



CS595 Data Visualization: Project on Agriculture Data

By

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The Data

- Three CSV Files
 - crop_production.csv
 - Contains details of production of various crops by States and UTs of India in different seasons for the years 1997-2015.
 - Fish_Production.csv
 - Contains details of Marine and Inland Fish production by States and UTs of India for the years 2007-2013.
 - Horticulture.csv
 - Contains details of production of various vegetables by States and UTs of India for the years 2009-2015.

Crop Production

	State_Name	District_Name	Crop_Year	Season	Crop	Area	Production
0	Andaman and Nicobar Islands	NICOBARS	2000	Kharif	Arecanut	1254.0	2000.0
1	Andaman and Nicobar Islands	NICOBARS	2000	Kharif	Other Kharif pulses	2.0	1.0
2	Andaman and Nicobar Islands	NICOBARS	2000	Kharif	Rice	102.0	321.0
3	Andaman and Nicobar Islands	NICOBARS	2000	Whole Year	Banana	176.0	641.0
4	Andaman and Nicobar Islands	NICOBARS	2000	Whole Year	Cashewnut	720.0	165.0

- Added a column “**Productivity**” which is defined as $\text{Production}/\text{Area}$

Fish Production

	States or Union Territories	Marine - 2007- 08	Inland - 2007- 08	Total - 2007- 08	Marine - 2008- 09	Inland - 2008- 09	Total - 2008- 09	Marine - 2009- 10	Inland - 2009- 10	Total - 2009- 10	Marine - 2010- 11	Inland - 2010- 11	Total - 2010- 11	Marine - 2011- 12	Inland - 2011- 12	Total - 2011- 12	Marine - 2012- 13
0	Andhra Pradesh	254.89	755.20	1010.09	291.16	961.62	1252.78	293.15	1012.71	1305.86	288.64	1079.57	1368.20	433.28	1169.89	1603.17	414.35
1	Arunachal Pradesh	NaN	2.83	2.83	NaN	2.88	2.88	NaN	2.65	2.65	NaN	3.15	3.15	NaN	3.30	3.30	NaN
2	Assam	NaN	190.32	190.32	NaN	206.15	206.15	NaN	218.82	218.82	NaN	227.24	227.24	NaN	228.62	228.62	NaN
3	Bihar	NaN	319.10	319.10	NaN	300.65	300.65	NaN	297.40	297.40	NaN	299.91	299.91	NaN	344.47	344.47	NaN
4	Goa	32.26	1.17	33.43	83.14	3.08	86.22	81.93	3.44	85.37	89.96	3.31	93.27	86.21	3.75	89.96	73.71

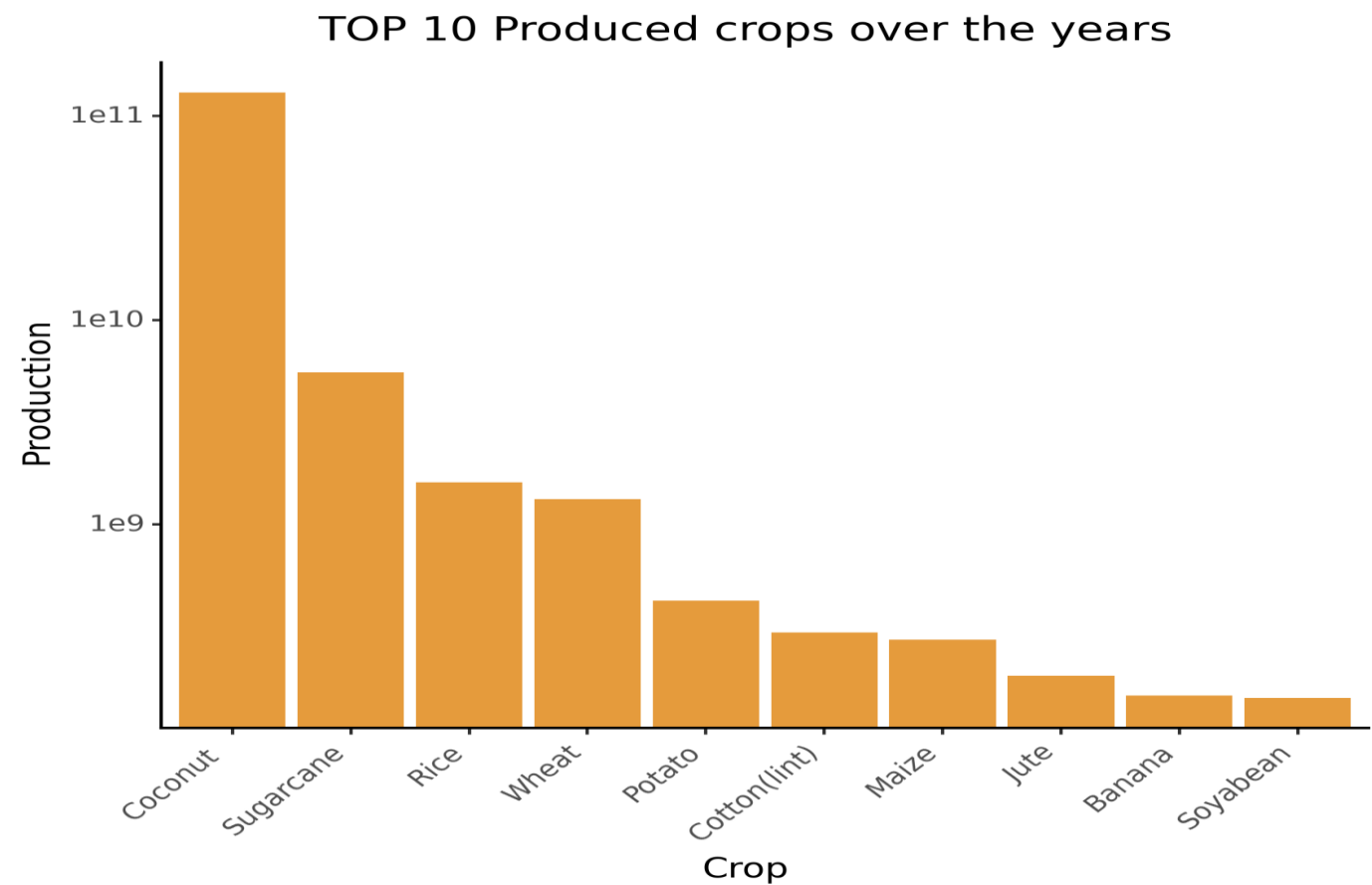
- The NaN values in the marine columns is because these States/UTs doesn't share boundaries with any ocean.
- Data Splitted into 3 tables
 - Marine Fish : Contains the states having marine fish production
 - Inland Fish : Contains Inland Fish Production details of all states
 - Total Fish: Contains Total Fish Production details of all states

