Analysis on Suicides in INDIA

Importing required packages

In [141]:

```python
import pandas as pd
from matplotlib import pyplot as plt
import seaborn as sns
```

Dataset consisting of suicide cases from 2001 to 2012 in India

In [2]:

```python
ind=pd.read_csv('India/Suicides in India 2001-2012.csv')
ind
```

Out[2]:

	State	Year	Type_code	Type	Gender	Age_group	Total
0	A & N Islands	2001	Causes	Illness (Aids/STD)	Female	0-14	0
1	A & N Islands	2001	Causes	Bankruptcy or Sudden change in Economic	Female	0-14	0
2	A & N Islands	2001	Causes	Cancellation/Non-Settlement of Marriage	Female	0-14	0
3	A & N Islands	2001	Causes	Physical Abuse (Rape/Incest Etc.)	Female	0-14	0
4	A & N Islands	2001	Causes	Dowry Dispute	Female	0-14	0
...	...	...	...	...	...	...	...
237514	West Bengal	2012	Social_Status	Seperated	Male	0-100+	149
237515	West Bengal	2012	Social_Status	Widowed/Widower	Male	0-100+	233
237516	West Bengal	2012	Social_Status	Married	Male	0-100+	5451
237517	West Bengal	2012	Social_Status	Divorcee	Male	0-100+	189
237518	West Bengal	2012	Social_Status	Never Married	Male	0-100+	2658

237519 rows × 7 columns

In [3]:

```python
dl=['Total (All India)', 'Total (States)', 'Total (Uts)']
for i in dl:
    ind=ind[ind['State']!=i]
ind.reset_index(inplace=True)
ind.drop(columns=['index'],inplace=True)
```
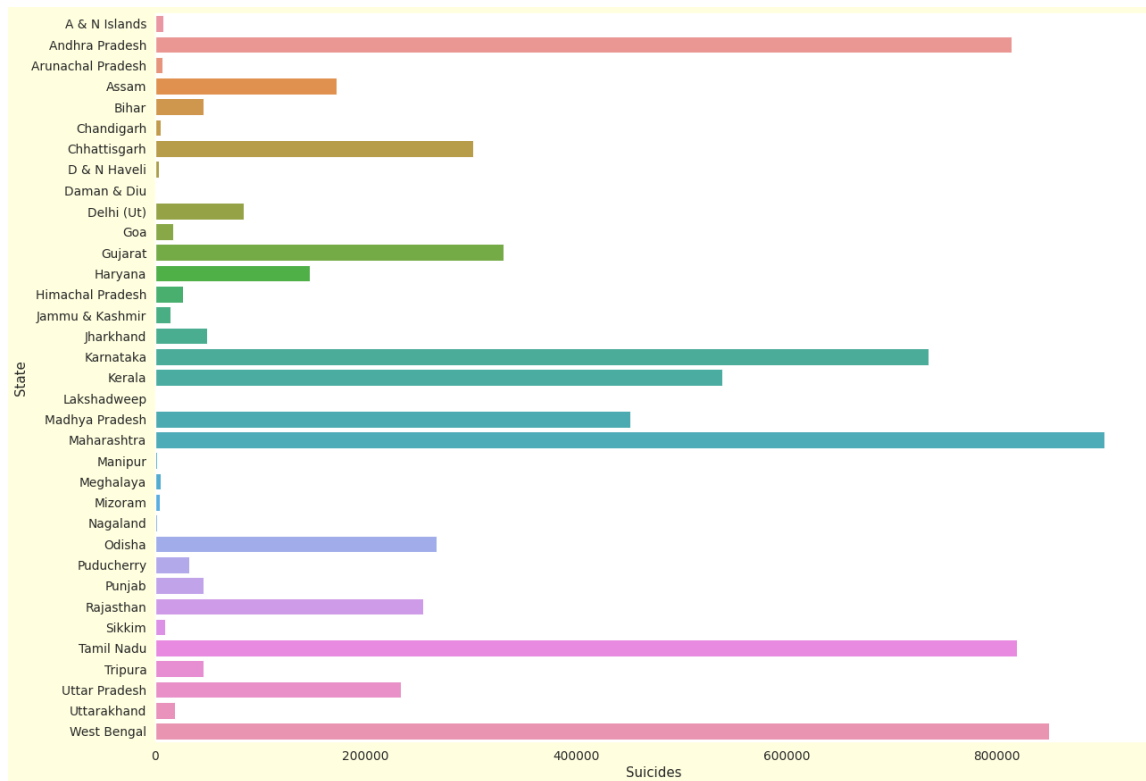
Analysis by State

