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Planetary Health In Medicine

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Healthcare's Climate Impact

"Doctors take an oath to 'do no harm.' Should that apply to the planet too?"



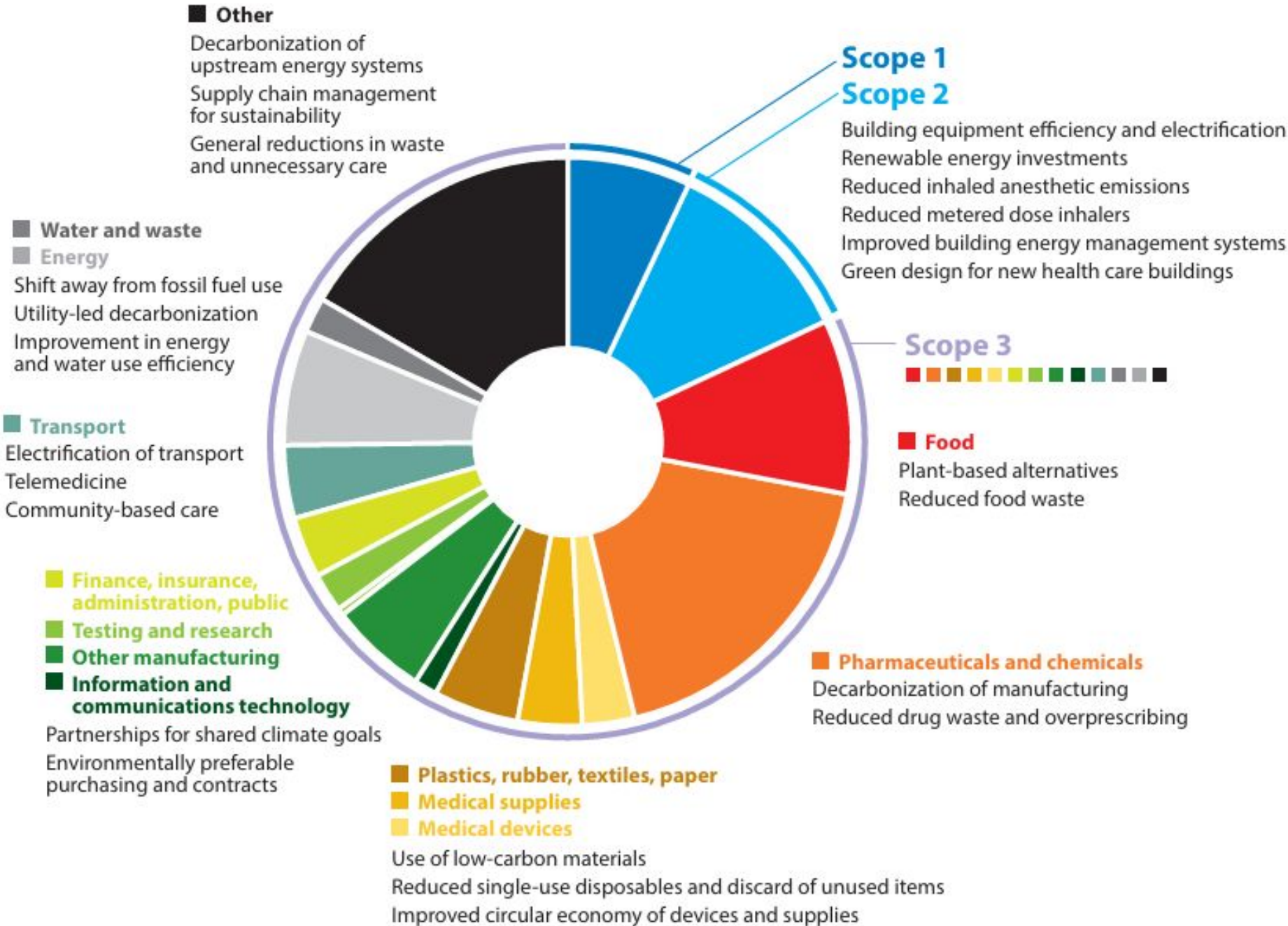
5% of total carbon emissions globally