Horticulture

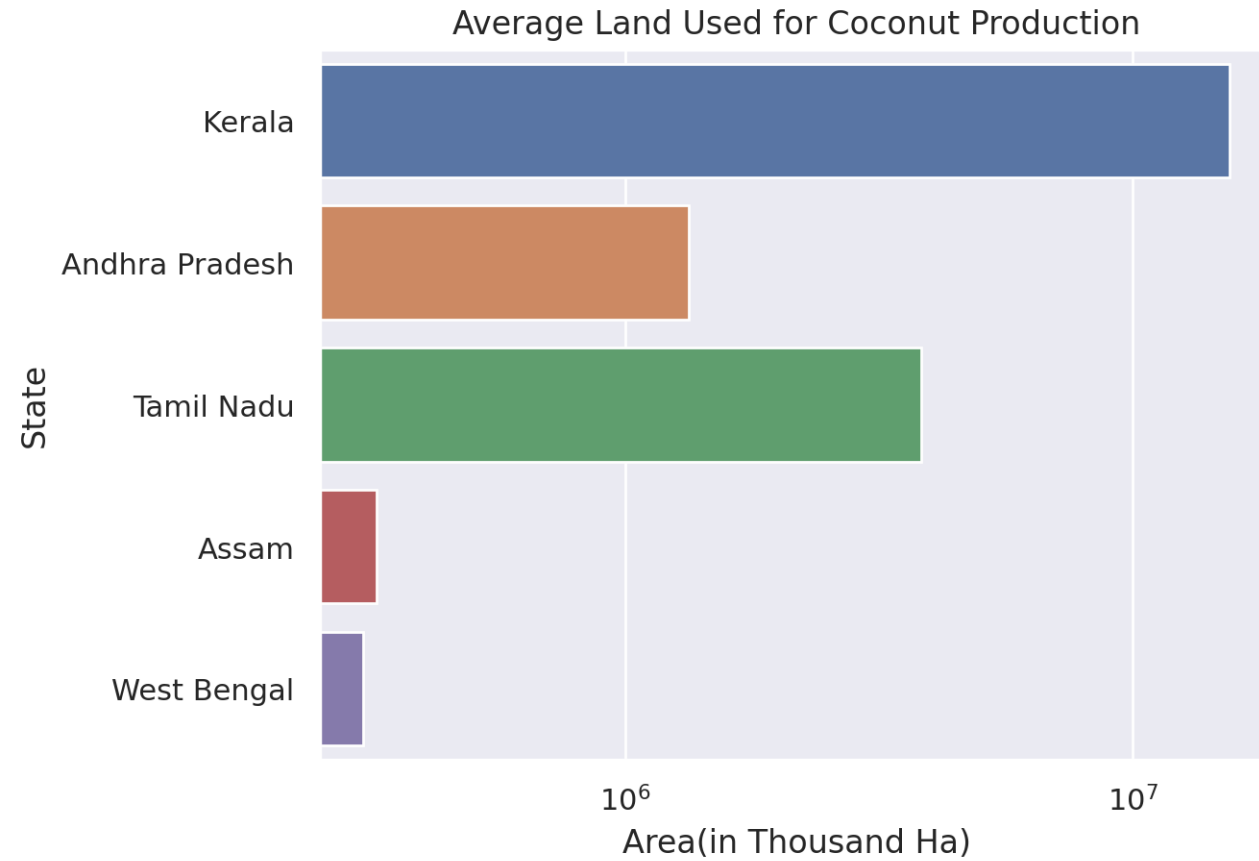
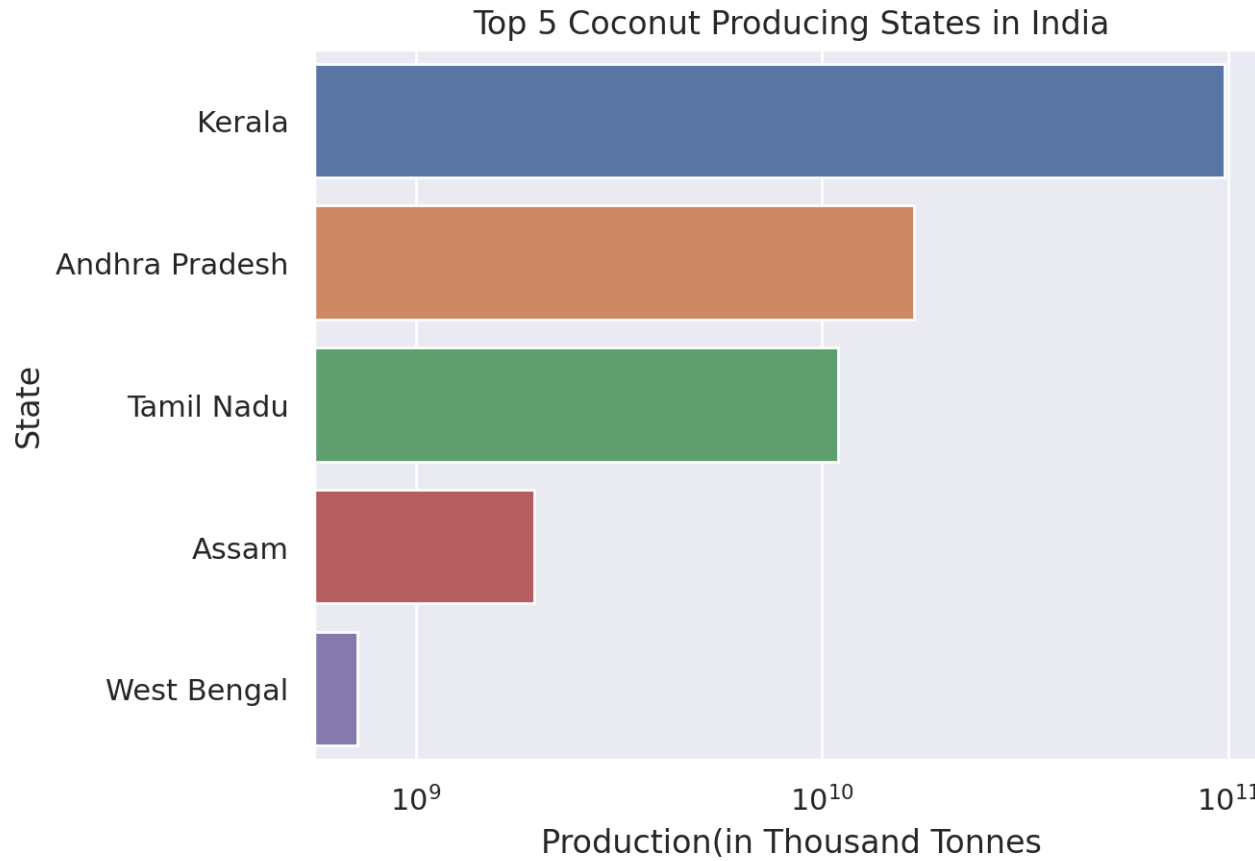
	Category	State/ UT Name	Brinjal-Area-2009-10	Brinjal-Production-2009-10	Brinjal-Area-2010-11	Brinjal-Production-2010-11	Brinjal-Area-2011-12	Brinjal-Production-2011-12	Brinjal-Area-2012-13	Brinjal-Production-2012-13	...	Total-Area-2010-11	Total-Production-2010-11	Total-Area-2011-12
0	State	Andhra Pradesh	24.3	485.0	NaN	NaN	76.3	1524.9	80.8	1615.3	...	0.0	0.0	661.0
1	State	Arunachal Pradesh	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	0.0	0.0	6.3
2	State	Assam	15.9	253.0	NaN	NaN	16.5	260.1	16.8	267.9	...	0.0	0.0	266.0
3	State	Bihar	55.3	1198.6	NaN	NaN	56.1	1271.5	56.2	1291.5	...	0.0	0.0	857.0
4	State	Chhattisgarh	25.2	374.5	26.7	439.5	28.5	502.9	31.2	545.7	...	190.0	2717.1	351.6

- Vegetables in the data: Brinjal, Cabbage, Cauliflower, Okra, Peas, Tomato, Onion, Potato, Sweet Potato, Tapioca , Others, Total
- Data was converted to long format for easy implementation.

