

An Analysis of Illegal Cheetah Trade (2010-2019)

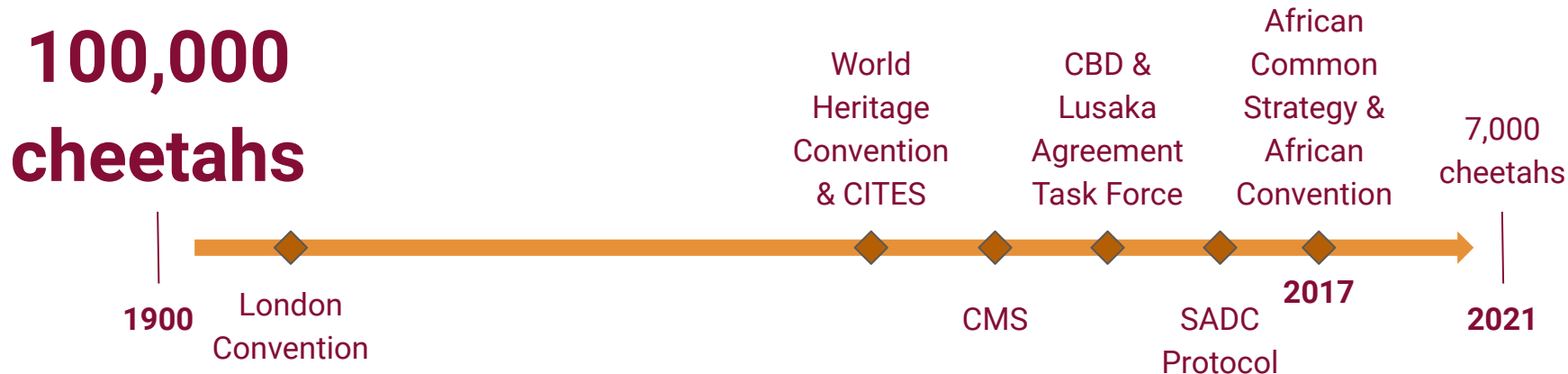
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Background

The global cheetah population has lost 93% of its members - from 100,000 in 1900 to only 7,000 today

- Illegal cheetah trade for exotic pets is the greatest threat impacting population decline today
- Conservation efforts such as the *African Convention* are widely ineffective, as illegal trade has thrived in the past decade
- Despite a decline of incidents over the past 5 years, it remains unclear if the situation has improved or if traffickers are avoiding detection by authorities



Summary of Data Sources

The global dataset for seized and non-intercepted illegal cheetah trade represents:

- Incidents collected from 2010-2019
- 1,884 illegal trade incidents
- 4,000 cheetahs or cheetah parts
- Over 56 countries represented
- Includes information about price, source of advertisement/report and country involved

Orientation to
Data and
background

Data overview and cleanup

Parsed date fields, filtered by report reliability
Extracted pricing information out of free-text field

Initial insights

Identified trends in trade activity

Answer the
primary
question

Core Data Analysis and Visualization

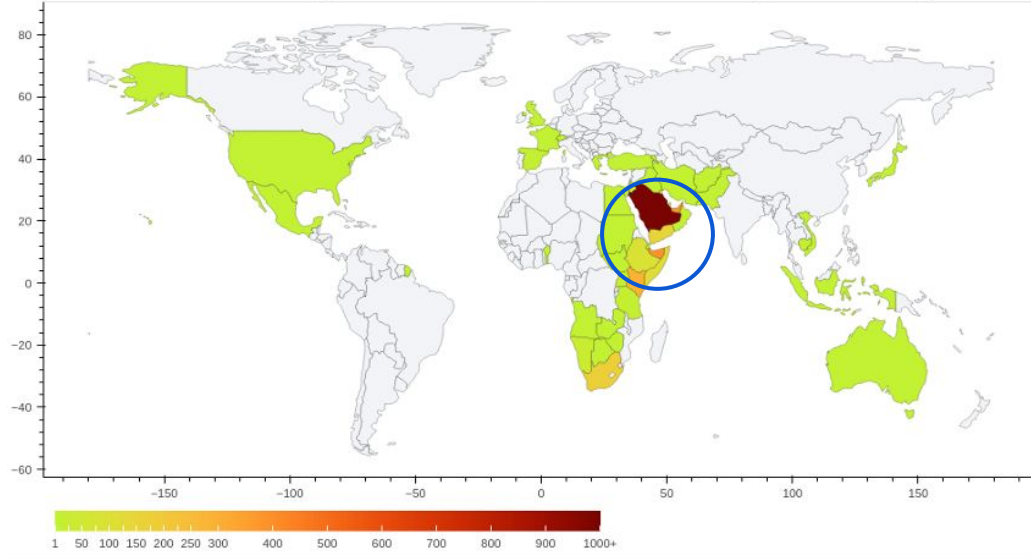
Formed hypothesis that the dataset may hold underlying insights into true impact of regulations

