of food and \$165 billion in lost economic value"
	"Wasted food represents nearly 1/3 of all food produced in the United States each year"
	"In many areas, farmers discard edible fruits and vegetables due to aesthetic imperfections, overproduction, or lack of sufficient cold storage"
	"Each day, edible food is discarded at all stages in the long supply chain stretching from farms to individual kitchens throughout the country. At the farm stage, overproduction damage from weather, insects and animals, and upgrading from aesthetic and quality standards all significantly contribute to food loss. Then, before the data is purchased, additional losses occur due to improper handling, quality deterioration during transport, and inadequate infrastructure for cooling and storage"
	"Within the United States, food insecurity afflicts many as in 2010, almost forty-nine million Americans lived in food-insecure households. Hunger and food insecurity exist in the United States not because our nation lacks an adequate food supply but because systemic inefficiencies
	"An estimate of 25% of all freshwater use in the United States and roughly 300 million barrels of oil are used annually to produce food that is eventually wasted.
Lane,	Sylvia. "The United States Food Policy."
	"Programs implementing U.S. food - assistance policy will currently lack support by many congressional representatives despite the fact that their curtailment will lead to there being more hungry children, more people going hungry among our elderly population and ultimately more debility and dependency among vulnerable groups in our population"
	"As it is, more than 1 in every 12 U.S. children under the age of twelve is hungry on a consistent basis"

## -North America:

"Environmental costs of food production include greenhouse gas emission
from livestock production, air pollution from the operation of farm machinery
and trucks that transport food, water pollution and damage to marine and freshwater fisheries from agricultural chemical run-off, soil erosion,
salinization, and depletion of nutrients arising from unsustainable production and irrigation practices"
"There is 168 million metric tonnes of Food Loss and Waste in North America
each year. Of that amount, Americans waste 415 kilograms per capita,
Canadians waste 396 kilograms per capita and Mexicans waste 249
kilograms per capita."
"67 million tonnes of FLW per year occurs at the consumer level, 51 million
tonnes occurs in the ICI levels and 49 million tonnes occurs at the pre-harvest
level."
"193 million tonnes of greenhouse gas emissions result from the lifecycle of
wasted food, from production to disposal."
"Among other wasted resources due to food waste are 6 billion cubic meters
of water, 22.1 million hectares of cropland production, 38.6 million cubic
meters of landfill space and \$278 billion in market value of annual food
production."

### -South America:

This is one of the great remaining challenges to achieve full food security, a challenge against which Latin America and the Caribbean is no stranger: the FAO estimates that 6% of global food losses occur in Latin America and the Caribbean and the region lost each year and / or wasted about 15% of their food available, even though 47 million people still suffer hunger. Losses and waste impact the sustainability of food systems, reduce local and global food availability, fewer profits for producers and raise prices for consumers. They also have a negative effect on the environment due to unsustainable use of natural resources. Considering the above, addressing this problem is essential for progress in the fight against hunger and must become a priority for governments in Latin America and the Caribbean.

With foods that are lost in the region only in terms of retailing, i.e. supermarkets, street markets, shops and other stalls retail- more than 30 million people could be fed, that is 64 % of those suffering from hunger in the region.

The three R's can help solve this problem:

Reduce: Prevention is always better than a cure. In food terms, this means preventing food from ending up in the bin. Better aligning production chains with real demand or making them more efficient can help to prevent these losses and reduce their cost on the producer. Across the world innovative initiatives are already being put into practice to recoup these foodstuffs and bring them back into the consumption chain – for example campaigns promoting the purchase of "ugly" fruit in France or machines which separate produce rejected by the commercial sector and turn them into animal or pet food. In the consumption stage, giving more incentives to hotels, restaurants and businesses to donate unsold food to food banks and soup kitchens could reduce food which is suitable for human consumption from going to waste as well as having a massive social impact.

Reuse: Even though an item may not be apt for human consumption doesn't mean that it is worthless. Such foodstuffs can be converted into feed for animals such as cattle and pigs. Recycle: Finally, if it can't be reduced or recycled, produce still has an industrial value in terms of the potential for biogas or compost upon decomposition. And separating organic waste at home, opens up the possibility of converting vegetables into compost for municipal or personal use.