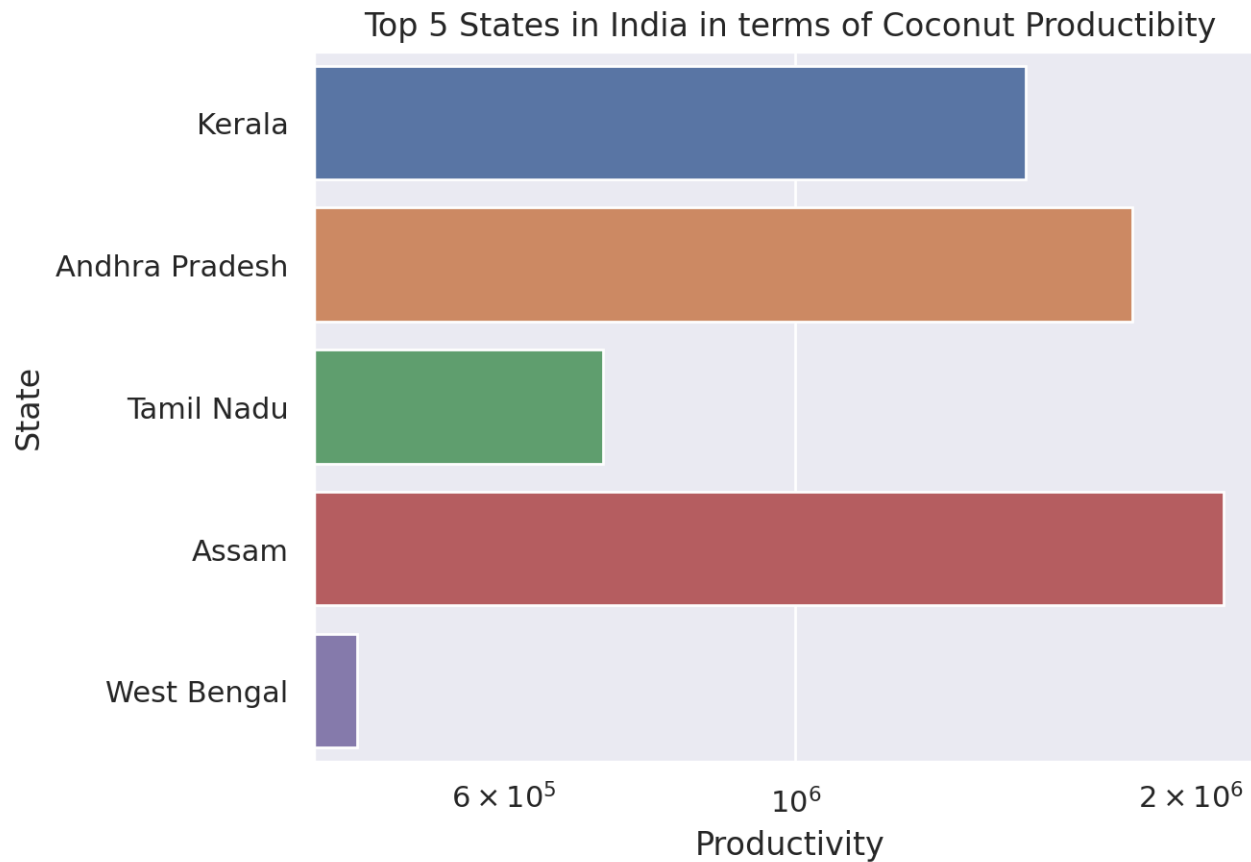
Top 10 produced crops over the years



Coconut Production

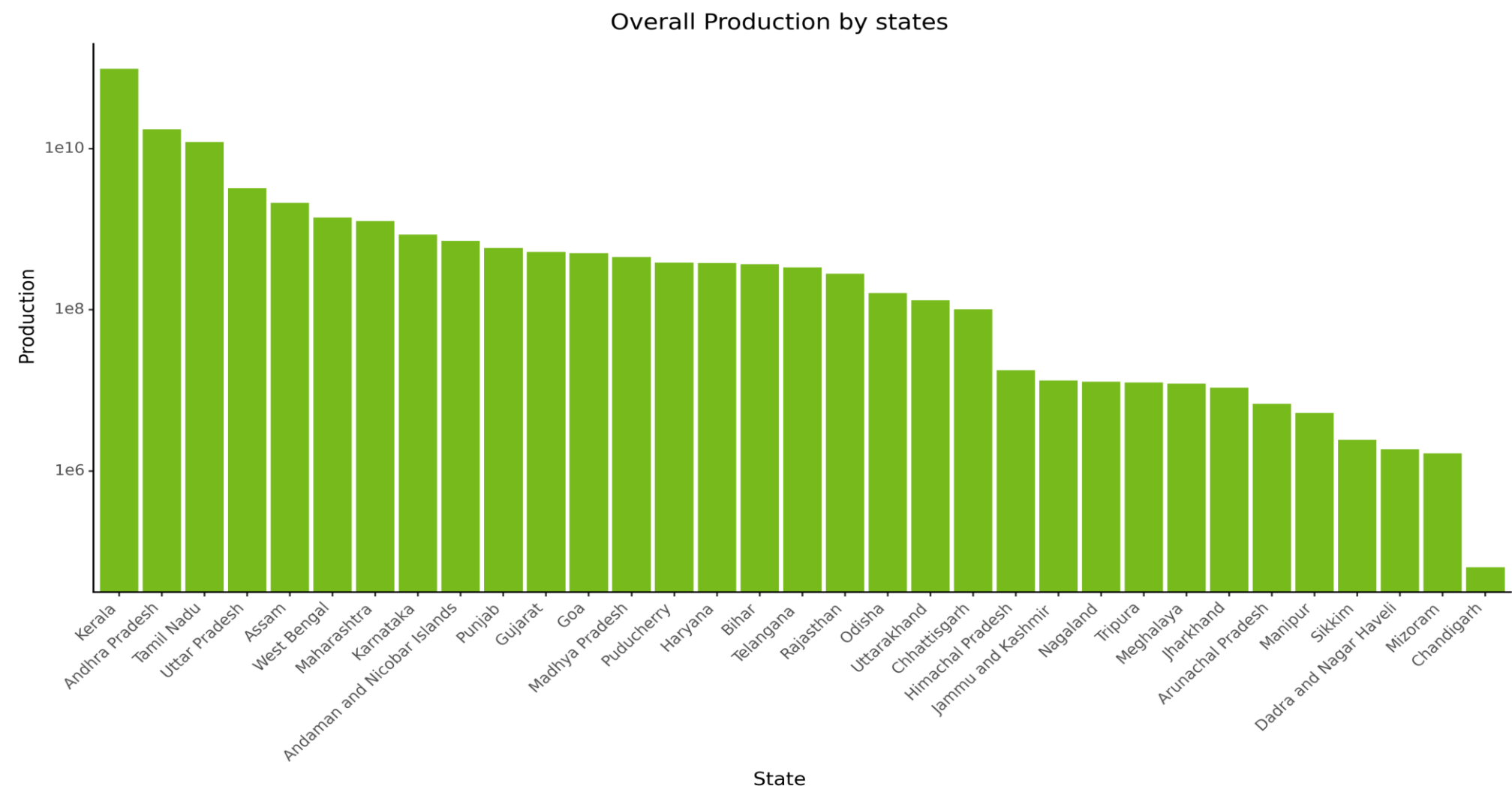


Coconut Productivity

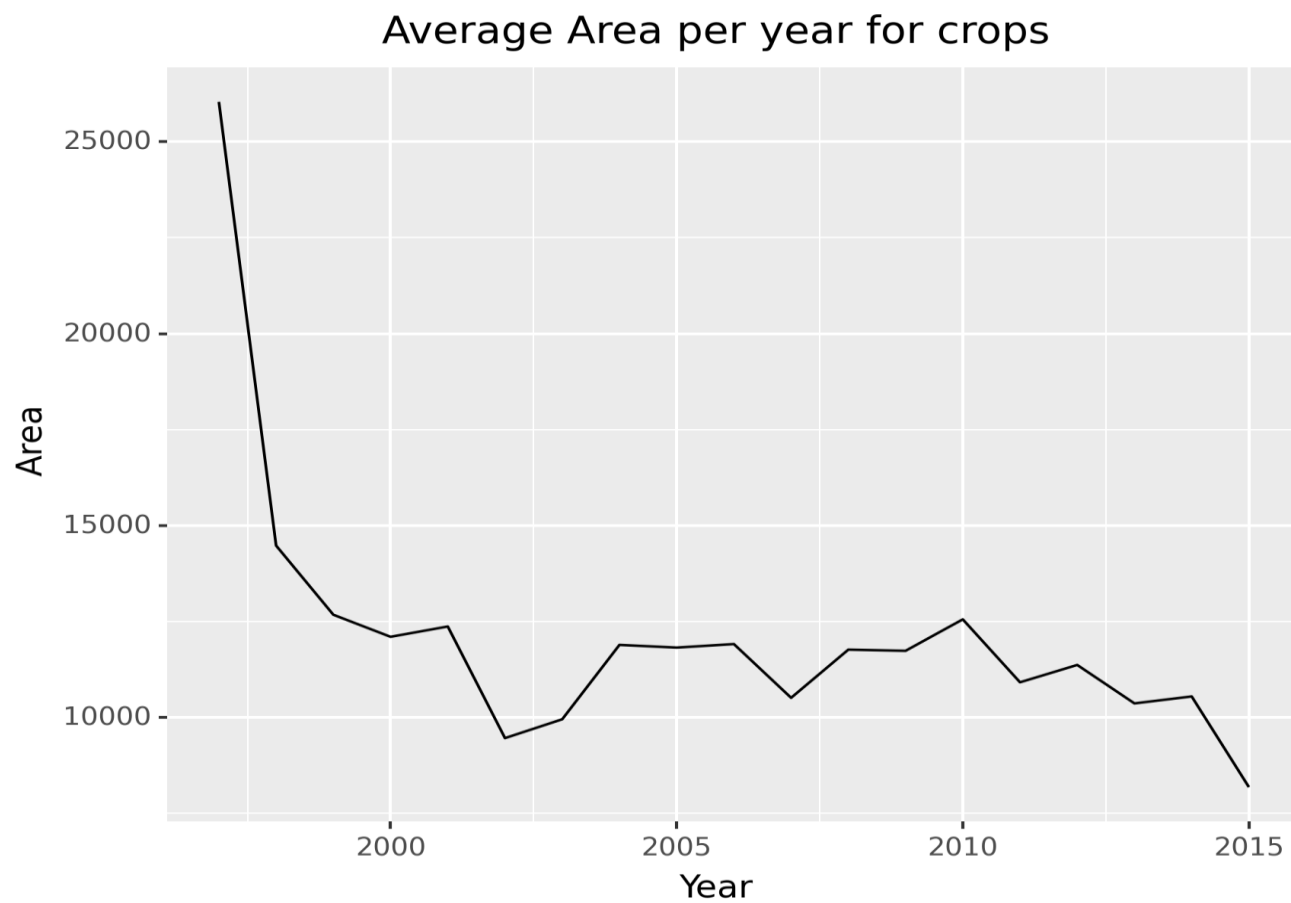


Assamese people prepare different types of edible items from coconut fruit in Bihu and other festivals.

