Food insecurity

Memory Organiser

1. Food insecurity

Food insecurity is when all people **DO NOT HAVE ACCESS** to sufficient, safe, nutritious food to maintain a healthy and active life at all times.

2. Causes

Physical location - Not enough food due to their location/ land conditions. E.g Malawi in Africa has no coastline – it's **landlocked**, therefore is has **no ports** from which **to export or import** food.

Climate change/extreme weather – Climate change can lead to increased droughts, hurricanes and plant diseases which can all impact the production of food.

Rising population World Population is expected to reach almost 9 billion by 2042. A rising world population increases the demand and price of food,

Changing diets – more people in Asia are eating more meat and poultry instead of vegetables. More grain is being used as animal feed. This means it is not available to feed people.

Food for fuel - The world's supply of oil is finite. There is a search to develop alternative sources of energy. Food crops (especially maize) are being used to produce biofuels, an energy substitute for oil. An estimated 100 million tonnes of grain per year is used.

Technology - Improvements in technology have increased the amount of food available. Eg. Fertilisers, pesticides, greenhouses etc. However, poorer countries cannot afford these.

Conflict/war – War causes many people to be displaced and move away from available food sources. Food supply can also be destroyed during fighting. E.g Sudan's Darfur region is in conflict over land ownership.

3. Wealth and food security

The graph shows a **positive correlation** (relationship) between calories and GNI (average income).

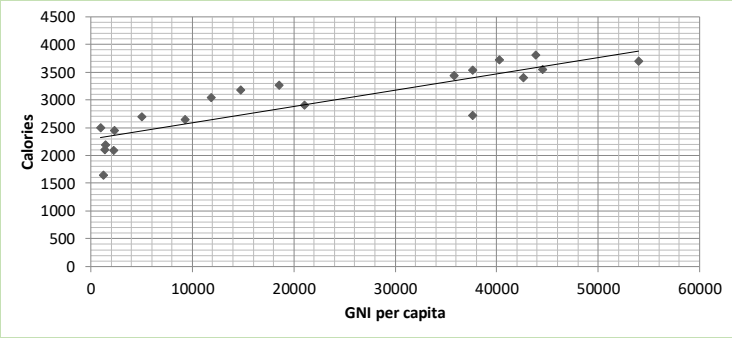
This means that as one increases the other increases too.

Wealth usually increases the amount of food a country had access to as it leads to:

- Being able to buy more food
- Spend money (invest) in factors that will increase food production and availability for example:
  - technology
  - transport
  - infrastructure

However, some countries are anomalies – they do not fit into the overall trend.

Japan has a high GNI but low calories – this could be due to culturally differences in diet leading to a less calorie heavy diet.



4. Solutions

1. Zero Hunger Challenge

Result in hunger eliminated everywhere. Attempted through 5 main aims – a global approach that requires everyone to change habits.

2. Farm Africa – give a goat

Giving local communities goats to breed and then sell and also provide milk. This increases income for families.

3. Greenpeace – changing eating habits

Encouraging people to reduce waste, eat fresh, locally and grow own food to help reduce the demand for food.

4. Hydroponics

Growing crops underground in artificial conditions – eg. No soil, water tanks and LED lights to grow food all year round.

5. The great green wall initiative

Trees planted in drought prone areas to increase the condition of the soil and help grow more crops.

5. Future foods

Rising demand for food will increase the price making lots of food expensive. Alternatives for the future include:

- **Insects**

1,400 species of insects are edible to man – they are cheaper, contain nutritional value and therefore could become a stable in our diets.

- **Lab grown meat**

Involves growing meat taken from stem cells of cattle to avoid breeding cattle for slaughter. Reducing greenhouse gases, saving energy & water.

- **Seaweed**

It has over 10,000 types and is the fastest growing crop in the world. Could be used as replacement to reduce the demand for other foods.

6. Genetically Modified crops

GM crops are those that scientists have altered to have certain traits, e.g. herbicide resistance, or to grow in certain ways that may be impossible naturally.

Advantages	Disadvantages
Can produce bigger crops Reduces cost of pesticides Plants could contain vaccines to protect against diseases.	Can reduce life expectancy Can give people serious food allergies Can be very expensive

Worldwide, more and more acres of land are being used for GM crops. In **1996**, less than **10 million acres** were used and in **1999, over 90million.**