## -Germany:

In Germany, there is no precise information on how many people suffer from hunger. The "hunger map 2020", made by the World Food Programme, shows that less than 2.5% of the population is hungry. According to the food banks, 1.5 million people use the food aids every week. The elderly and single women are particularly affected. Chronic hunger is very rare in Germany. Normally, it is malnutrition or an unbalanced diet. This is mainly due to social assistance, which is not enough for a healthy diet for a family with children, but it avoids starving. The Federal Government wants to halve per capita food waste by 2030. If only private households halve their food waste, 6 million tons of CO2 could be saved. Germany is currently providing around 16 million euros as part of research programmes aimed at reducing food waste. On the internet plattform www.lebensmittelwertschätzung.de, the Federal Government publishes initiatives against food waste. Numerous associations and organizations contribute to the fact that no longer marketable foods that are still suitable for consumption are used.

### Bosnia and Herzegovina

BANJALUKA, SARAJEVO – About 500 tons of food ends up in landfills in BiH every day due to expired shelf life or surplus in catering facilities and bakeries, said the Ombudsman for Consumer Protection in BiH.

"Large amounts of food end up in landfills in cities across BiH. This bad phenomenon is worrying, because UNICEF data indicate that every fifth inhabitant of BiH lives below the poverty line," the Ombudsman said.

In the Cantonal company KJKP "Rad" d.o.o. Sarajevo says that increasing quantities of discarded food can be seen at their landfill day by day, and that the number of users in public kitchens is growing.

"On average, we collect 600 tons of waste per day, and 12 to 15 percent is food scraps. Expired food is adequately destroyed. Since large quantities of food are discarded, our company is taking action to raise awareness about selective waste disposal and education of the population. ", they said in this utility company.

"About 500 tons of expired food products are destroyed annually," the company said. Citizens believe that in addition to raising awareness, it is necessary to pass certain laws that would permanently regulate this problem.

"I buy as much groceries as I need and in that way I take care to throw away as little food as possible. I think that all food that is close to the expiration date should be donated to the poor, and not wait for it to expire and be destroyed." says Sladjana P. From Banja Luka. "On the way from the place of production to the place of consumption, a lot of food spoils, which must be thrown away. The same is the case of illicit trade and import, due to lack of regulations, which is why proper food often ends up destroying it," said the BiH Ombudsman. .

The BiH Food Safety Agency points out that consumers can significantly influence the reduction of food waste, and that we should always try to buy food according to plan, and store it at appropriate temperatures in order to prolong its freshness and durability.

## -Europe:

The European Union is one of the strongest economic alliances in the world. But this also comes with a great responsibility for its citizens and the rest of the world. 15% of Europe's inhabitants live below the poverty line, which corresponds to 79 million people. 43 Mio people struggle to afford a decent meal. It can be assumed that the majority of the 79 Mio feed unbalanced and are therefore considered malnourished. In order to improve this situation in its own region and worldwide, it has set itself the goal of helping to combat global hunger. According to the EU, reducing food waste is one of the most effective ways of achieving this goal. The less food is wasted, the more efficiently land can be used. Currently, around 89 million tons of food per year

end up in the garbage throughout Europe. Each kilogram of produced food consumes 4.5 kg of CO2. The wasted food thus causes 170 million tons of CO2, which could be saved. The EU has developed guidelines to facilitate food donations. As a result, around 550,000 tons of food are distributed to 6.1 million people through food banks. However, this is only a fraction of the estimated amount of food that could be redistributed in order to avoid so food waste and to combat food poverty.

#### -India:

Frankly speaking, our food problem dates to the partition of Burma from India in April 1937 when India lost her best rice producing areas and had to import 15 to 20 lakh tons of rice from Burma. India faced its first serious food shortage in 1943, when millions of people perished in the Bengal famine.

This famine showed India's weakness in rice production. Separation of Burma forced India to import rice; the Partition in 1947 made India dependent on import of wheat. Rapid increase of population since 1920, the separation of Burma in 1937, the creation of Pakistan in 1947 and occasional crop failures due to failure of monsoons have been the basic causes for the origin of the food problem in India. During the first decade of planning food grains production in spite of some setbacks, had shown significant increase. Between 1950-50 and 1960-61 the production of food grains increased from 55mn. tonnes to 82mn. tonnes—the increase in production of food grain was over 50%.