4.6% of Canada's greenhouse gas emissions



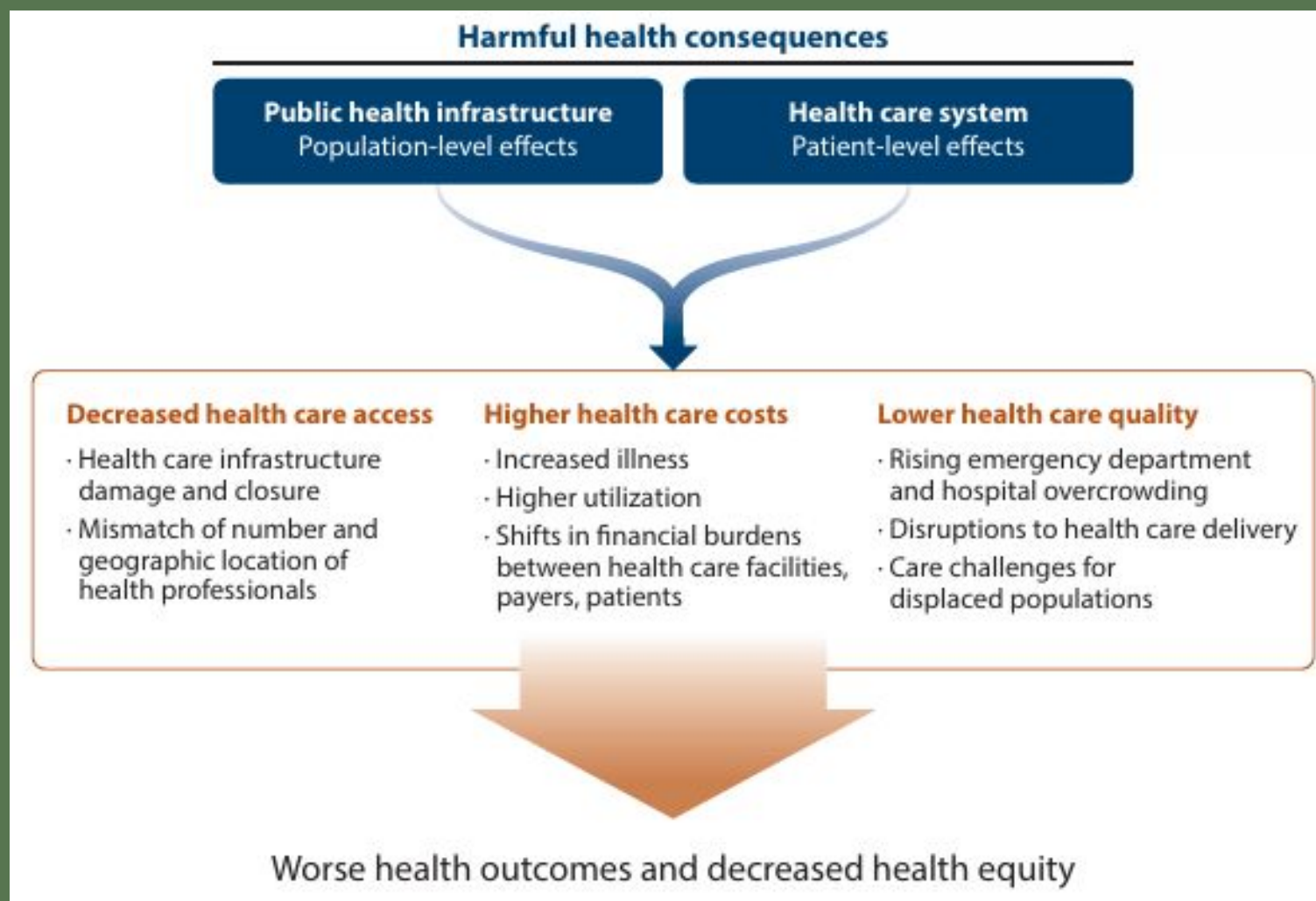
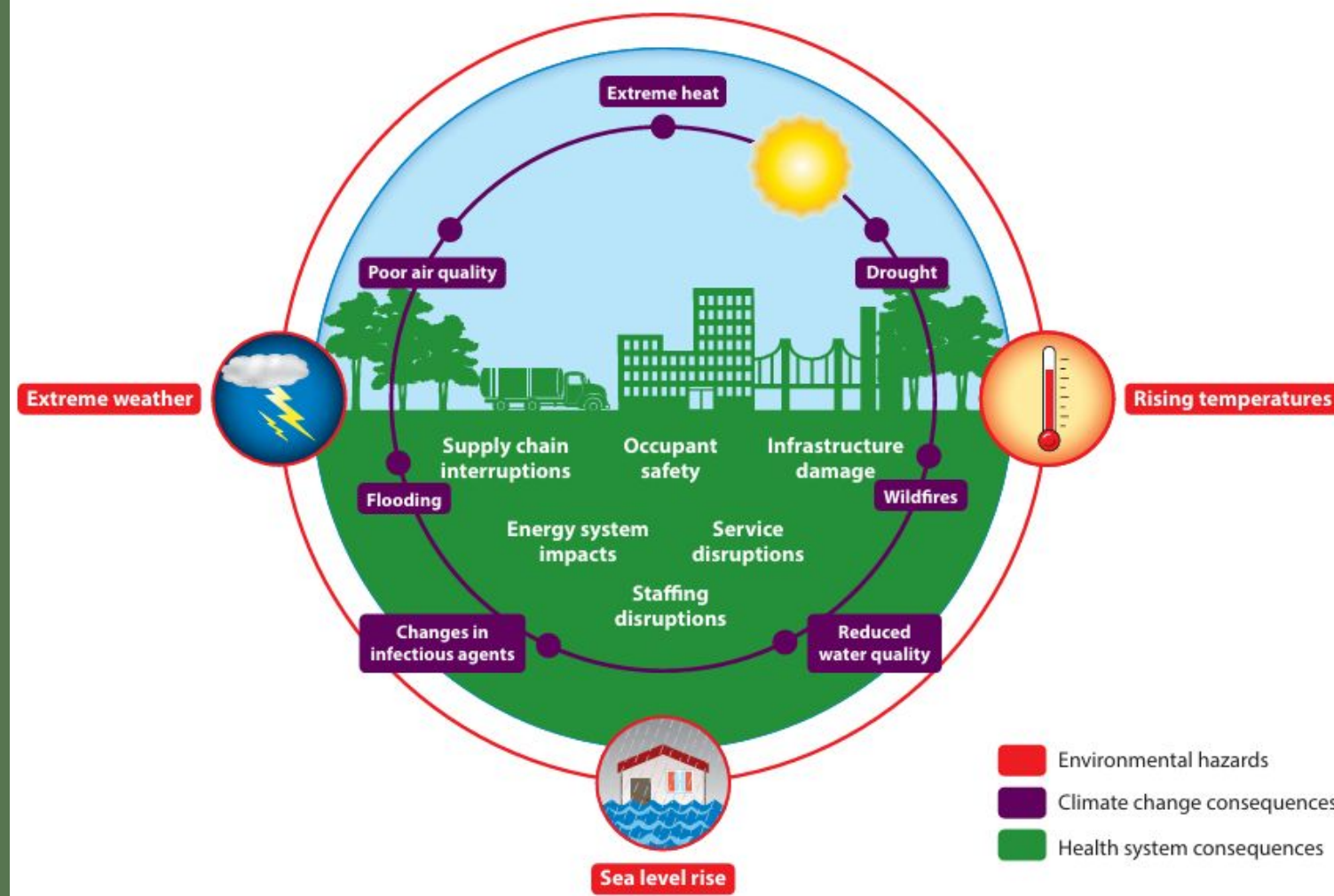
Canada produces 200,000 tons of pollutants annually