In [84]:

```python
st=ind.groupby('State').agg('sum')
sns.set(rc={'figure.figsize':(20,15), 'axes.facecolor':'white', 'figure.facecolor':'lightyellow'}, font_scale=1.25)
state_analysis=sns.barplot(st['Total'], st.index)
state_analysis.set(ylabel='State', xlabel='Suicides')
```

Out[84]:

`[Text(0, 0.5, 'State'), Text(0.5, 0, 'Suicides')]`

- Maharastra is the top most state with a suicides count of nearly 900000+
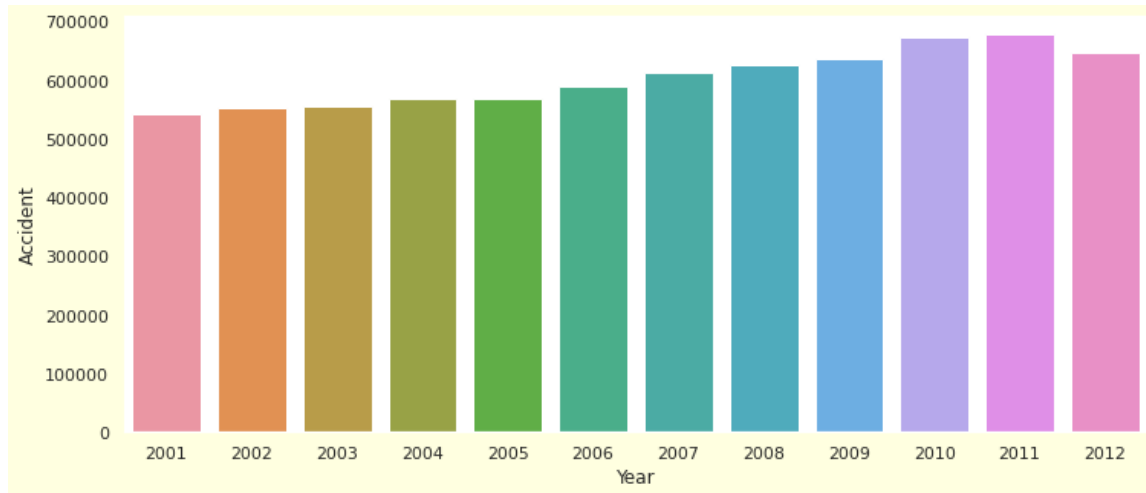- Followed by West Bengal, Andhra Pradesh and Tamil Nadu

Year wise Analysis

In [83]:

```
yr=ind.groupby('Year').agg('sum')
sns.set(rc={'figure.figsize':(12,5), 'axes.facecolor':'white', 'figure.facecolo
r':'lightyellow'})
year_analysis=sns.barplot(yr.index, yr['Total'])
year_analysis.set(ylabel='Accident', xlabel='Year')
```

