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Analysing wildlife trade industries for conservation: crocodilian skins

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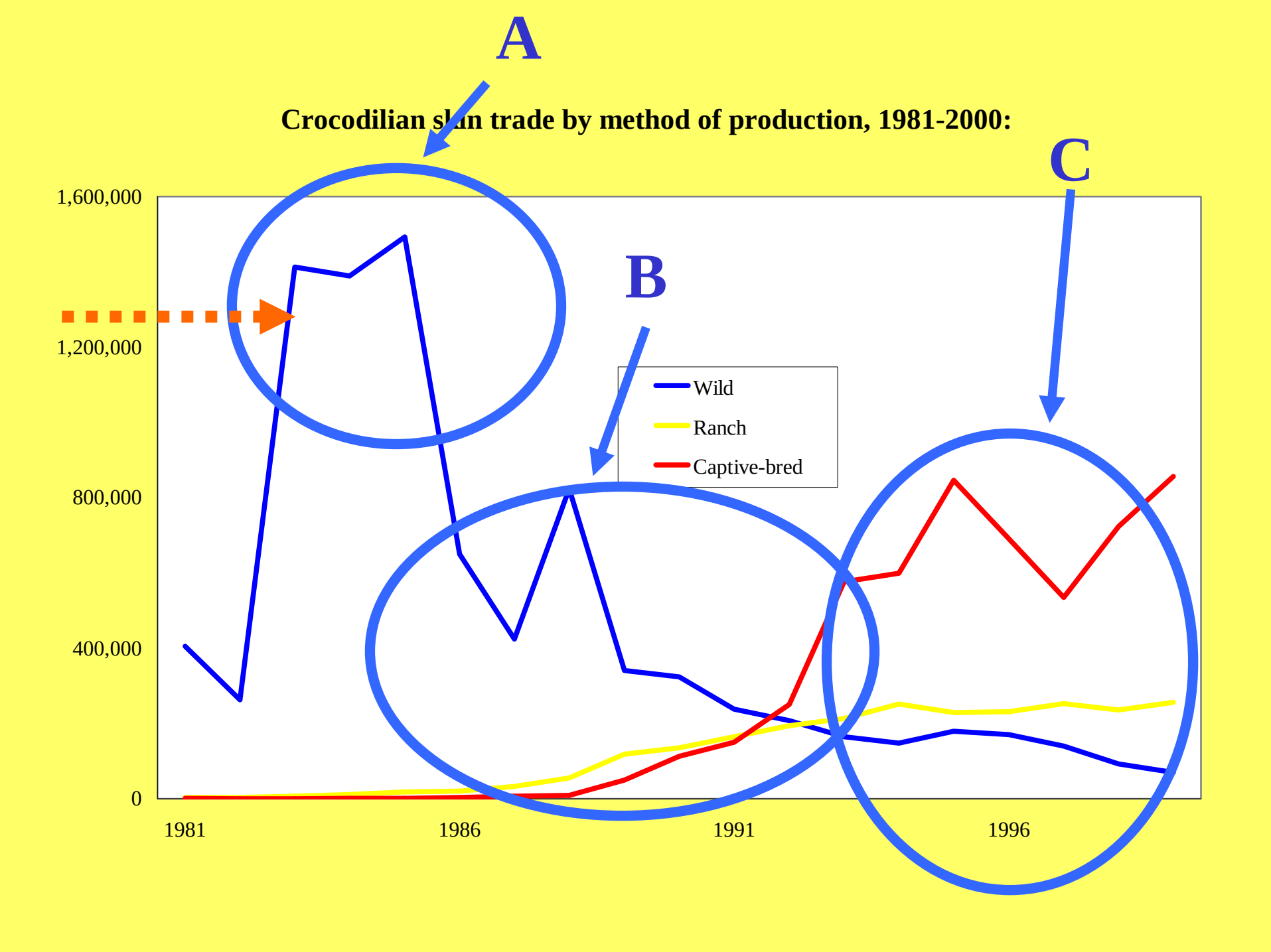
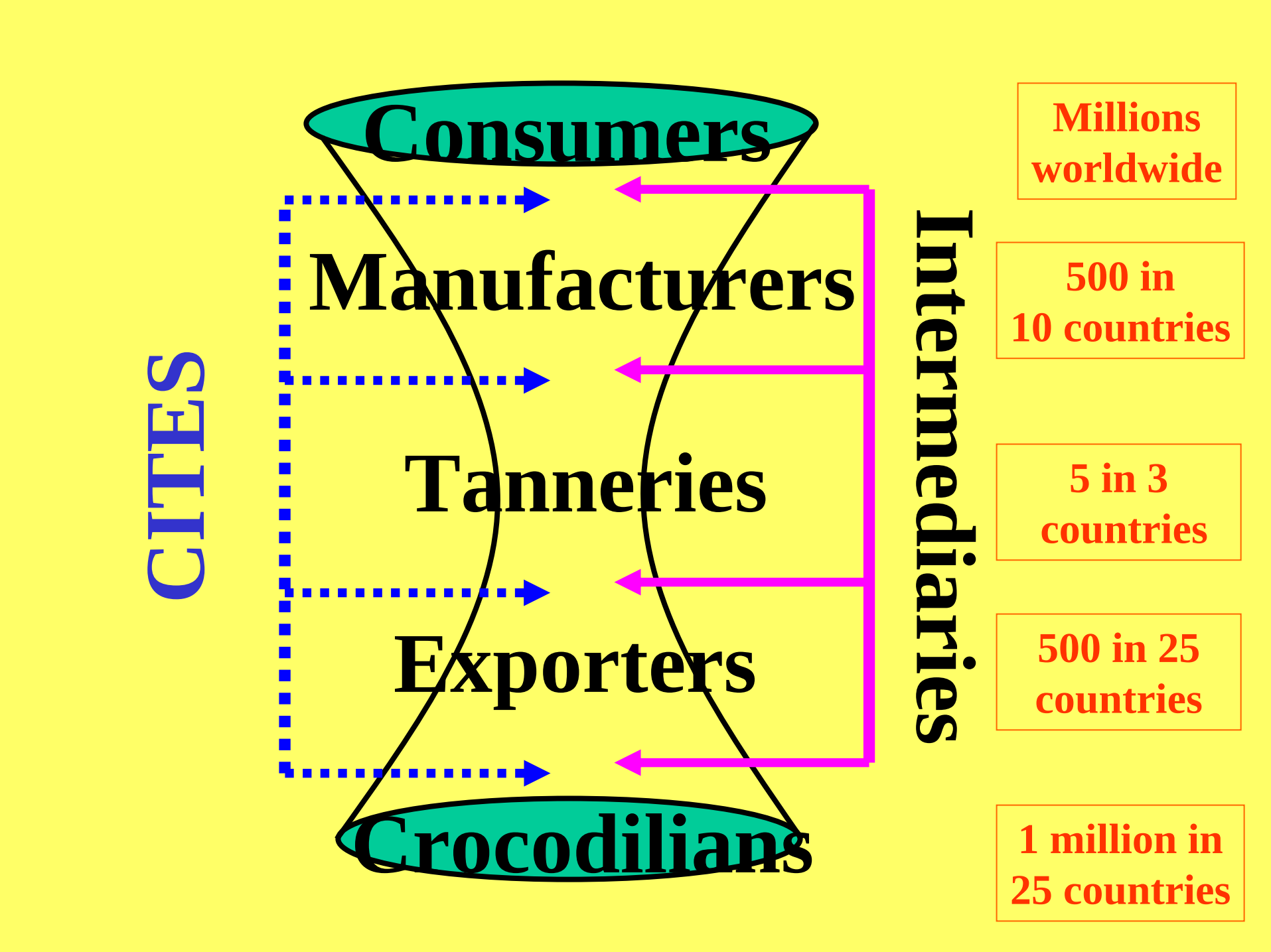
Crocodilian skin industry study

