

# Incidence of Vegetarianism in India: Insights from HCES 2022 Data

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# Introduction

- Vegetarianism is a significant dietary choice in India, shaped by cultural, religious, and socioeconomic factors. The HCES 2022 dataset provides a comprehensive view of food consumption patterns.
- This study explores the incidence and distribution of vegetarianism in India.
- Focus on regional, demographic, and socioeconomic patterns.

# Motivation

- The widespread narrative of India as predominantly vegetarian fails to capture the significant variation in dietary practices across regions, and religions.
- Food choices in India are not only personal preferences but also intersect with socio-cultural identities, often shaped by regional power structures and political influences.
- Inspired by the concept of “provincializing vegetarianism,” the study seeks to decentralize the dominant discourse around vegetarianism, examining it within the broader, diverse context of Indian society.

# Objectives

- Building on the work of Balmurli Natrajan and Suraj Jacob in Provincialising Vegetarianism, this study aims to examine whether the latest data from the Household Consumer Expenditure Survey (HCES) 2022-23 align with or challenge their findings on the diversity of dietary practices in India.
- Quantify the incidence of vegetarianism across different regions and states.
- Explore factors like religion, and urban-rural distribution.

# Data and Methodology

- We use the Household Consumption and Expenditure Survey (HCES) 2022-23 released by National Sample Survey Office(NSSO).
- To understand food consumption pattern of different households, we use the following 2 questions :
  - **How widespread is the vegetarian diet in India, and among particular religious groups?**
  - **How do household consumption patterns vary across different states and regions?**

## Key Variables

- **Dietary Choices:** Vegetarian vs. non-vegetarian preferences.
- **Demographic Information:** state and urban/rural setting.
- **Sociocultural Indicators:** Religion

# Categorisation

For ease of understanding, we are using the following categorization:

Veg Items (sub total values)
Cereals
Cereals substitutes
Pulses and pulse products
Salt and sugar
Milk and milk products
Vegetables
Fruits (fresh)
Fruits (dry)
Edible oil
Spices

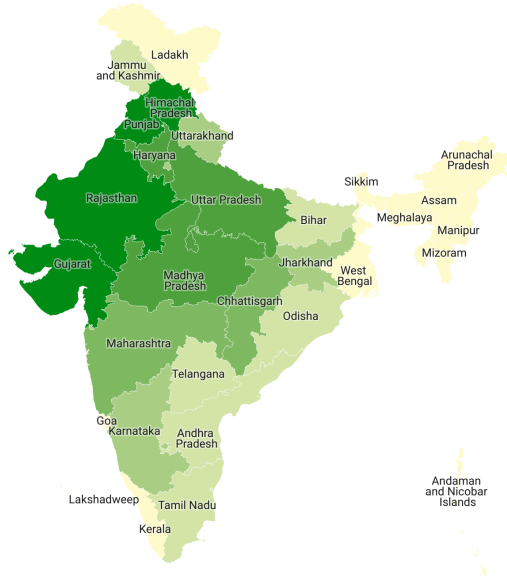
Only Non Veg Items
Eggs
Chicken
Fish, Prawn
Goat meat/mutton
Beef/buffalo meat
Pork
Others: birds, crab, oyster, etc

- Vegetarian = Veg items
- Non vegetarians = Veg items and only non veg items
- Eggitarians = Veg items and Eggs

# Incidence of Vegetarianism

Percentage of vegetarianism

< 0.07 0.07–0.2 0.2–0.3 0.3–0.35 0.35–0.5 ≥ 0.5



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# Vegetarianism by States

- Higher incidence of vegetarianism in northern and western states.
- **Rajasthan** highest with **78%** approx vegetarians compared to non-vegetarians, followed by **Gujarat** with **69%**, **Punjab 57%** and **Himachal Pradesh 53%**.
- Coastal states tend to have a low proportion of vegetarians, as fish is an inexpensive food source. **Gujarat is a notable exception**, due to its two dominant faiths that prescribe vegetarianism i.e the Vaishnav and the Jain faiths.
- The Green Revolution also significantly increased the production of wheat and rice, which made plant-based diets more accessible in North-Western regions, aligning with vegetarianism in these regions
- Ali et al. (2010) indicate that income levels shape food purchasing behavior, with plant-based diets in agriculturally rich areas supporting vegetarian choices for cost-conscious households.

