Plant-Rich Diet



Base analysis:

Average per capita meat consumption in GA is about 47 kg/y

Technical Potential: Reduction of 3.4 Mt CO₂ in 2030

Achievable Potential: Reduction of 1.1 Mt CO₂ in 2030

- The average per capita meat consumption in Georgia is about 47 kg/y and more than 50% of them comes from red meat sources (beef & pork)
- Key obstacles are over consumption, consumer behavior, lack of awareness of health concerns, and lack of alternative choices.
- Long-term health-risks and obesity issues can transform the consumer shift to plant-rich diet.
- Current growth in market accessibility to grass-fed meat, Impossible Burgers, Beyond Beef and other low-carbon meat choices will promote the shift to plant-rich diet



Source: health.Harvard.edu. Creator: Romariolen | Credit: Getty Images/iStockphoto

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Plant-Rich Diet



Baseline = Estimate based on the life cycle CO2 emissions to produce meat (beef, pork, chicken & turkey).

<u>Achievable Potential</u> = A 25% shift to plant-rich diet reduces **1.1 MtCO**₂ in 2030 (Expected annual adaption rate of 2.5%)

Technical Potential = Maximum of 75% shift to plant-rich diet/low-carbon meat reduces **3.4 MtCO**₂, in GA between 2020 and 2030 (Expected annual adaption rate of 7.5%)

+ Less air and water pollutions

+ More land for available for other use

+ Healthy lifestyle

+ lower healthcare cost

1 MtCO ₂ e solution in 2030 = 25% shift to plant-rich diet in Georgia		Avoided CO ₂ (MMt/y) in 203
	Achievable	1.1
	Technical	3.4

Plant-Rich Diet – Strategies to shift diet/consumption

Figure ES-1 | Protein Consumption Exceeds Average Estimated Daily Requirements in All the World's Regions, and is Highest in Developed Countries g/capita/day, 2009



Goals to achieve a shift to plantrich diet

- Reduce overconsumption of calories
- Reduce overconsumption of animal-based protein
- Reduce beef consumption

Several societal, social and personal interventions are critical for a shift

Plant-Rich Diet – Strategies to shift diet/consumption



Source: Ranganathan, J. et al. 2016. "Shifting Diets for a Sustainable Food Future." Working Paper, Installment 11 of Creating a Sustainable Food Future. Washington, DC: World Resources Institute. Accessible at http://www.worldresourcesreport.org.

Plant-Rich Diet – Cost Estimate for Achievable Potential

Baseline = Investment estimated based on the potential strategies to implement the solution (conservative estimates). About 2% annual inflation and 3% discount rate were assumed.

10% increase = A 10% increase in the initial investment was assumed after the first year.

10% decrease = A 10% reduction in the initial investment was assumed after the first year

Assumptions

- Carbon abatement cost estimated based on the expenditures over a decade starting 2021 at an expected shift rate of 2.5%/y
- Anticipated cumulative GHG reduction of 6.12 Mt CO2-e by

Stakeholder Analysis of Plant-Rich Diet Solution

Plant-Rich Diet Solution Interactions

Conservation Agriculture

 Promotes conservation agriculture principles as a fertilizer displacement

Composting

Promotes home composting

Afforestation & Silvopasture

 Promotes healthy forest in croplands

Temperate Forest Protection & Management

 Promotes healthy temperate forest with improved water quality

Promising shift to plant-rich diet in Georgia

- <u>Reduction of chronic diseases</u> by up to 35% is expected, if people shift to plant-rich diets with strong brain power
- <u>Reduction in long term health care</u> <u>cost</u> is also expected due to the longterm benefits of plant-rich diets along with healthy lifestyles.
- Increased water availability can be expected as limited water is used to produce animal feeds
- <u>Improved ecosystem</u> with less environmental pollutions and enhanced ecosystem services.

Source: <u>http://worldresourcesreport.org</u>

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