- Results of study for IUCN Crocodile Specialist Group
- Study examines the incentives inherent within the international trade
- One of the first systematic economic analyses of CITES-listed species
- Economists' hypothesis: Study of the industry's structural characteristics can provide compelling evidence of where 'power' originates as well as guidance over how to curb this for conservation ends
- Relevance to this meeting: Economic instruments aim to 'tweak' the incentives facing stakeholders in wildlife product chains associated with *in situ* production to develop and assure conservation as a natural economic outcome


A
B
C
Crocodilian skin trade by method of production, 1981-2000:
1,600,000
1,200,000
800,000
400,000
0
1981
1986
1991
1996
Wild
Ranch
Captive-bred


Consumers
Manufacturers
Tanneries
Exporters
Crocodilians
CITES
Intermediaries
Millions worldwide
500 in 10 countries
5 in 3 countries
500 in 25 countries
1 million in 25 countries

Implications

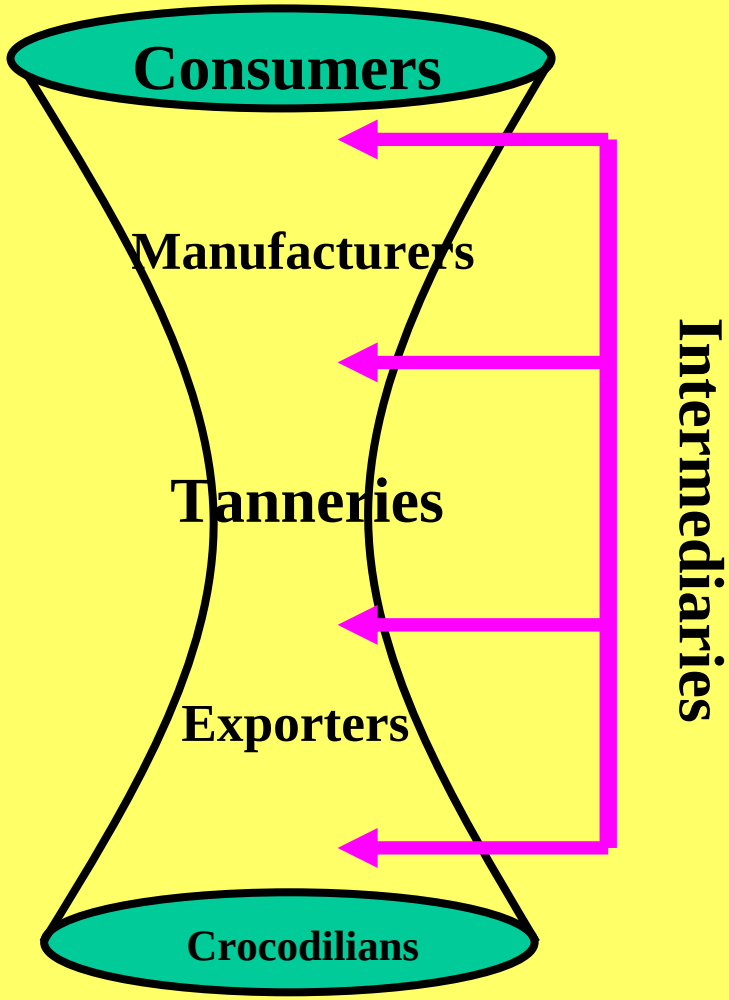
This structure implies:

- possibility of imperfections and inefficiency in the crocodilian skin trade
- strong risk that the transmission of price ‘signals’ along the length of the supply chain will be distorted
- Conservation: risk of profits being dissipated away from the resource, with other industry segments benefiting instead of the wild crocodilian resource

This point was recognised and noted in the presentation on the Economic Incentives working group

Why is there not a direct flow of price signal from consumer to producer?