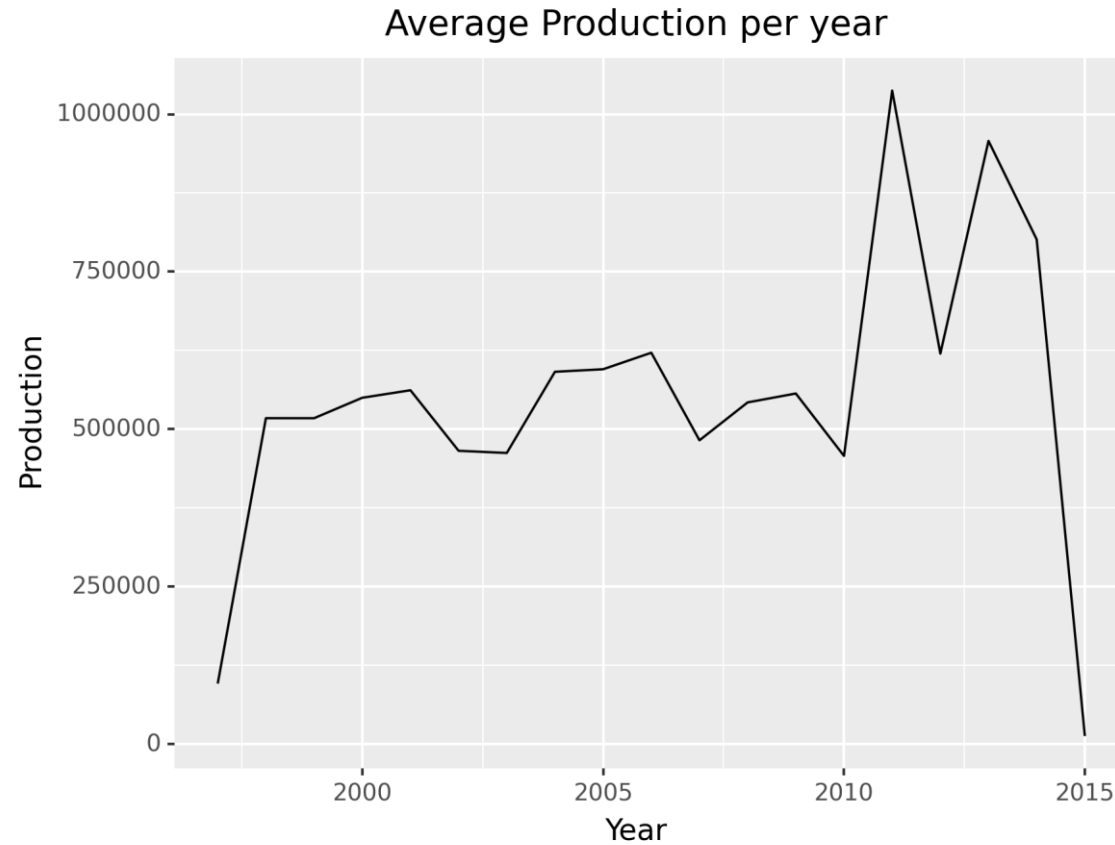
Overall Crop Production By States



Average Area per year for crops

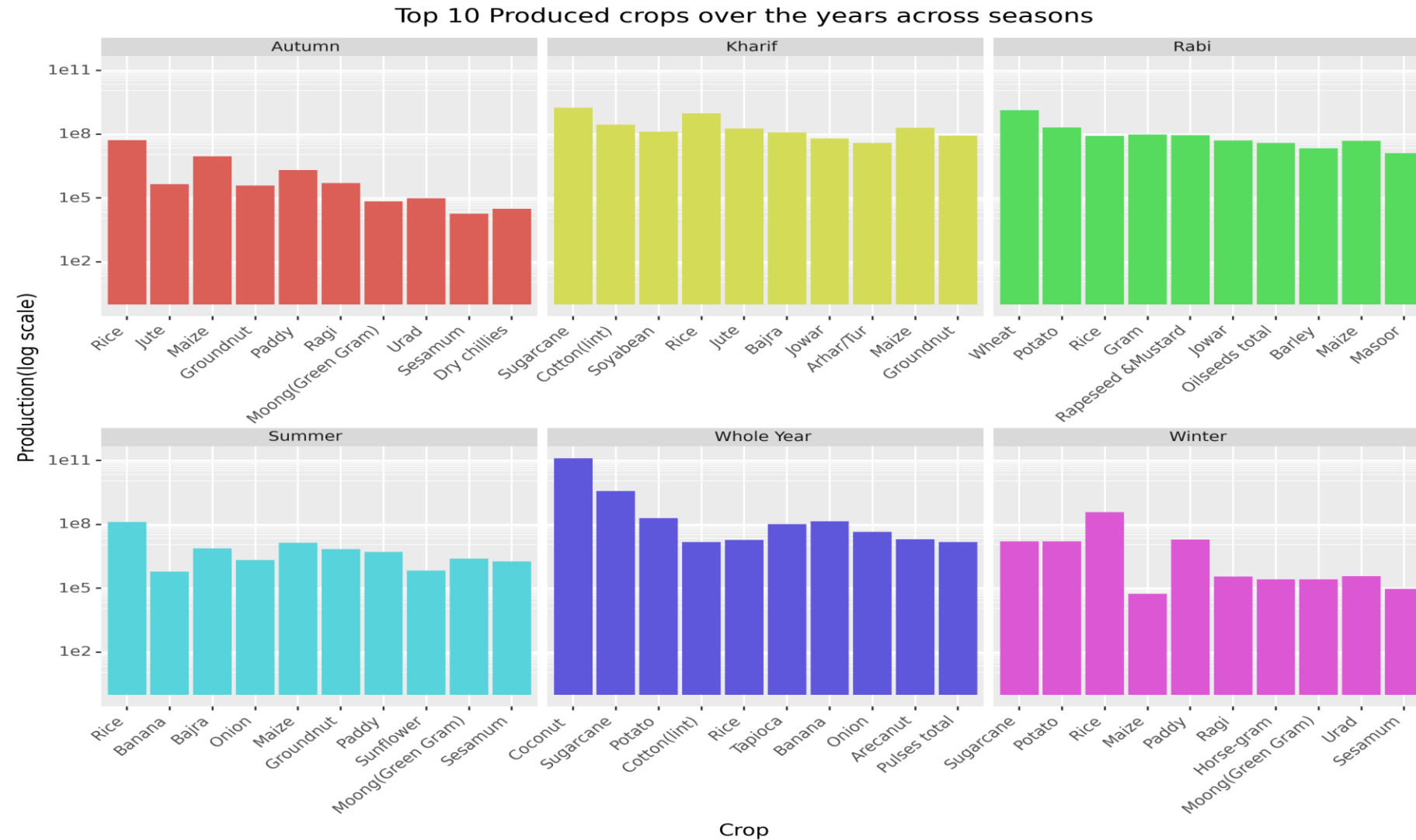


Average Crop Production per year



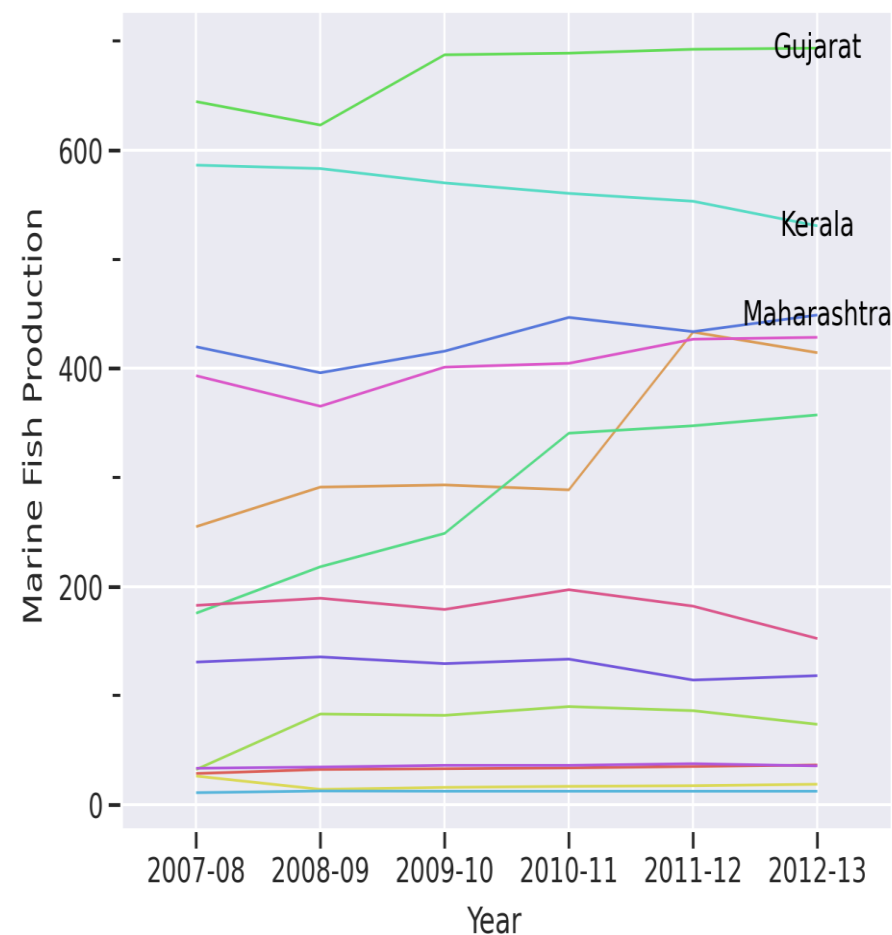
It is not that Crop production suddenly decreased in 2015, it's just that data for 2015 is not complete. Despite Decrease in Area, crop production is increasing.