During the same period, the population of India increased only by 22%. After 1960-61, the food production had gone from bad to worse. In the first place, the production of food grains was more or less constant, till it reached a record high of 89mn. tonnes in 1964-65. But in the last year of the Third Plan (i.e., 1965-66) production came down badly to 72 mn. tonnes. India went through severe famine conditions in Bihar and U.P.

India's food problem normally takes two aspects, i.e., shortfall in internal production and high prices of food grains. These two aspects are, in fact, inter-related. It is the internal shortage of production, combined with the increased demand for food, which leads to rise in prices of food grains.

### -Asia:

It's estimated that 959 million people in the Asia-Pacific region are experiencing moderate or severe food insecurity, with nearly one-third of them (327 million) in the severe food insecurity category; 80% of the severely food insecure are in South Asia.

The conditions of stunting, wasting and underweight that result from acute, recurrent and chronic undernutrition and the "hidden hunger" associated with vitamin and mineral deficiencies may seem unrelated to the rising incidence of overweight and obesity in low- and middle-income countries,\* but they stem from the same root causes: poverty, inequality and poor diets.

Nearly 80 million children in Asia under the age of 5 have faced hunger for so long that they are now stunted (low ratio of height to age), but at the same time, Asia is experiencing growing rates of obesity. Millions of children in Asia – especially those in large cities where economic growth is not distributed equally – are becoming overweight and obese because the food their families can afford lacks nutritional value. As a result, they eat a lot of processed foods full of fat, salt and sugar.

Despite the obesity crisis occurring in cities, extreme poverty in Asia is most prevalent in rural areas. In South Asia, more than four out of every five people who suffer from hunger live in rural communities, and the situation isn't much better in East Asia or the Pacific; 75% of the people in rural East Asia and the Pacific are poor and struggling to afford food.

Regardless of the setting, poverty and inequality are the main causes of hunger and all the forms of malnutrition across the Asia-Pacific region.

Inadequate sanitation infrastructure and poor hygiene practices, common elements of extreme poverty, are also prevalent across Asia, making existing hunger-related problems worse.

Despite the widespread problem of hunger around the world, particularly in Asia and Africa, the situation is not hopeless.

### -South Africa:

The period of September - December 2020, 9.34 million people in South Africa (16% of the population analysed) faced high levels of acute food insecurity and required urgent action to reduce food gaps and protect livelihoods. An estimated 27% of children under the age of 5 in South Africa are stunted. This means that they experienced a lack of nutrients in the womb that can result in lifelong challenges. However, hunger is only one measure of malnutrition. One might have food to eat, and therefore not be hungry, but the quality of that food may be poor. Meals composed primarily of processed carbohydrates are far less nutritious than those that include protein, vegetables and healthy fats. We know from research that inadequate diets like this lead to stunting as well as poor attention which impacts schooling. The aim of the Integrated Food Security Strategy is to attain universal physical, social and economic access to sufficient, safe and nutritious food by all South African at all times to meet their dietary and food preferences for an active and healthy life. The stated goal of the National Food and Nutrition Security Policy is to ensure the availability, accessibility and affordability of safe and nutritious food at national and household levels. It is stated in the policy that it builds on existing initiatives and systems, and puts in place mechanisms that ensure stricter alignment, better coordination, and stronger oversight. Moreover, the Policy seeks to ensure that our response to food and nutrition insecurity is ambitious, rigorous and dynamic. The Policy therefore provides a platform for various strategies which will include:Increased and better targeted public spending in social programmes which impact on food security. Efforts to increase food production and distribution, including increased access to production inputs for the emerging agricultural sector. Leveraging Government food procurement to support community-based food production initiatives and smallholders; and the strategic use of market interventions and trade measures which will promote food security.

#### Zimbabwe and Africa:

The aim of this research is to explore the problem of world hunger as a global condition with the sole purpose of providing a sustainable, long term solution. It will focus mainly on Zimbabwe specifically and Africa as a whole.

In politics, humanitarian aid and social sciences, hunger is defined as a condition in which a person cannot eat sufficient food to meet basic nutritional needs for a sustainable period. World hunger refers to hunger aggregated to the global level.

According to World Vision, Approximately 690 million people regularly go to bed hungry. This is a figure that continues to rise rapidly. It is estimated that 840 million people will be affected by the year 2030. The most areas affected by hunger are Sub- Saharan Africa with 22% to 29.4% also including the Caribbean with 16.6% people affected, North America and Europe having less than 2.5% rates of hunger.