Conclusions

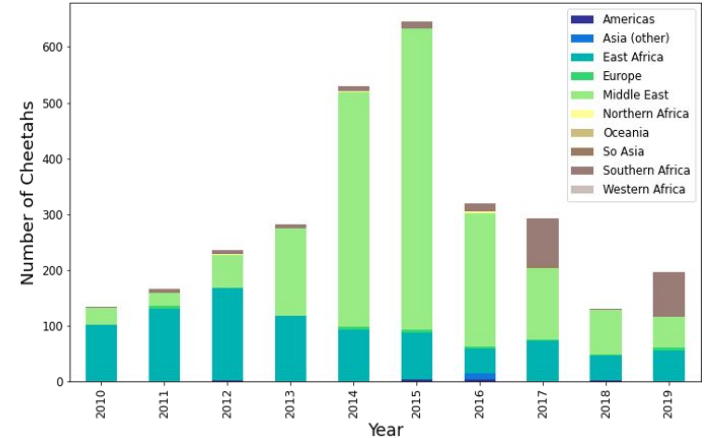
Further insights support hypothesis

Initial Findings

Number of Illegal Cheetahs Traded by Country



Number of Cheetahs by Region by year

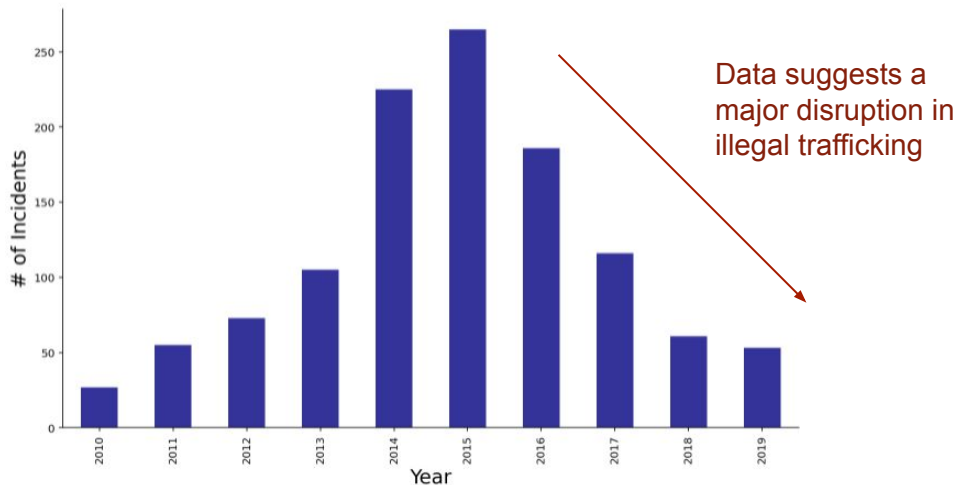


Decrease in number of cheetahs traded, but does this really indicate that regulations were effective?

Supply & Demand's Impact on Cheetah Pricing

We can validate these findings by analyzing cheetah prices over time. If supply has been successfully disrupted, we should see prices rising...

Global Cheetah Trafficking Incidents By Year



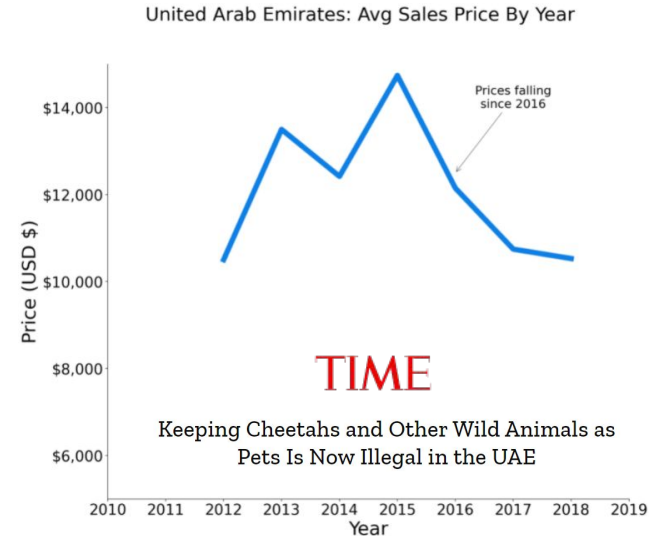
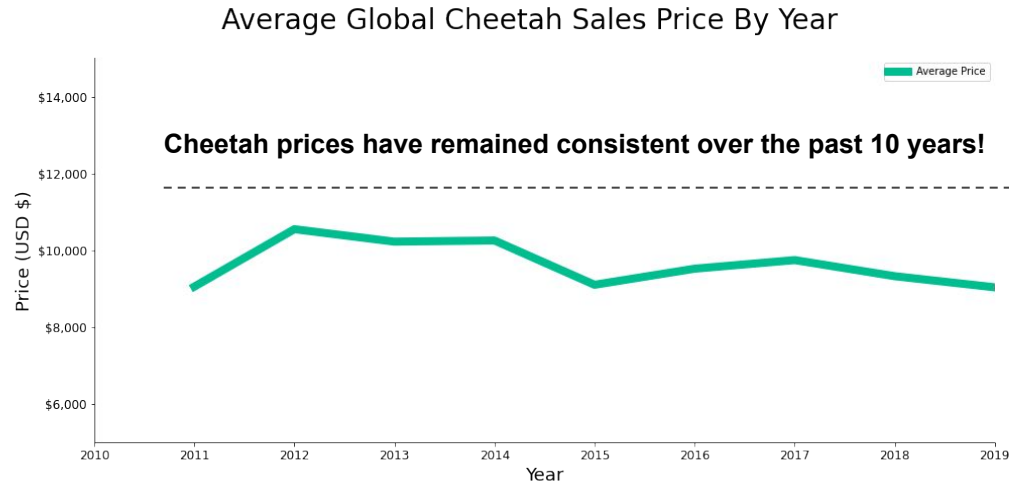
How'd We Do It?