In which season which crops are produced more



Marine Fish Production Over The Years

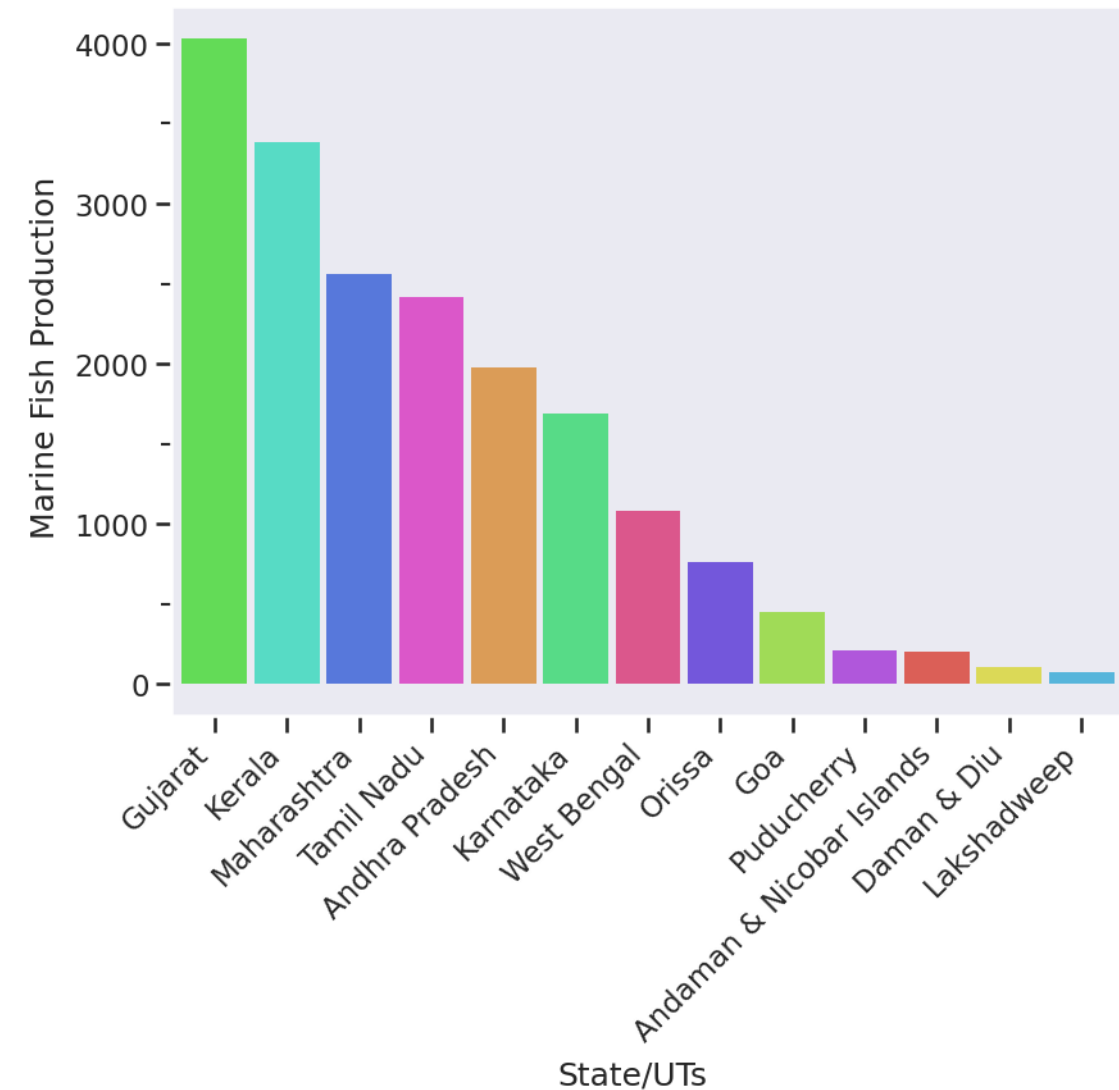
Marine Fish Production Over the Years



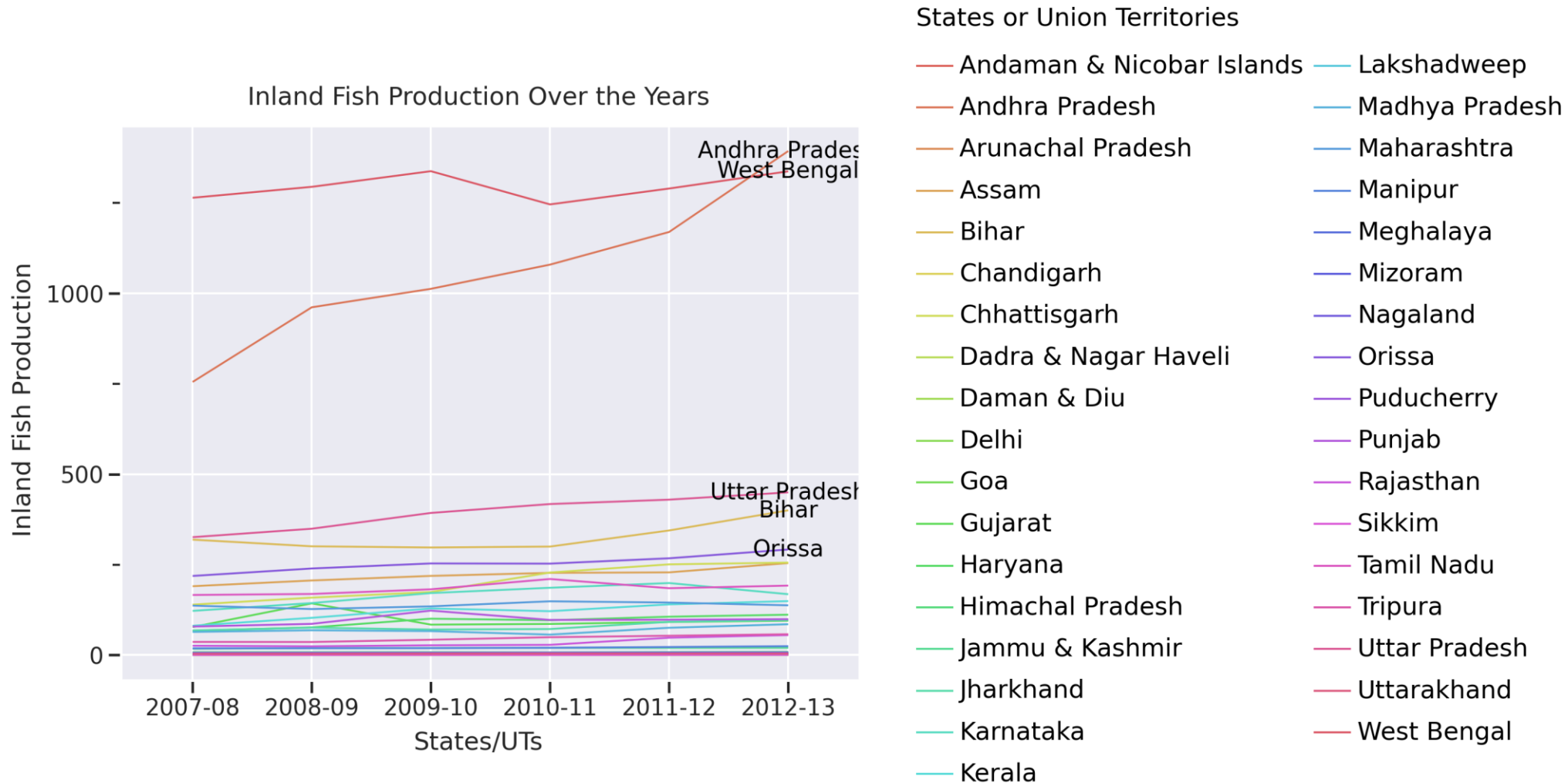
States or Union Territories

- Andaman & Nicobar Islands