Africa has 250 million people experiencing hunger which is 20% of the population. East Africa has 7 million people at risk of starvation. 33.8 million people are affected by food insecurity and 12.8 million are facing acute malnourishment. Zimbabwe now faces approximately 7.7 million people in the grip of hunger. Reasons leading to this phenomenon in Zimbabwe and Africa at large include climate change, food insecurity, poverty, poor investment in the agricultural sector, inelasticity of the food production sector, extreme weather and political instabilities. However the challenges of world hunger can be solved by increasing the investment in the agricultural sector, reduction in food waste, introducing sustainable foods, government intervention, economic growth and meal planning.

According to the WFP, extreme weather events are rapidly increasing hunger and malnourishment. More than two thirds of Zimbabweans are subsistence farmers who rely on a single increasingly unreliable rainy season to grow corn. Floods, droughts and other extreme weather conditions such as Cyclone Idai in Zimbabwe brought on by climate change can make it harder to produce food. As a result the price of food increases and access becomes more and more limited putting many at higher risk of hunger. Also widening our perspective, climate change as brought into light by the Intergovernmental Panel on Climate change (IPCC 2007), warming in Sub-Saharan Africa is expected to be greater than the global average and in parts of the region rainfall will decline. This only leads to decreasing crop yields and increasing population will put additional pressure on an already fragile food production system. That is why experts here predicted that Africa will be fulfilling only 15% of its food needs by 2050. Therefore Africa will be at the brink of starvation.

Poverty is a cause of hunger in Africa as well as an effect. Nearly a third of individuals living in Sub-Saharan Africa are undernourished and 41% of people in that same area live on less than U.S. \$1 daily. According to the UN, poverty in Zimbabwe has reached unprecedented levels with more than 70% of Zimbabwean children in rural areas living in poverty. The report compiled by UNICEF and the Zimbabwe National Statistics Agency shows high levels of privation in rural areas. Urban areas also have high poverty levels. The World Bank estimated that between the years 2018 and 2019 there was an increase from 4.7 - 5.7 million people in the grip of poverty. In a country where poverty and inflation are a common sight, the

availability of food is also limited resulting in basic food necessities being very scarce for most of the population.

Agriculture is the backbone of Zimbabwe's economy as Zimbabweans remain largely subsistence farmers. Due to the poor investment in the agricultural sector they face challenges such as low and erratic rains, infertile soils, shortages of labor and very low irrigation facilities. According to the Food and Agriculture Organization of the United Nations, "The peasant sector which produces 70% of staple foods (maize, millets and groundnuts) is particularly vulnerable as it has access to less than 5% of national irrigation facilities." This alone means that food production is very much affected leading to lower yields thus a leading factor to hunger in Zimbabwe. Focusing on Africa, poor investment in the agricultural sector also leads to Hunger as Africa is largely on agro-based continent largely dominated by peasant farmers in most states. Factors such as land degradation, desertification, low labor, poor farming machinery, poor farming methods are also due to poor investment in the agricultural sector as it reduces quality and quantity of food production resulting in hunger and starvation.

In Africa today, hunger is a great result of political decisions made by governments. Zimbabwe at some point used to be the bread basket of Africa and the greatest exporters of food crops but has since declined to seek food donations and import more and more food. According to the WFP, "Perhaps our greatest sense of alarm is in Zimbabwe which ironically has been a traditionally strong food exporter. In the 1980s WFP purchased up to half million tons of food a year there for use in operations in order in parts of Africa. But politics, bureaucracy and bad economics have conspired to damage food output and worse yet slow down the aid response. More than half of Zimbabwe's 12 million people are now living with the threat of starvation." This thus shows how political instability really affects food security in Zimbabwe. Other examples of countries with political and ethnic violence are Sudan, Burundi, Cote d'Ivoire and the Democratic Republic of the Congo also suffer mass hunger. Due to the political crisis, agriculture is largely neglected due to fear of being kidnapped as women and children mostly participate in agricultural activities and also because of poverty suffered during such periods that also lead to hunger also to include lack of manpower.