- Regular expressions to extract pricing from incident descriptions.
- Currency valuation changes could be a problem so we developed a function to convert all prices to USD based on historical exchange rates

...What did we find?

Supply & Demand's Impact on Cheetah Pricing

The results suggest an entirely different story. Despite new regulations, experts claim a significant amount of Cheetah trade continues to occur. The United Arab Emirates may be an exception.



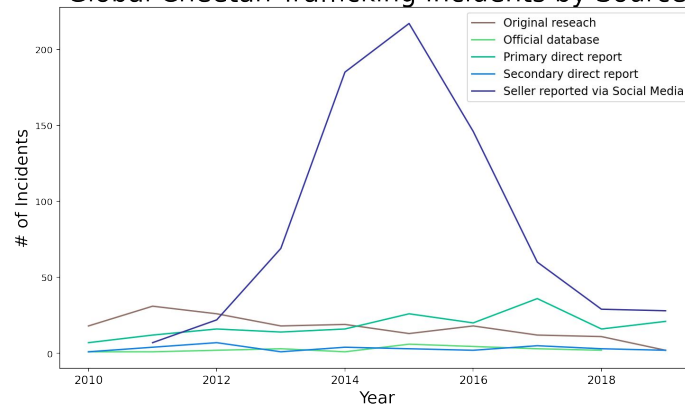
So what explains our initial findings that the trafficking problem increased significantly between 2010-2015 and improved in recent years?

Incident Sources and the Role of Social Media

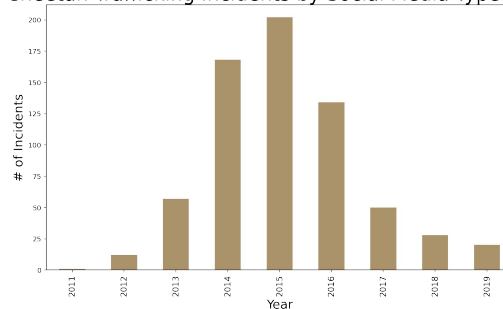
The dramatic increase / decrease of illegal trafficking incidents is driven by social media use

- Original research, databases, and primary/secondary direct reports remain low contributors to total frequency of events
- Seller reported information (social media) saw swift growth from 2011-15 and decline from 2015-18
- The fact that social media is the main driver impacting the decline in incidents suggests that the situation may not be improving

Global Cheetah Trafficking Incidents by Source



Global Cheetah Trafficking Incidents by Social Media Type (Instagram)



Conclusions and Recommendations for the Future

- Unlikely that the drop in illegal trade incidents is true, more likely the result of under reporting
- Opportunities for effective regulation:
 - Is the price drop in the UAE a sign of an effective regulation reducing demand?
 - Opportunity to disrupt trade flow through Somaliland and Yemen
 - Further exploration of sources of advertisement utilized by sellers

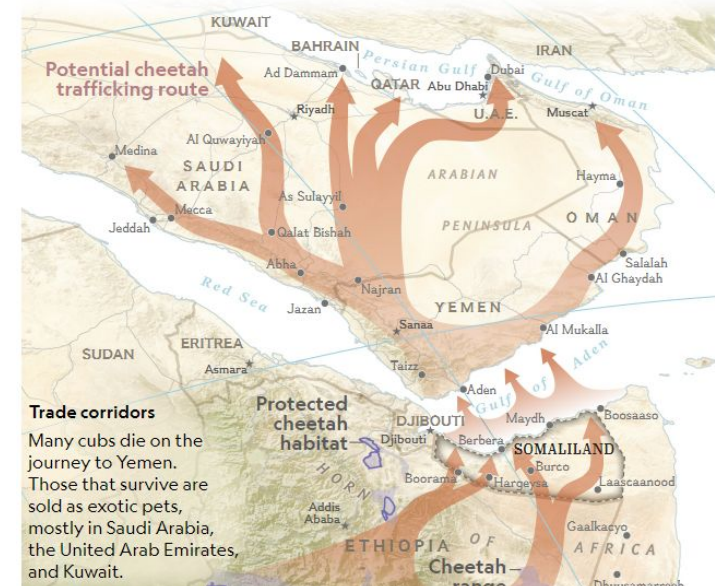


Image source:
<https://www.nationalgeographic.com/animals/article/how-trafficked-cheetah-cubs-move-from-the-wild-and-into-your-instagram-feed>