- Andhra Pradesh
- Daman & Diu
- Goa
- Gujarat
- Karnataka
- Kerala
- Lakshadweep
- Maharashtra
- Orissa
- Puducherry
- Tamil Nadu
- West Bengal

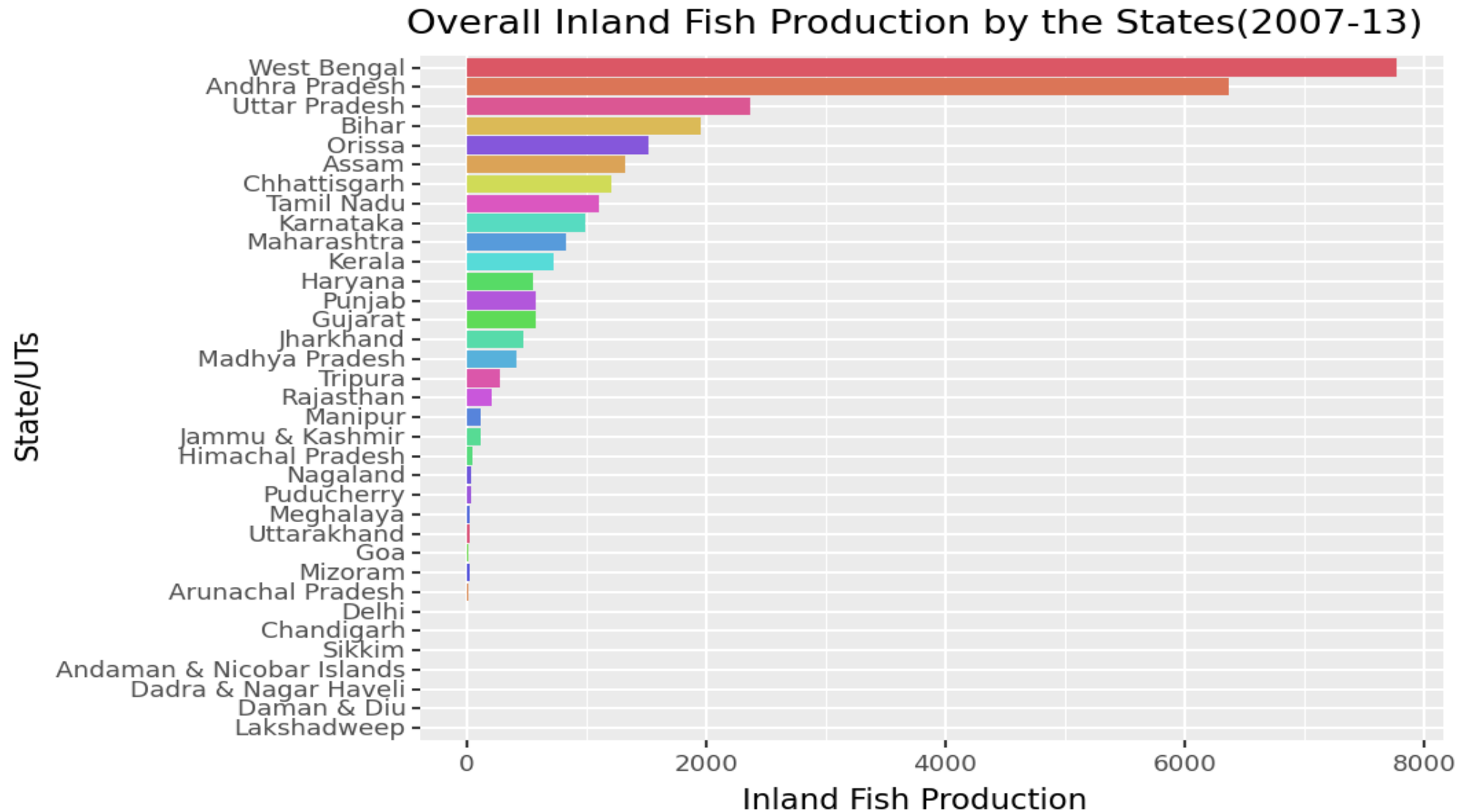
Overall Marine Fish Production by the States(2007-13)



