

SDG 2: Nachhaltige Ernährung

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Topic : Sustainable Nutrition – Watch out, what do you eat ?

Namate ! Hola! Moin! Vorstellung über mich

Herkunft: Indien

Bachelor : Agricultural Biotechnology, M.P.K.V, Rahuri, MH, India.

Master : International Food Business and Consumer Studies.



Sustainable Development Goals (SDGs)

Origin:

- SDG 2 (Zero Hunger) & SDG 12 (Responsible Consumption & Production)
- Ensuring access to safe, nutritious, and sufficient food
- Promoting sustainable food production
- Encouraging responsible consumption and reducing food waste

SDG 2 and SDG 12

SDG 2: Zero Hunger

- Goal: End hunger and ensure food security
- Support sustainable agricultural practices
- Combat malnutrition and food insecurity

SDG 12: Responsible Consumption & Production

- Promote sustainable consumption patterns
- Reduce food waste and environmental impact
- Encourage responsible sourcing of food

Introduction to the topic: “Watch out What you Eat?”

- Understand the impact of sustainable diets on health and the environment
- Identify different types of sustainable diets
- Analyze the environmental impact of food choices
- Develop strategies for adopting sustainable eating habits
- Impression upon Environmental Footprint of CO₂ Food Products

- Activity 1 : What was your last meal in last 2-3 days ? What do you think of this in terms sustainability impacts or Food consumption?

Answer : How Diet Choices Impact Sustainability

- Promoting Sustainable Food Production
- Reduce greenhouse gas emissions from food systems
- Support sustainable farming and biodiversity
- Reducing Food Waste
- One-third of food is wasted globally
- Smart consumption and storage can prevent waste
- Addressing Overconsumption & Malnutrition
- Shift towards balanced, nutrient-rich diets
- Reduce reliance on resource-intensive food

Identifying Different Types of Sustainable Diets

- **Plant-based diets:** Prioritize fruits, vegetables, legumes, and whole grains while reducing animal products.
- **Mediterranean diet:** Focuses on plant-based foods, healthy fats, and moderate fish/meat consumption.
- **Flexitarian diet:** Primarily plant-based but allows occasional meat and dairy.
- **Locally sourced diets:** Support local farmers and reduce transportation emissions.

Balanced Diets and the Food Pyramid

Balanced diet : A balanced diet consists of a variety of foods in the right proportions to provide essential nutrients for good health.

Carbohydrates: Whole grains, fruits, and vegetables for energy.

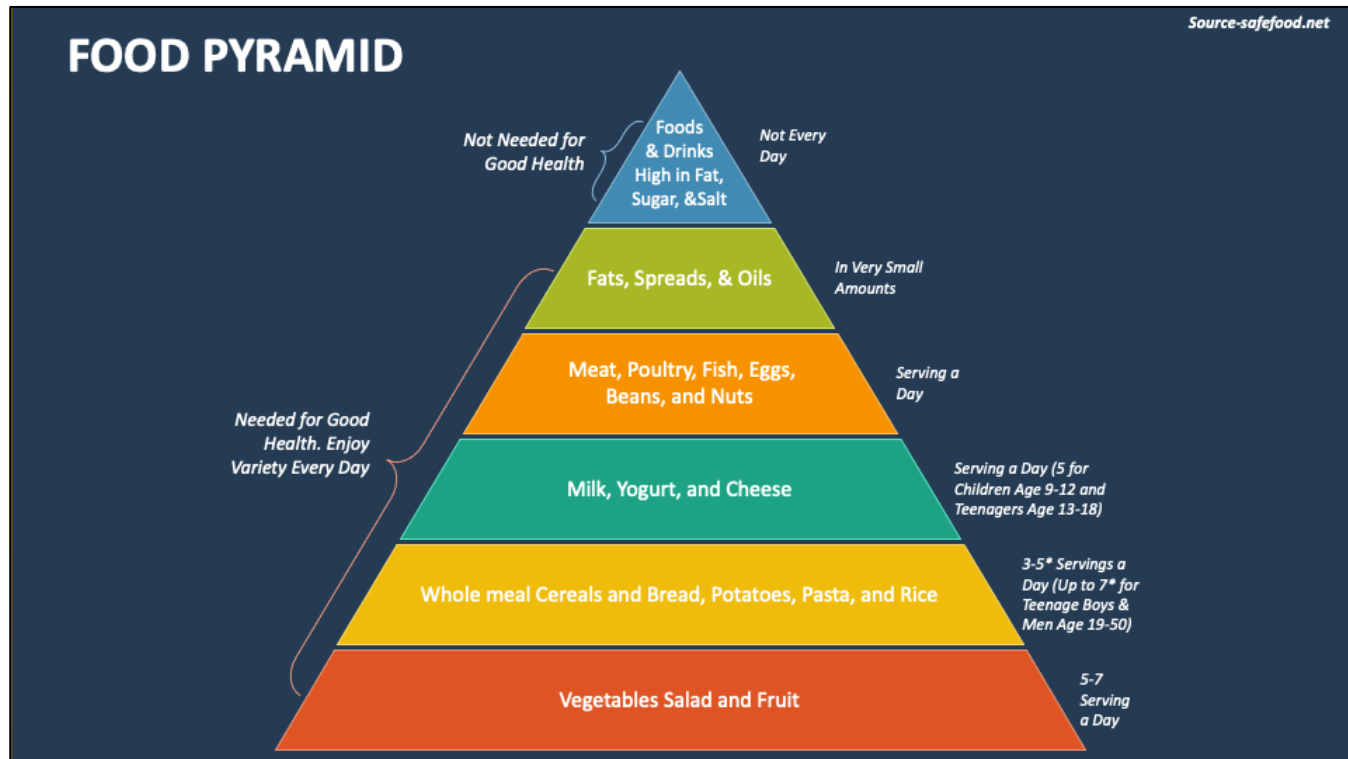
Proteins: Legumes, lean meats, fish, eggs, and dairy for **muscle growth and repair**.