Climate Change Risks to Health Systems

Healthcare is both a contributor to and a victim of climate change

- **Rising Disease Burden:** Drives patient surges
- **Resource Strain:** Damaged facilities and disrupted supplies hinder care.
- **Economic Costs:** Patient surges and repairs strain budgets.
- **Human Life Impact:** 23,000 years of life lost due to disabilities and premature deaths.



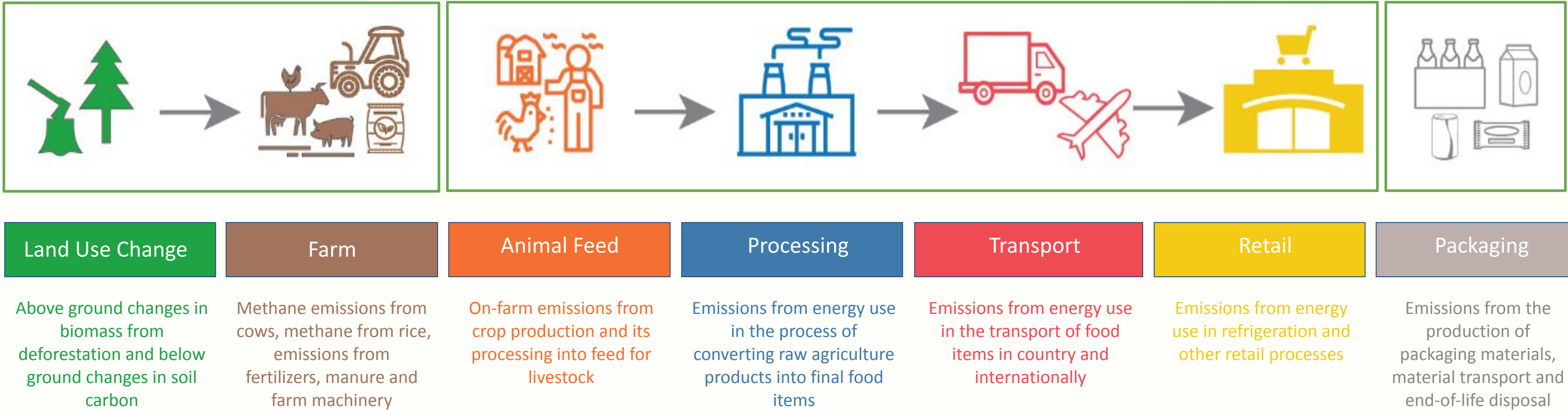
Healthy And Sustainable Food

Focus on transforming the hospital's food services by reducing reliance on animal-based foods and introducing plant-based alternatives. This approach addresses environmental sustainability while aligning with health promotion objectives in healthcare.

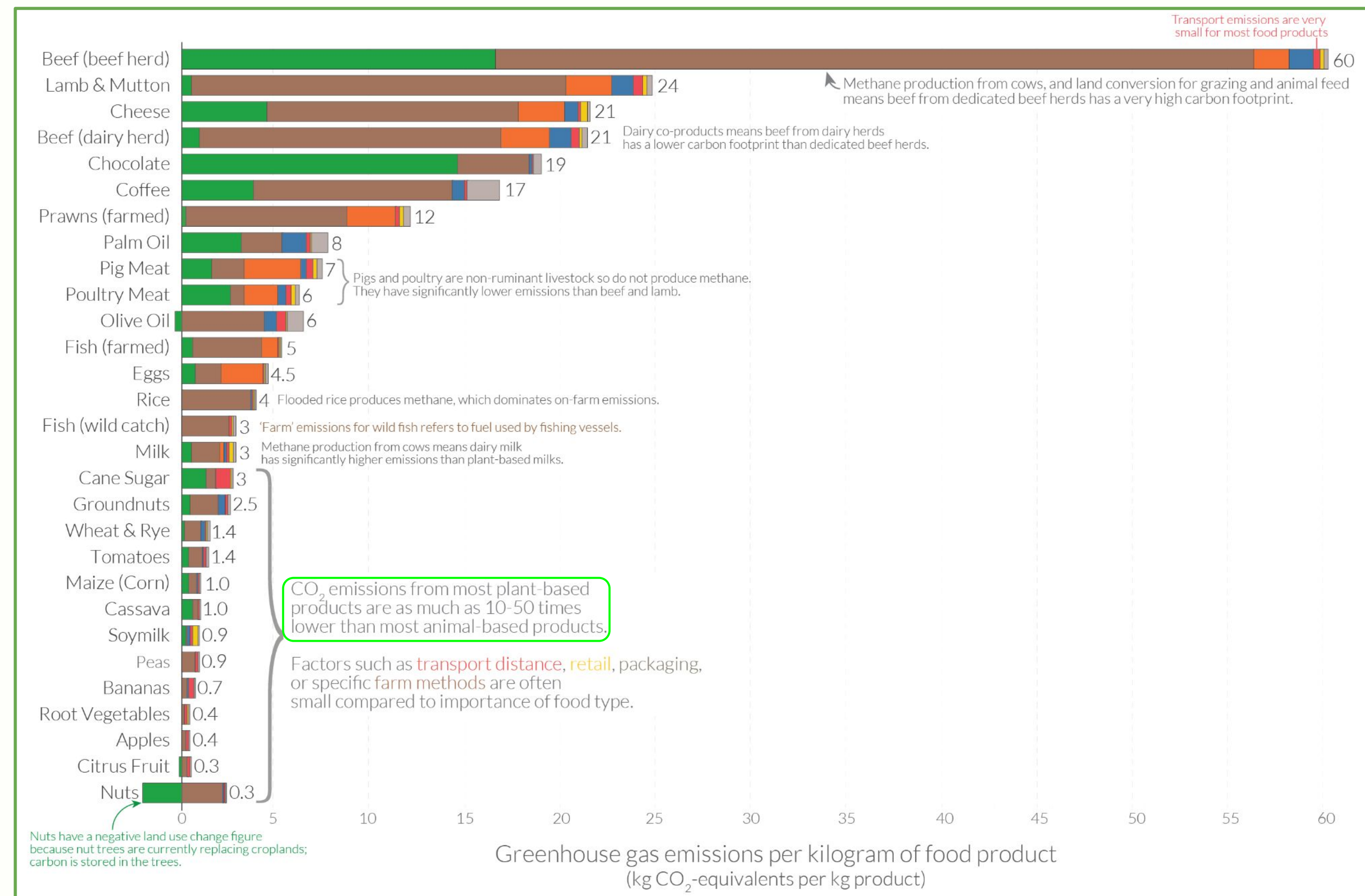
- Reduction in Carbon Footprint
- Environmental Sustainability
- Health Benefits
- Cost reduction
- Alignment with Global Goals