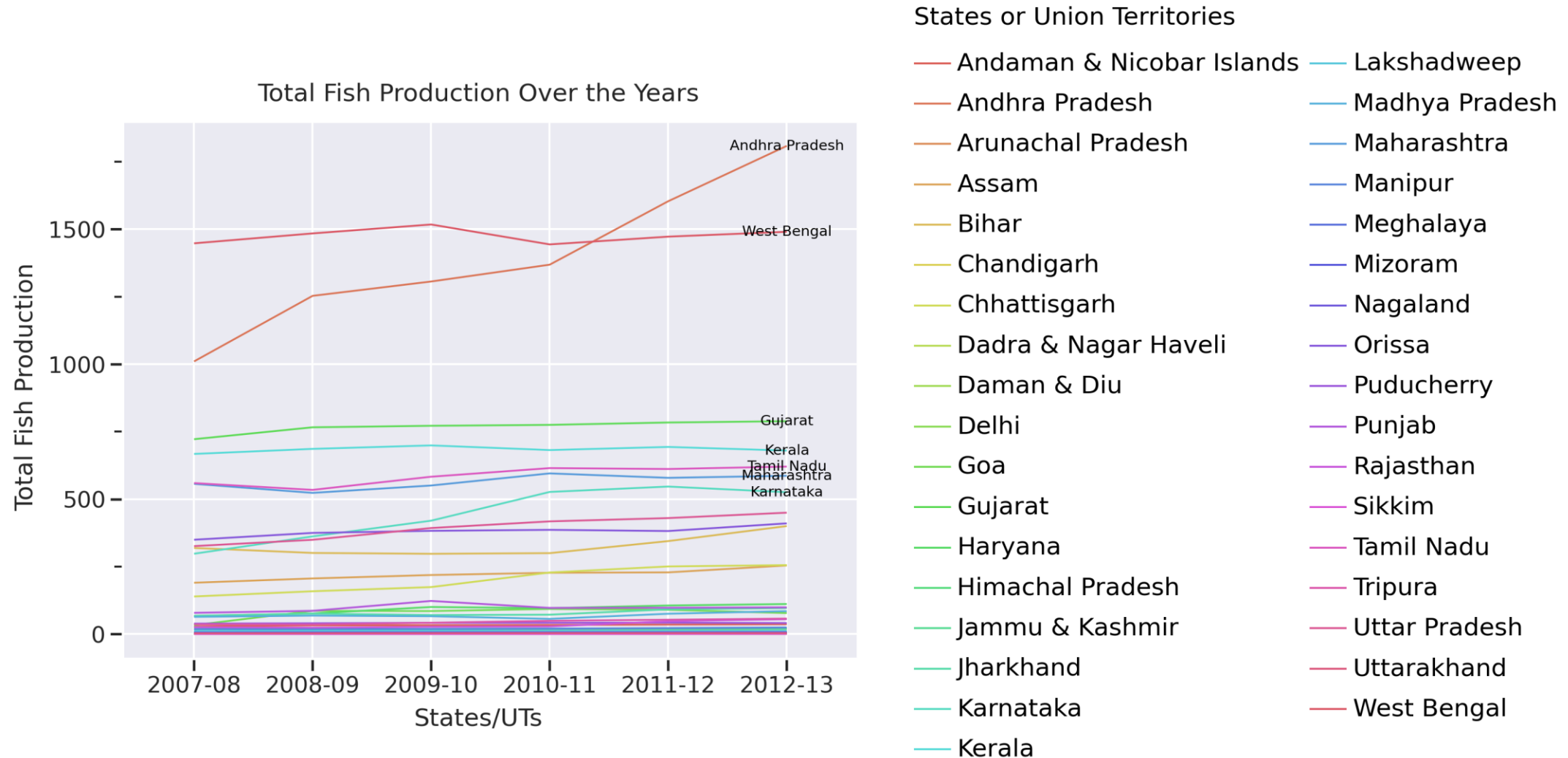
Inland Fish Production of the states/UTs over the years