Out[83]:

```
[Text(0, 0.5, 'Accident'), Text(0.5, 0, 'Year')]
```


- 2011 has highest suicide rate followed by 2010 and 2012

Other Factors

In [113]:

```
ind['Type_code'].unique()
```

Out[113]:

```
array(['Causes', 'Education_Status', 'Means_adopted',
       'Professional_Profile', 'Social_Status'], dtype=object)
```
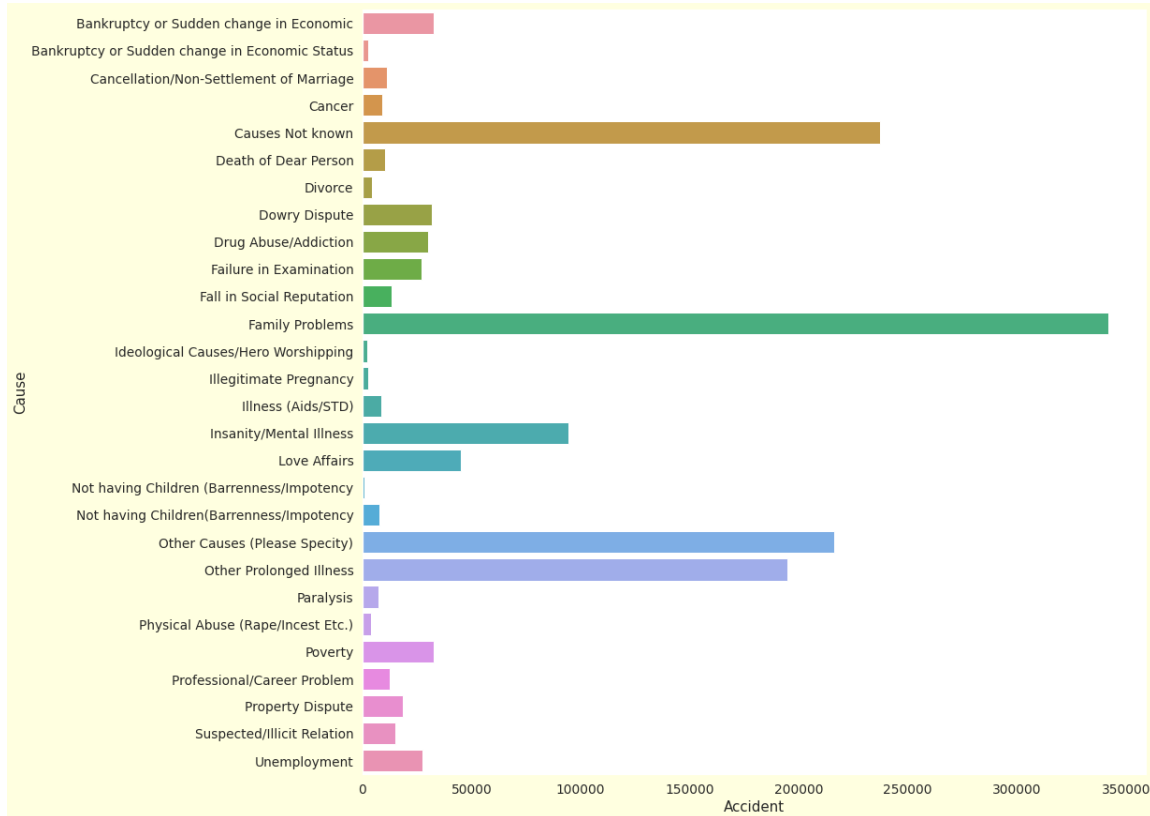
Cause

In [142]:

```python
cause=ind[ind['Type_code']=='Causes']
tp=cause.groupby('Type').agg('sum')
sns.set(rc={'figure.figsize':(15,15), 'axes.facecolor':'white', 'figure.facecolor':'lightyellow'},font_scale=1.25)
type_analysis=sns.barplot(tp['Total'], tp.index)
type_analysis.set(ylabel='Cause', xlabel='Accident')
```

Out[142]:

[Text(0, 0.5, 'Cause'), Text(0.5, 0, 'Accident')]

- Most of the people commited suicide due to Family Problems

Educational Status

In [125]:

```
edu=ind[ind['Type_code']=='Education_Status']
tp=edu.groupby('Type').agg('sum')
sns.set(rc={'figure.figsize':(15,4), 'axes.facecolor':'white', 'figure.facecolo
r':'lightyellow'},font_scale=1.25)
type_analysis=sns.barplot(tp['Total'], tp.index)
type_analysis.set(ylabel='Qualification', xlabel='Accident')
```

Out[125]:

[Text(0, 0.5, 'Qualification'), Text(0.5, 0, 'Accident')]
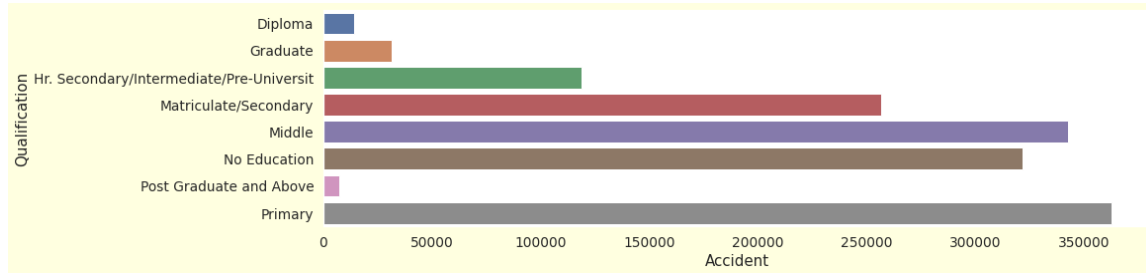
- Primary Educated people are committing more suicides