Food: Supply Chain Processes



Climate Impact of Food Supply Chain



Foods sourced from animals, especially red meat, have **relatively high environmental footprints** per serving compared to other food groups.

This has an impact on greenhouse gas emissions, land use and biodiversity loss.

Implementation Strategy

Objective: Reduce GHG emissions by prioritizing plant-based meals

Target: Increase Plant-Based Meals by transition 50% of meat-based menu items to plant-based alternatives within 12 months and limit meat options to 20% of overall menu choices by year-end

Action Plan:

1. **Menu Adjustments:** Begin replacing highly processed and low-demand meat dishes with plant-based alternatives
2. **Nutritional enhancements:** Hire full-time nutrition experts to design meal plans and offer medically tailored meals for specific patient needs
3. **Promotional Campaigns:** Introduce initiatives like "Meatless Mondays" to promote change management gradually
4. **Waste Reduction initiatives:** Eliminate single-use plastics and using smaller plate sizes to minimize food waste.
5. **Outcome Tracking, Reporting and Feedback:** Monitor GHG emission, food waste reductions, health outcomes, and cost savings. Feedback from patients and staff.



Meatless Monday

Meatless Monday is a global movement that encourages people to reduce meat in their diet on every monday.

The campaign was started in 2003 by Sid Lerner, the Founder of The Monday Campaigns.

It has taken root in over 40 countries

The US : Leading healthcare systems and hospitals have begun making vegetarian meals the standard choice on Mondays.

2018 NewYork-Presbyterian
(4 Hospitals/Medical Centre)

2019 NYC Health + Hospitals
(11 acute care hospitals)

Singapore :At Khoo Teck Puat Hospital food court, vendors are required to offer at least one vegetarian dish at a reduced price, while continuing to serve meat-based options on Monday.

Data Collection



Baseline Metrics - (Both before and after)

- Carbon Footprint: Emissions data for meat-based vs. plant-based items.
- Meal Composition: Percentage of plant-based meals served.
- Proportion of wasted plant-based vs. animal-based meals.
- Patient and staff preferences to predict acceptance of menu changes.
- Cost analysis of plant-based alternatives vs. current food items.
- Data on patient recovery rates correlated with dietary changes.
- Staff wellness indicators (e.g., productivity, absenteeism) linked to dietary interventions.

Additional Data Needs:

- Supplier Information: Local, sustainable options.
- Nutritional Profiles: Proposed plant-based recipes
- Qualitative data from discussions with stakeholders about barriers and motivators.

Monitoring and Evaluation

Tools and Methods:

- **Carbon Accounting Software:** Track emissions from food sourcing, preparation, and waste.
- **Waste Management Systems:** Measure daily food waste volumes and types.
- **Survey Platforms:** Collect feedback from patients and staff.