Fats: Healthy fats from nuts, seeds, and oils to support **brain function and energy**.

Vitamins and Minerals: Found in fruits, vegetables, dairy, and whole grains to support **body functions**.

Hydration: 3-4 litres per day.

Food Pyramid



1.Base (Largest Section) – Whole grains, vegetables, and fruits should make up most of the diet.

2.Middle Section – Protein sources (lean meats, fish, legumes) and dairy should be consumed in moderation.


3.Top Section (Smallest Portion) – Sugary foods, processed snacks, and unhealthy fats should be limited

Adoption of Sustainable Eating Habits.

- **Choosing plant-based and whole foods** (legumes, nuts, seeds)
- **Reducing meat consumption** and consuming alternative plant-based proteins
- **Support sustainable farming:** Buying from local, organic, and regenerative farms promotes eco-friendly agriculture.
- **Minimize food waste:** Planning meals, proper food storage, and repurposing leftovers help reduce waste.
- **Opting ethically sourced products:** Fair-trade and sustainable groceries.
- **Educate and advocate:** Raising awareness about food sustainability encouragement to SDG 2 and SDG 12.

Environmental Footprints of Food Products-

Factors Influencing the **Carbon Footprint** of Food Products.

- **Farming Method:** Conventional vs. organic farming impacts emissions and land use.
- **Production Type:** Locally produced, seasonal products
- **Transportation:** Domestic products
- **Packaging:** Glass jars, plastic containers, and composite cartons have different environmental footprints.
- **Processing and Storage:** Fresh products  frozen or processed foods.
- **Phosphate Rock Footprint:** Used in fertilizers, affecting soil and water ecosystems.
- **Land Use:** Higher for livestock than plant-based food production.
- **Water Footprint:** Meat and dairy require significantly more water than grains, vegetables, or legumes.

Status Carbon footprint from agricultural and Food Industry:

- Image with source:

How I Can Reduce or Lower CO² Footprint ?

- **Organic Farming (Bio-Produkte):** Lower pesticide use, better soil conservation.
- **Seasonal and Regional Foods:** Reduce emissions linked to transport. (SoLaWi Anteil, Local and regional farmer markets.)
- **Food Waste Reduction Programs:** Initiatives like "Too Good To Go" promote surplus food consumption.
- **Packaging Reduction:** Try to purchase or use biodegradable and reusable packaging to cut down on waste.

Economic and Ethical Considerations in Reducing Carbon Footprints

- Economic Factors:
 1. Sustainable farming practices and Reducing food waste
 2. Local food production (Creation of Jobs and support to local economics)
 3. Image for Economics os Scale

Group Activity : CO2 Footprint Calculation exercise (20 Min)

- Activity: Students calculate the carbon footprint of different recipe per portion.
- Reflection Questions: How do different food ingredients impact CO2 emissions?
- Resource: Global Learning – Impacts of Meat Production and Consumption
- Distribution of meal cards. Each card should describe a specific meal, including ingredients, portion sizes, and preparation methods.
- Calculators or spreadsheet software for computations.
- Flip charts or whiteboards for group discussions.

Stepwise Guide for Calculation of CO₂ Emissions (**20 Min** Max.)

- **Step 1: Gather Data on CO₂ Emissions per Ingredient.**

1. Each food item has an associated CO₂ emission factor (kg CO₂ per kg of food).
2. Source Link : () or it will be distributed offline its online access its not possible.

- **Step 2: Identify Ingredients and Their Weights:**

1. Check all ingredients in the meal along with their approximate weights in **Kilograms. (kg)** e.g
Pasta: 100 gm convert in (**0.1 Kg**)

- **Step 3: Multiply Each Ingredient's Weight by Its CO₂ Factor**

F: CO₂ emissions=weight of ingredient (kg)×CO₂ emission factor (kg CO₂ per kg)

- **Step 4: Add up all total CO₂ emissions of the ingredients:**

E.g , $A+B+C+D= XYZ$ kg CO₂

- **Step 5: Compare & Interpret**

Group Presentation (4-5 min each group)

- Each group shall present their findings, detailing including following points:
- The **total CO₂ emissions** of their assigned meals.
- **Insights or surprises encountered** during the calculation process.
- Suggestions for **reducing** the meal's carbon footprint.
- Create your group Poster to present using different creative and artistic Ideas.

Discussions : Sustainable Diets and Nutrition

- Sustainable Key points and indicators in Food transformation system
- Sustainable shopping or buying behaviour
- Impressions of CO₂ emissions from exercise
- New ways or ideas to reduce CO₂ and Food waste
- Mindful Healthy Food choices

Feedback and Reflection

- Task: Write down one action or challenge to adopt after Seminar.
- Assessment: Participation in activities, discussions, and group presentations.
- Feedback for training methods, content and group work.

Thank You & Resources

- Future Resources: Links to sustainable diet resources, videos, and guides
- Links:

- Results from the master thesis :
- Link :

- GFI (Good Food institute Guides)
- Link :

Thank you for attention and active participation!