## References:

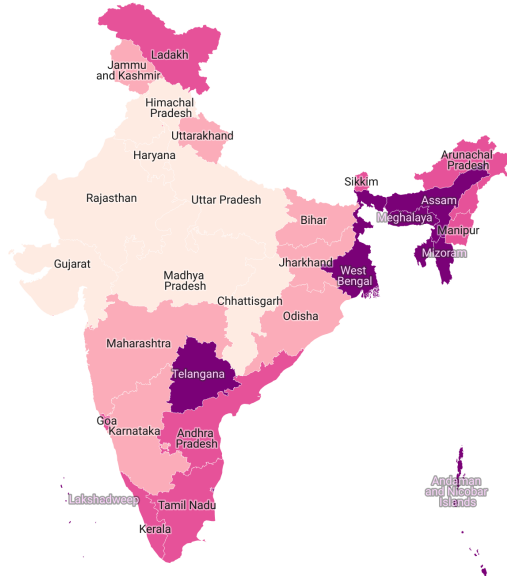
1. *Bhattacharya, Manoshi. (2015). A Historical Exploration of Indian Diets and a Possible Link to Insulin Resistance Syndrome. Appetite.*



# Incidence of Non-Vegetarians

Non\_Vegetarian\_Incidence

< 0.22   0.22–0.44   0.44–0.74    $\geq 0.74$



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Navigation icons: list, back, forward, search, zoom in, zoom out

# Non-Vegetarianism by States

- **West Bengal(83%)** and **Tripura(86%)** show very high non-vegetarian rates, where fish and meat are dietary staple.
- Northeastern states like **Assam (80%)**, **Mizoram(79%)**, etc. are primarily non-vegetarian - cultural preference, geographical limitations, pork and beef more affordable and accessible in rural areas, while urban areas show a higher demand for chicken
- Southern states, like **Kerala (73%)** also include fish, & meat.
- There has been considerable increase in consumption of meat and other protein-rich foods like fish, in developing countries (Kearney, 2010). This shift in dietary pattern is a consistent change associated with economic growth over the world (Huang and Bouis, 1996)

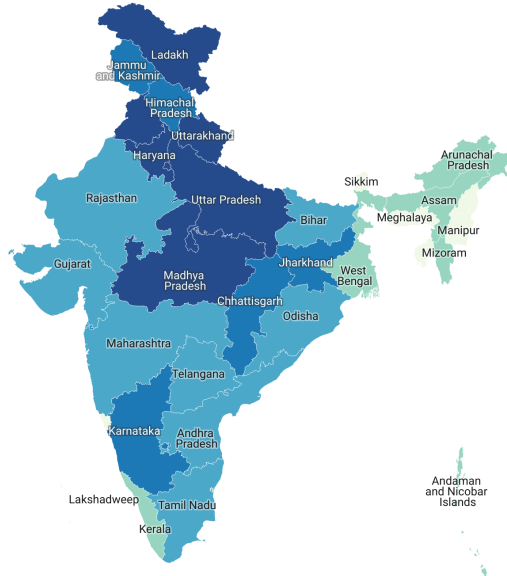
## References:

1. Kumar, Niraj Kapoor, Sanjeev. (2014). *Study of consumers' behavior for non-vegetarian products in emerging market of India. Journal of Agribusiness in Developing and Emerging Economies*
2. Mahajan, Sumit Papang, Janailin Datta, K.K.. (2015). *Meat consumption in North-East India: Pattern, Opportunities and Implications. Journal of Animal Research*

# Incidence of Eggitarian

Eggitarian\_Incidence

< 0.02   0.02–0.06   0.06–0.12   0.12–0.2   ≥ 0.2



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Navigation icons: Home, Previous, Next, Full Screen, Print, Search, Refresh

# Eggitarians by States

- Eggitarians serves as an interesting middle ground, particularly in states with neither strict vegetarianism nor non-vegetarianism
- **Delhi (39.88%), Haryana (32%) and Chandigarh (31.11%)** have the highest rates of egg consumption, followed by **Uttarakhand (24%), Madhya Pradesh (23%), Uttar Pradesh (21%)**
- Eggs are relatively affordable and accessible, making them a practical addition as protein supplements
- As more people become aware of the importance of protein in a balanced diet, eggs offer a convenient and affordable source of high-quality protein. Unlike other animal-based foods, eggs are more **"acceptable"** to those who prefer not to consume meat but still seek a richer protein intake than a strict vegetarian diet provides.