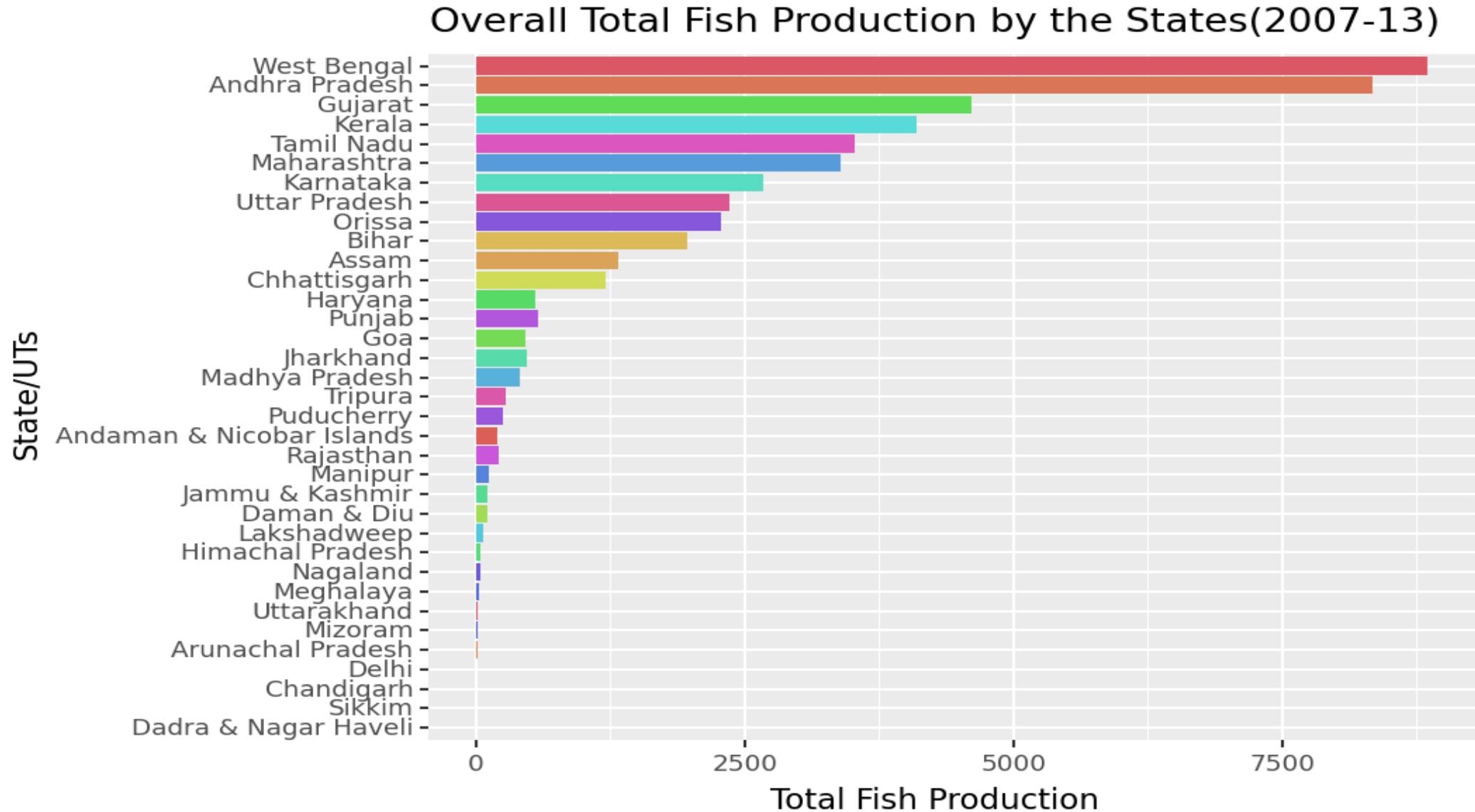
Overall Inland Fish Production



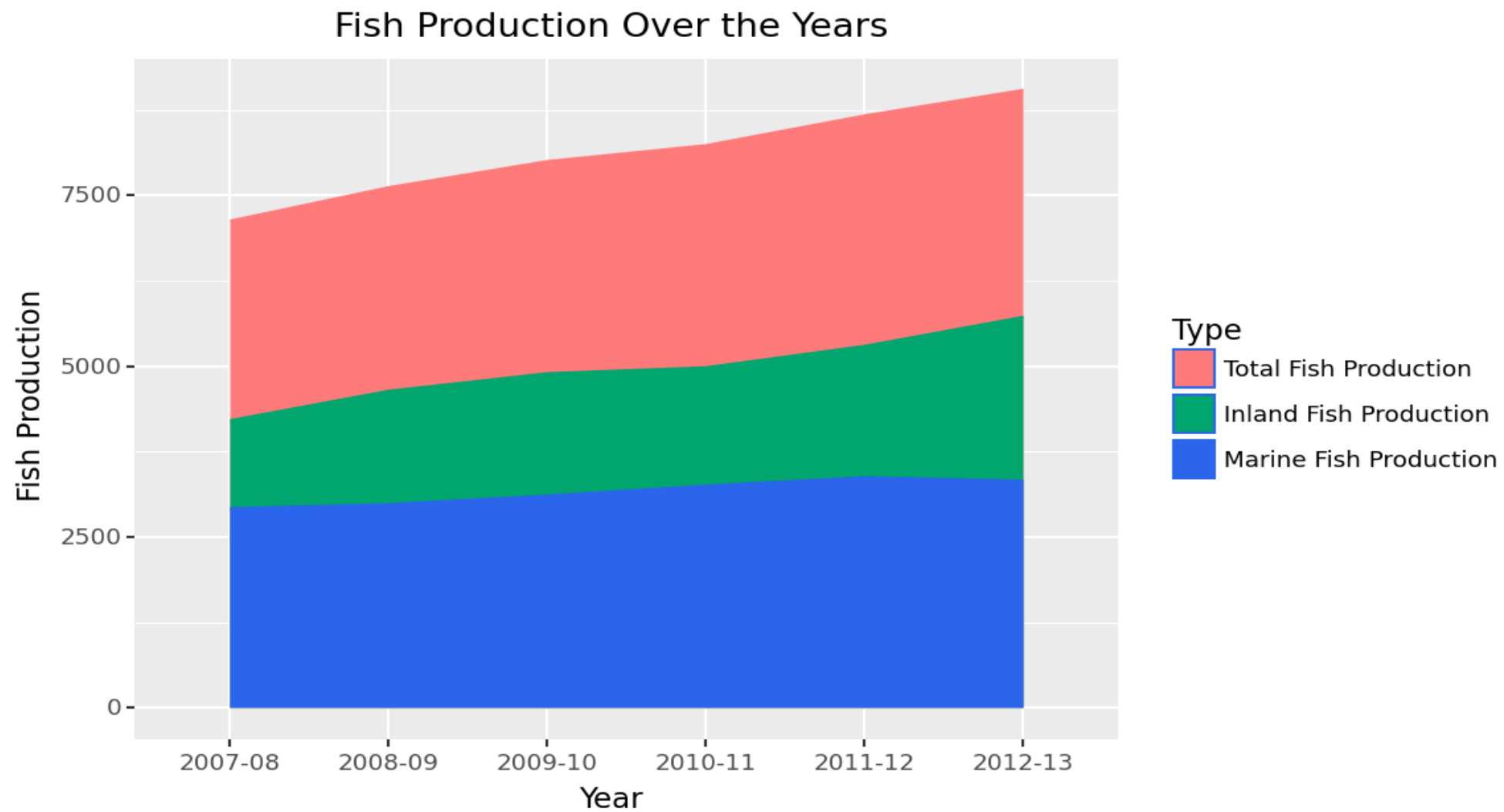
Total Fish Production of the states/UTs over the years



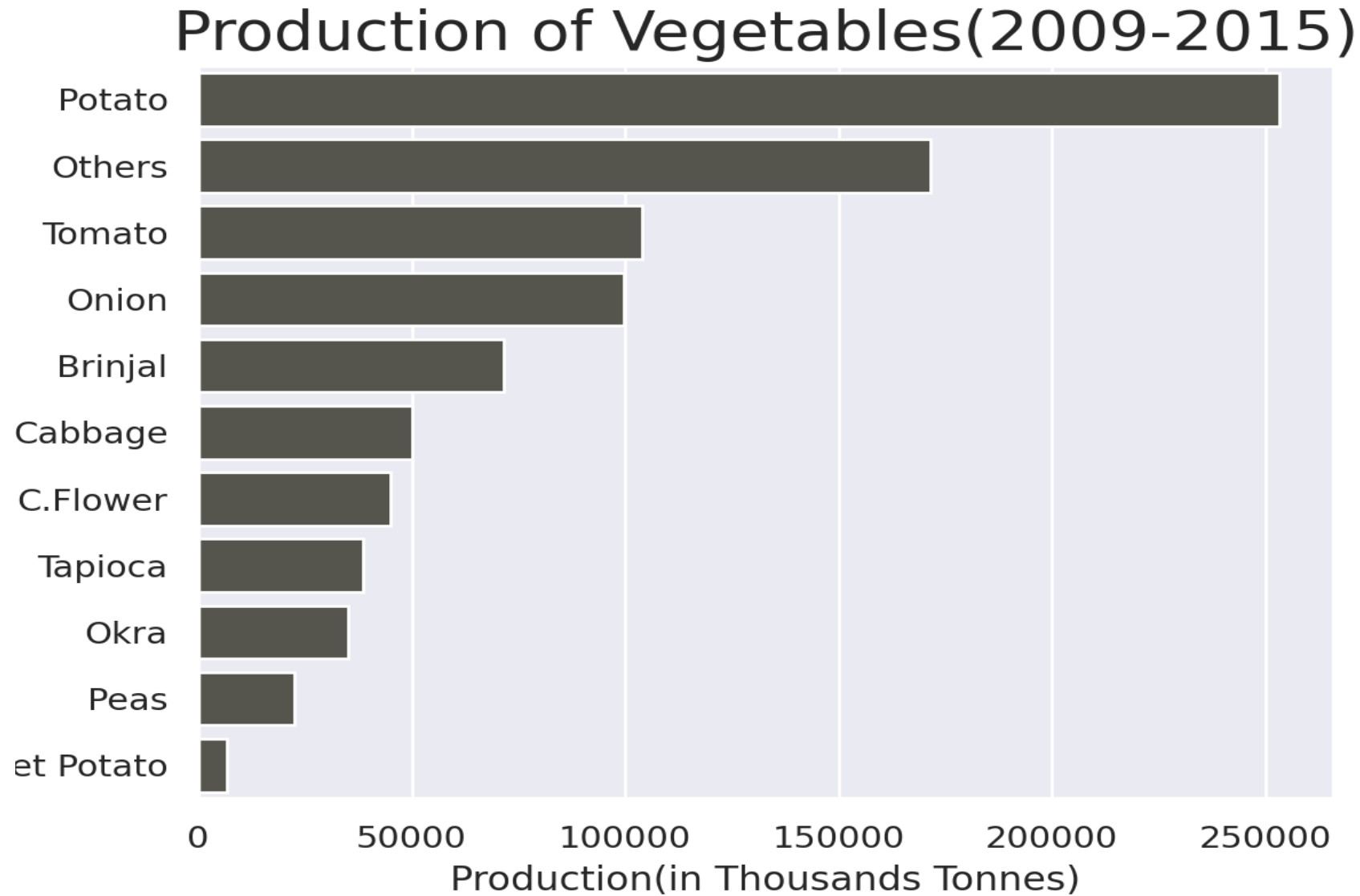
Total Fish Production



Fish Production Over the Years



Vegetable Production



Vegetable Production Over the Years