Key Performance Indicators:

- Food-Related reduction in carbon footprint (measured in CO₂e).
- Percentage of plant-based meals served.
- Decrease in food waste and costs.
- Patient and staff satisfaction scores.

Key Involvement:

- **Hospital Administration:** Drives policy support, allocates resources, ensures alignment with strategies.
- **Food Service Managers:** Manages menu redesign, staff training, ensures smooth service operations.
- **Nutrition & Dietetics Team:** Develops recipes, monitors health outcomes, ensures nutritional compliance.
- **Sustainability Experts:** Oversee carbon tracking and emissions reductions.

How does it Impact of People Involved

For Patients:

- **Reduce Disease Risks:** Lower risk of death from **heart disease, stroke, and type 2 diabetes** by reducing red and processed meat consumption.
- **Shorter Hospital Stays & Faster Recovery:**
Patients on plant-based diets experience **1-2 days shorter** hospital stays and recover approx **20% faster** after surgery.
- **Lower Infection Risks:** Hospital-acquired infections decrease by about **10%** with plant-based diets.
- **Food Satisfaction:** Patients who ate the NYC Health + Hospital's plant based menu reported a **95% satisfaction rate**

For Staff:

- **Improved Health:** Plant-based diets can reduce body weight and improve mental health (e.g., lower depression and anxiety).
- **Enhanced Productivity:** Healthier food options boost staff productivity and well-being.
- **Reduced Burnout:** Plant-based initiatives promote a culture of health, helping combat burnout and stress in healthcare workers.

For the Planet:

- **Greenhouse Gas Reduction:** Skipping one serving of beef every Monday for a year saves emissions equivalent to driving **348 miles** in a car.
- **Resource Conservation:** Producing one quarter-pound beef burger consumes **425 gallons of water** (enough to fill 10 bathtubs).

For Hospital:

- **Emission Savings:** Since 2021, New York City Health + Hospitals has reduced emissions by **36%** through plant-based menus.
- **Cost Reduction:** Switching to plant-based entrees saved **\$0.59** per meal, resulting in a total savings of **\$318,000** in 2023.

Believe The Facts and Actual Initiatives!

NYC Health + Hospitals implemented a plant-based menu by default for their network of 11 hospitals. During a three-month pilot, **over half of patients chose plant-based meals. The switch resulted in \$500,000 (USD) of cost savings**

A Harvard study found that individuals who most closely adhered to the Planetary Health Diets had a **30% lower risk of premature death with a 29% reduction in greenhouse gas emissions**, illustrating the benefits of personal and planetary health


North Americans are consuming nearly **6.5 times the recommended amount of red meat**. The EAT-Lancet Commission emphasizes the importance of a dietary shift towards a predominantly plant-based model. Reducing reliance on animal products has the potential to **decrease land use by 76% and cut emissions by 49%**

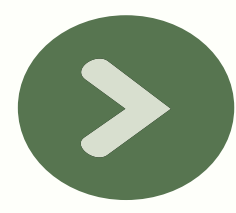
UC Davis Health received coverage from ABC News for being the first hospital in the country to be named to the “Good Food 100” list recognizing healthy, sustainable food.


Vancouver General Hospital was highlighted by **CBC** and many other Canadian news outlets during their plant-based pilot project.


NYC Health + Hospitals has had countless and ongoing media spotlights on their new approach to hospital food.


What's next? – “The Green Plate Revolution”

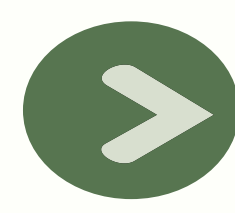
 **Audit & Assess:** Evaluate current food services to identify carbon hotspots and areas for improvement.

 **Scale & Refine:** Expand successful practices across the hospital, using feedback and data to optimize.


 **Achieving Higher Goals:** National Zero Waste Council's goal of reducing both food loss and waste by 50 percent before 2030

 **Pilot & Test:** Introduce plant-based options. A/B Testing methods to find out what works best.

 **Showcase Success:** Share results with stakeholders and position the hospital as a champion of sustainable healthcare.



 **Adding Value Based Procurement:** Environmentally conscious farming practices, local supply chains, and ethical sourcing to be integrated into procurement practices

THANK YOU!



*"Places of healing should be leading the way,
not contributing to the burden of disease"*

-Director General of the World Health
Organization.



References

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