## References:

1. *Devi Anjali. (2020). Consumption Pattern of Animal Protein Foods - Eggs, Meat and Sea Food. International Journal of Scientific Research and Reviews*

# Religious distributions and dietary practices across households

- Overview of dietary patterns across religions in India.
- Analysis of religious and cultural influences on food choices.
- Focus on two dietary categories:
  - Vegetarian
  - Non-Vegetarian

# Household Distribution by Religion and Vegetarianism

**Table:** Household Distribution by Religion and Vegetarianism

Religion	HHs %	Veg HHs %	Non-Veg HHs %
Buddhism	1.31%	7.52%	92.48%
Christianity	6.76%	2.70%	97.30%
Hinduism	77.06%	30.68%	69.32%
Islam	12.25%	4.24%	95.76%
Jainism	0.21%	86.29%	13.71%
Not reported	0.03%	11.69%	88.31%
Others	0.82%	5.31%	94.69%
Sikhism	1.54%	55.76%	44.24%
Zoroastrianism	0.01%	18.92%	81.08%

# Distribution of Religions in India

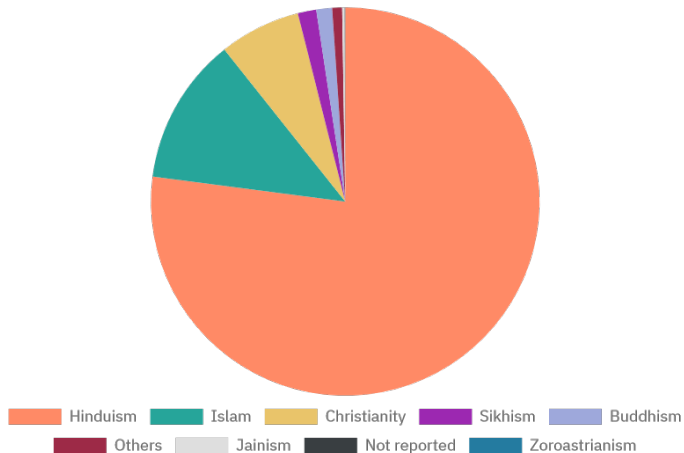


Figure: Distribution of Religions in India

# Religious Distribution of Households

- Majority: Hindu households (77%)
- Muslim households (12.3%), Christian households (6.8%)
- Jainism, though a very small fraction (0.2%), shows unique dietary practices.
- Other groups: Sikhism(1.5%), Buddhism(1.31%), and Zoroastrianism(0.01%).



# Vegetarianism Vs Non Vegetarianism by Religion

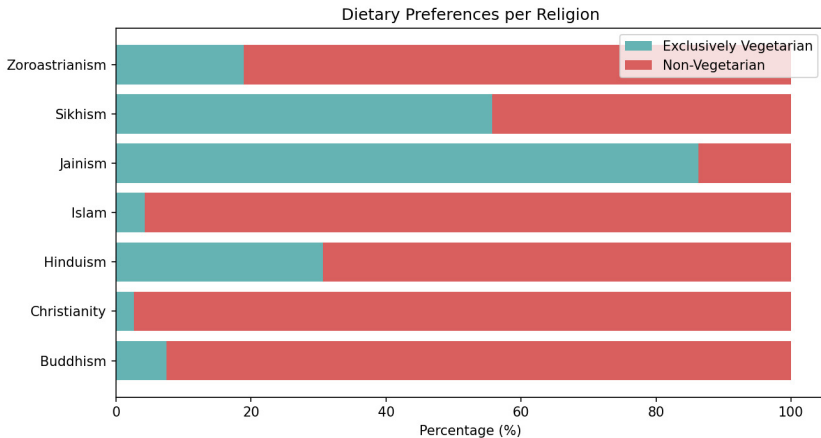


Figure: Incidence of vegetarianism by religion

# Interpretation of data

- **Hindu Households** : Dietary practices vary widely, with some households adhering strictly to vegetarianism(30.7%) while others consume meat or eggs. Cultural influence, regional variations, socioeconomic factors, and urbanisation factors come into play.
- **Muslim Households** : Low levels of vegetarianism(12.3%). Minimal restriction on meat consumption, aligning with Islamic dietary laws. Most Muslim households are non-vegetarian, indicating a cultural acceptance of meat.
- **Christian Households** : Very low levels of vegetarianism(6.8%). The majority of Christians in India tend to follow non-vegetarian diets, influenced more by regional customs than by religious restrictions, as Christianity does not impose dietary prohibitions against meat.

# Interpretation of data

- **Jain Households** : Highest rate of vegetarianism(86.3%). Jains emphasize principles of non-violence, leading to a high prevalence of vegetarianism. This commitment stems from their beliefs, which discourage harm to living beings.
- **Sikh Households** : Many Sikhs practice vegetarianism(55.8%), influenced by regional Punjabi customs. However, dietary choices remain flexible, allowing for both vegetarian and non-vegetarian options.
- **Other Minor Religions** : Buddhists generally show a tendency toward non-vegetarianism(92%), reflecting regional traditions that may overshadow doctrinal teachings. Similarly, Zoroastrians follow dietary practices reflecting Persian cultural influences, accepting meat consumption(81%).