Methods used to Suicide

In [132]:

```
means=ind[ind['Type_code']=='Means_adopted']
tp=means.groupby('Type').agg('sum')
sns.set(rc={'figure.figsize':(15,8), 'axes.facecolor':'white', 'figure.facecolo
r':'lightyellow'},font_scale=1.25)
type_analysis=sns.barplot(tp['Total'], tp.index)
type_analysis.set(ylabel='Method', xlabel='Accident')
```

Out[132]:

[Text(0, 0.5, 'Method'), Text(0.5, 0, 'Accident')]
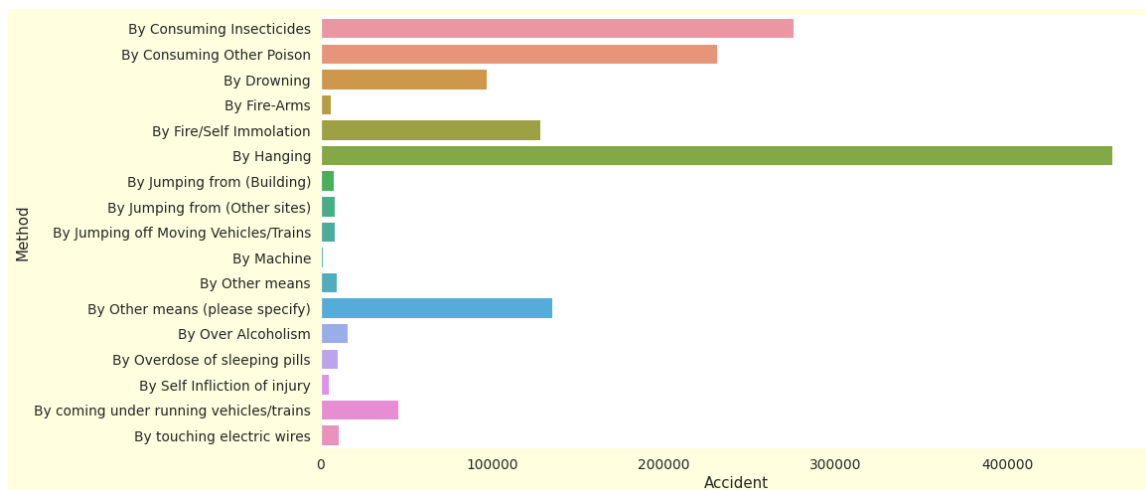

- Many people died by hanging themselves

Professional Status

```
prof=ind[ind['Type_code']=='Professional_Profile']
tp=prof.groupby('Type').agg('sum')
sns.set(rc={'figure.figsize':(15,5), 'axes.facecolor':'white', 'figure.facecolo
r':'lightyellow'},font_scale=1.25)
type_analysis=sns.barplot(tp['Total'], tp.index)
type_analysis.set(ylabel='Profession', xlabel='Accident')
```

Out[136]:

[Text(0, 0.5, 'Profession'), Text(0.5, 0, 'Accident')]
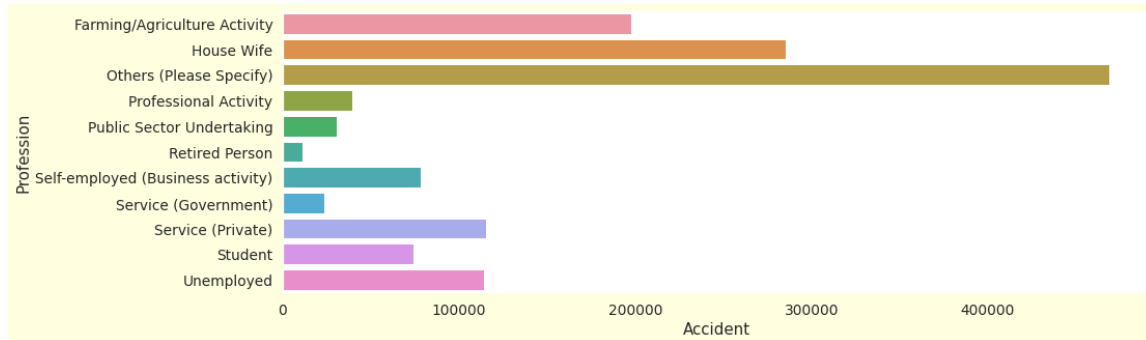
- Suicides are not mainli dependent upon a profession
- Other than that House wifes are top in committing suicides
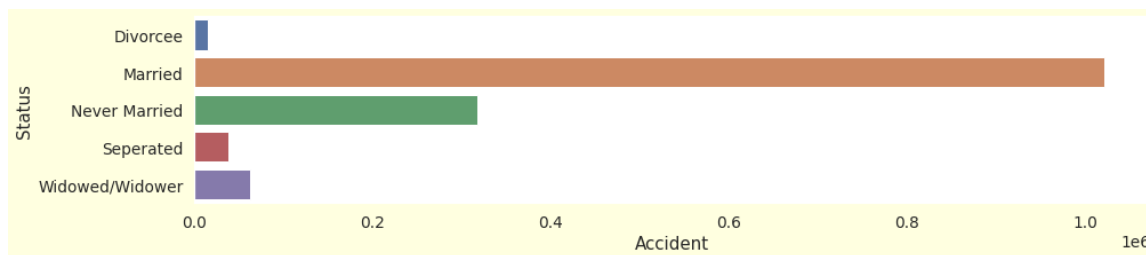
Social Status