- The trade chain is a series of contracts and relationships
- Decisions will be a factor of ‘power’ in the industry – ability to negotiate, access to finance, inventory,
- Speculation – skins are easily storable and value fluctuates
- Tanneries also process other exotic skins – ostrich, python, etc.
- Skins characteristics – size, quality, origin – have different characteristics in the trade
- Complex: but this does inform our design of economic instruments



Findings from crocodilian industry research

Some commonalities:

- For different skins (species, quality, origin), prices are common and the trade chain is similar
- Direct link to consumer confidence

Some differences:

- Different end products – different consumers, hence complex

Fashion

Is there a conservation impact of demand and fashion?

What does “luxury” mean for fashion?

Designers get ideas from film

There are several markets for all products: domestic; international commodity; international niche

How do these markets and values translate into conservation outcomes ?

Substitutes

- Other exotic skins – ostrich, snake, elephant, stingray, cow, toad, etc.
- How do these interact with crocodilian?
- Same tanneries, same retailers, often same manufacturers

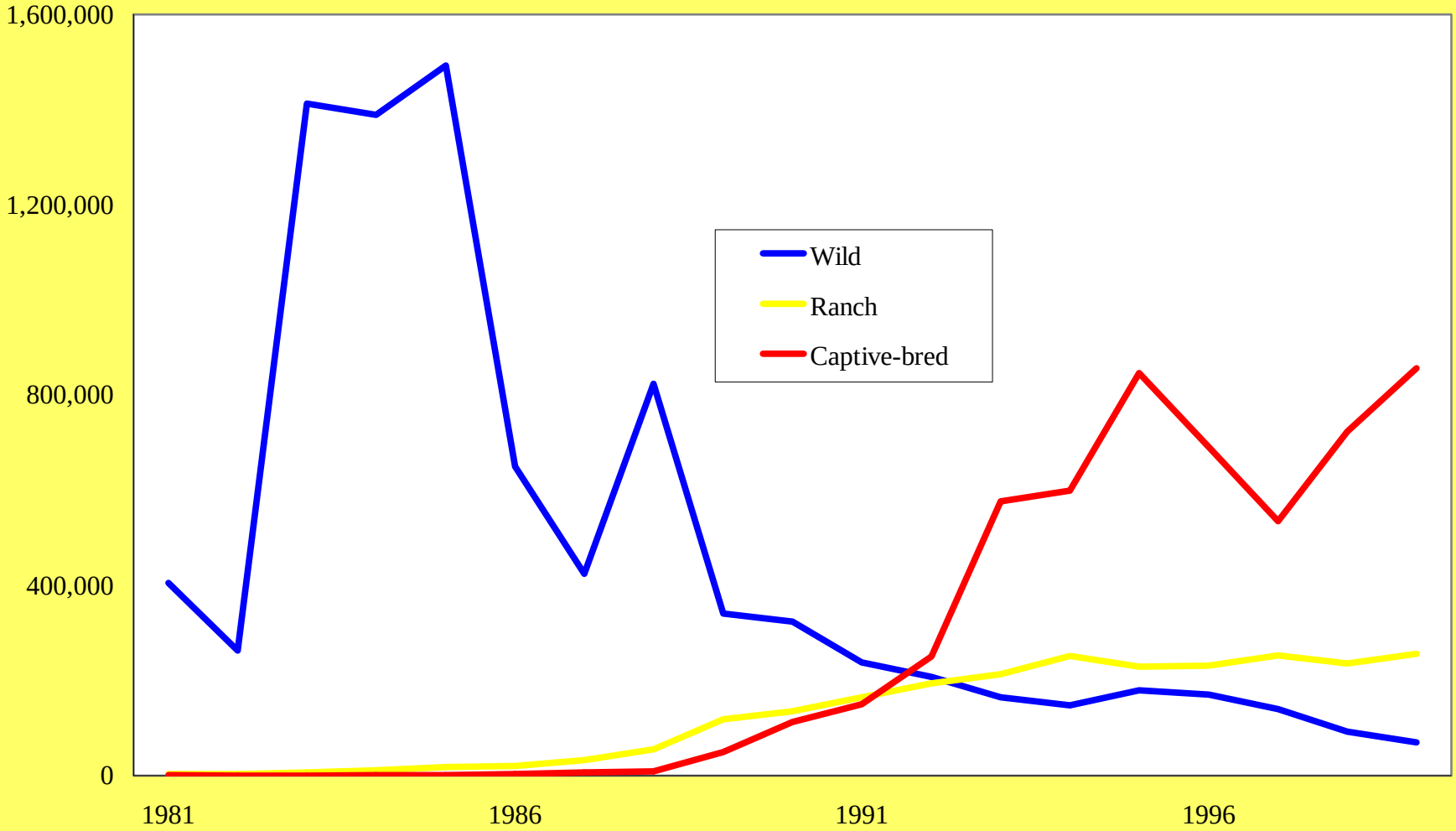
Source: *Bazaar* (Japan), December 2002

Captive breeding and conservation

Economic characteristics of trade

- Increased from nothing to dominating supply today
- Evidence of price synchrony among all skins in trade
- How high is global demand for crocodilian skins?
- Is captive breeding an ambiguous development for conservation?

Crocodilian skin trade by method of production, 1981-2000:



Long-term implications of captive-bred skin supply for the industry

Main impact on the industry of captive-bred skins: <u>ensuring certainty of supply</u> – hence, diminishing uncertainty/ risk and increasing economic efficiency of trade. Likely economic impacts:

- *increased price competition* as economies of scale and technology are realised by larger producers. Unit costs decrease and prices might fall
- *horizontal integration*: concentration of production and economic power among selected large-scale producers
- industry supply becomes more certain and stable as disruptive factors such as climate are erased from the production equation, technology is more important
- *comparison*: domestication increases specialisation and homogenisation of supply units, increasing the potential for comparison between the products of different producers – possibly increasing production efficiency and inevitably generating further price competition
- *vertical integration*: any reduction in the number of industry stakeholders in certain sectors will expedite communication between producers and downstream stakeholders

Potential long-term losers

- *smaller suppliers of captive-bred skins* to the industry fold as competition favours larger producers;
- *suppliers of wild-harvested skins* to the industry *could* suffer a contiguous downward spiral in value. Synchronous fluctuations in value forewarn of cross-price effects: if supply-led effects of captive-bred skins affects its *own* market value in the short-term, this could affect the value for *all* crocodilian skins
- *livelihoods* of those stewards of wild crocodilian resources
- *intermediaries* will be needed less, because fewer transactions will be executed between fewer industry stakeholders.
- *range states* without access to the technology to take full advantage of specialisation and economies of scale.
- *illegal trade* market consolidation would reduce enforcement costs and possibly raise standards in a sector with fewer stakeholders

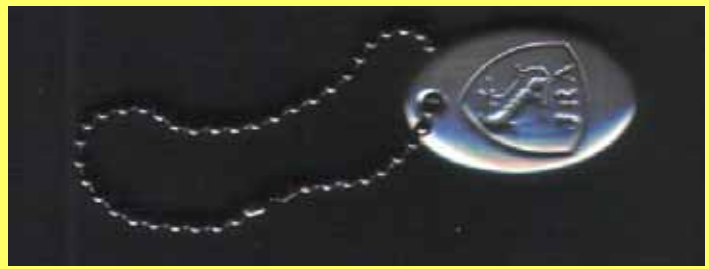
Full paper: http://biodiversityeconomics.org/

Fashion

Economic analysis can help you understand why particular outcomes occur

Combined with livelihoods and conservation information

Tanneries



CITES and market mechanisms