# Rural-Urban Trends

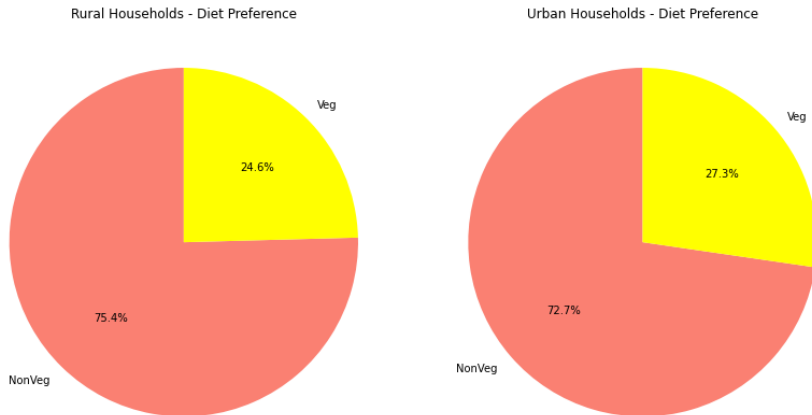


Figure: Incidence of vegetarianism by sector

# Interpretations for variation across sectors

- Cultural and Religious Factors : Principles of religion and caste (higher castes especially) more prevalent in urban areas
- Perceptions based on Health : Urban populations increasingly associating health with vegetarian diet
- Growth of Veganism : Urbans more exposed to global trends
- Access to Vegan Food : Easy accessibility in urban areas

*References : MDPI and ACS Style Hargreaves, S.M.; Raposo, A.; Saraiva, A.; Zandonadi, R.P. Vegetarian Diet: An Overview through the Perspective of Quality of Life Domains. Int. J. Environ. Res. Public Health 2021, 18, 4067*

# Rural-Urban Trends : The Case of Eggs

Household Type Distribution by Sector

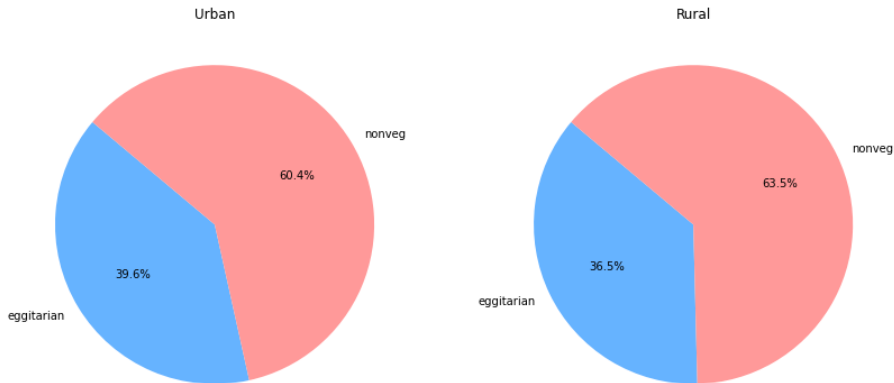


Figure: Incidence of vegetarianism by sector including eggs as veg diet

# Interpretations : The Case of Eggs

- Eggs donot include killing of a full grown animal, hence more acceptable
- Eggetarianism is a middle-ground dietary category
- Affordable and Accessible animal-based protein

## References:

1. Narula, M. (2020). *Cultural Vegetarianism in India: The Influence of Religion and Society*. *Journal of Cultural Studies*, 12(3), 145-159.
2. Natrajan, B., & Jacob, P. (2018). *Provincialising Vegetarianism: Putting Indian Food Habits in Their Place*. *Economic and Political Weekly*, 53(9), 45-53.
3. Biswas, S., & Kapoor, P. (2017). *Eggs in Indian Diets: Perception and Acceptance*. *Journal of Food Studies*, 5(2), 67-79.
4. Pingali, P., & Khwaja, Y. (2004). *Globalisation of Indian Diets and the Transformation of Food Supply Systems*. *FAO Agricultural Economics Paper*.
5. *Indian Council of Medical Research (2020). Report on Dietary Diversity and Nutrition in India.*

# Key Insights of Vegetarianism in India

- **Vegetarianism Patterns:** Higher rates in northern and western states; vegetarianism prevalent in Urban areas as compared to Rural, Key role of religious beliefs
- **Challenges in Measuring Vegetarianism:** Cultural factors might lead to under-reporting of non-veg consumption, variable definitions of vegetarianism
- **Limitations and Further Research:** Gender analysis was limited due to data constraints; further research could take into account effect of education and income
- **Conclusion:** Although seen as a vegetarian country, the data and analysis seem to show the opposite picture ; vegetarianism being complex blend of cultural,economic and demographic factors



# Questions?

Thank you for your attention!  
Questions and Discussion