In [140]:

```
status=ind[ind['Type_code']=='Social_Status']
tp=status.groupby('Type').agg('sum')
sns.set(rc={'figure.figsize':(15,3), 'axes.facecolor':'white', 'figure.facecolo
r':'lightyellow'},font_scale=1.25)
type_analysis=sns.barplot(tp['Total'], tp.index)
type_analysis.set(ylabel='Status', xlabel='Accident')
```

Out[140]:

[Text(0, 0.5, 'Status'), Text(0.5, 0, 'Accident')]

- Married persons are comitting more suicides.

Gender

In [151]:

```python
female=ind[ind['Gender']=='Female']
female=female.groupby('Year').agg('sum')
male=ind[ind['Gender']=='Male']
male=male.groupby('Year').agg('sum')

g=plt.figure(figsize=(15,8))
plt.scatter(male.index, male['Total'], color='red', label='Male death rate')
plt.scatter(female.index, female['Total'], color='blue', label='Female death rat
e')
plt.plot(female.index, female['Total'])
plt.plot(male.index, male['Total'])
plt.legend()
x=plt.gca()
x.set_facecolor('white')
x.yaxis.label.set_color('lightyellow')
x.xaxis.label.set_color('lightyellow')
```
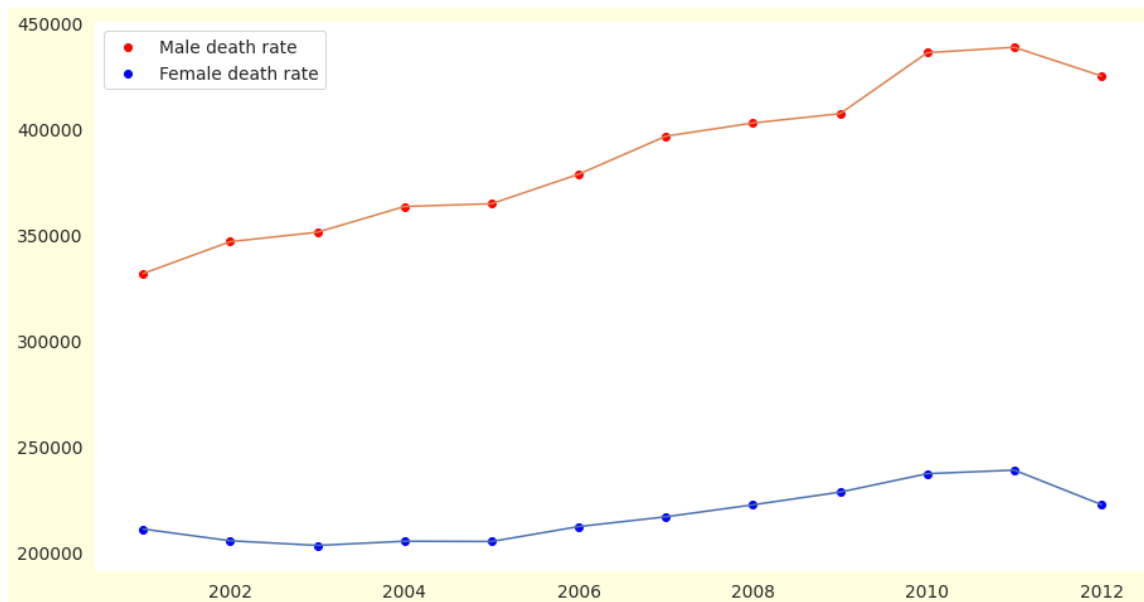

- Male death rate is higher compared to Female