Proper investment into the agricultural sector such as diversifying crop varieties, low water sack gardens and urban farming improve agricultural outputs. According to Concern Worldwide US, "Families benefit both nutritionally and financially from these solutions. In Syria, Syrian refugee women and their Lebanese counterparts have been learning to make staples such as cheese and yogurt and how to sell them at

market for a profit. Thereby by learning this skill set, people are able to fight off hunger. In Zimbabwe the introduction of the use of drip irrigation, enhancing crops with bio-fortification and growing drought resistant crops such as sorghum and millet, crop yields show to have increased. Thereby the risk of hunger and starvation is reduced.

Reduction of food waste is a big step towards solving world hunger. Making meal preparations in advance also reduces the amount of food waste. According to Lite n' Easy, "By buying what you need and using the ingredients as close to when you purchase them, you can reduce what ends up in the bin at the end of the week. Food wastage can also be improved by having proper food storages. In Zimbabwe, facilities such as the Grain Marketing Board allow grains of food to be stored in silos for long periods of time for up to 10 years. Therefore in times of great harvests, foods can be kept and used in droughts. Thereby by reducing food waste, the ones that are saved up can be then used as donations to hunger stricken areas and peoples.

The other way to help fight hunger are food donations. According to the Global Food Banking Networking, "In Nigeria, the Lagos Food Bank Initiative is navigating excessive food by the military and police to distribute food to informal settlements." Especially with the current pandemic known as Covid 19, most people in Africa have benefited from these food donations. In Zimbabwe, the use of food donations is all the more evidenced by the occurrence of natural disasters such as the most recent cyclone Idai. According to the Global Food Banking Networking, "CBM in Zimbabwe are ready to distribute emergency support to help the most vulnerable and isolated people in the coming days and times weeks." Most people were helped in this situation when they felt helpless. According to the GFBN, "Action Against Hunger and its partners, Africa Ahead Zimbabwe and Nutrition Action Zimbabwe responded to cyclone Idai through an emergency food assistance intervention and a cash transfer project in Chipinge region, one of the most affected areas.

Government interventions in Zimbabwe such as policies like the land reform program have enabled the farmers to have more arable land for farming thus increasing crop yields and balanced diets. According to Wikipedia, "land reform in Zimbabwe officially began in 1980 with the signing of the Lancaster House Agreement as an effort to more equitably distribute land between black subsistence farmers and white Zimbabweans of European descent. Other government interventions in Africa include those of countries such as Senegal. The consolidation of Traditional villages of Pikine Senegal were negotiated for legitimacy, control and Access to Peri-Urban land. By enforcing these reforms, fair distribution of land allowed the people to equally grow crops thus reducing hunger.

In conclusion, World hunger is a resultant factor of climate change, poverty, poor investment in the agricultural sector and political instabilities. This can however be corrected by implementing solutions such as investing in the agricultural sector, reducing food waste, food donations and government interventions. Therefore, by looking specifically at Zimbabwe and Africa at large, this exploration proves that World Hunger is a problem that can be solved.

## -Oceania:

2.60 million people in Oceania are undernourished and it has a total population of 40,70 million. There has been a slight progress towards achieving zero hunger. The Oceania region's adult population also faces a malnutrition burden: an average of 8.7% of adult (aged 18 and over) men live with diabetes, compared to 7.3% of women. Meanwhile, 28.7% of women and 27.4% of men live with obesity. According to the 1995 Australian National Nutrition Survey and the Aboriginal and Torres Strait Islander Health Performance Framework (data 2004-05) certain groups experience food insecurity at a higher rate than the general population (Browne, Laurence, & Thorpe, 2009; Burns, 2004). These groups include: Indigenous people (24%);unemployed people (23%);single parent households (23%);low-income earners (20%); rental households (20%); and young people (15%). In remote locations, food supply is often limited to a "general store" that is not always open, and is often expensive, with a 26% higher price of a "basket of food" in remote community stores when compared with a Darwin supermarket (large supermarkets). It is important to consider policy measures that may impact food security. Service providers can advocate locally for policies that may improve food security in their geographical area such as policies that.

# What are the benefits of zero food waste

Zero food waste protects the environment, benefits communities, and supports a strong local economy. By reducing food waste it saves you money. It reduces your carbon footprint and also preserves energy and resources that would have been used to make that food. This is a big one, it drives down food prices.

What are the benefits

Cutting food waste is a delicious way of saving money, helping to feed the world and protect the planet.

~ Tristram Stuart