

IWC/S15/ASW/9

Hunting in the Amazon Basin: inputs for management and sustainability in a changing world

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INTERNATIONAL
WHALING COMMISSION

HUNTING IN THE AMAZON BASIN: INPUTS FOR MANAGEMENT AND SUSTAINABILITY IN A CHANGING WORLD



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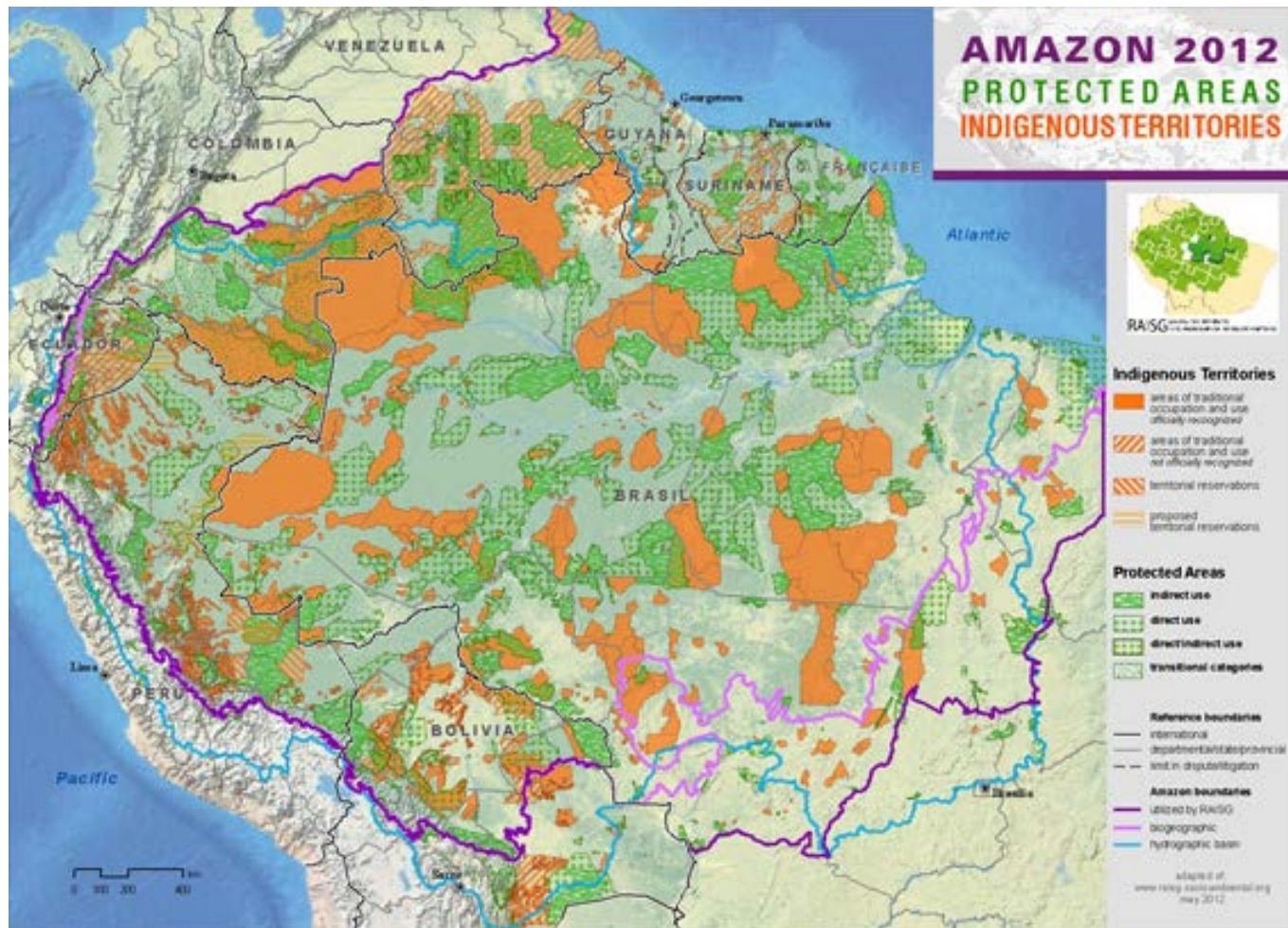


The Amazon

- 7 million of Km²
- The river Amazon and >1000 tributaries
- Severe weather conditions (87% humidity, 30° C)
- Dramatic changes of the landscape (Flooded pulses)
- About one million of indigenous people living in low densities
- Isolated communities in many cases only connected by rivers

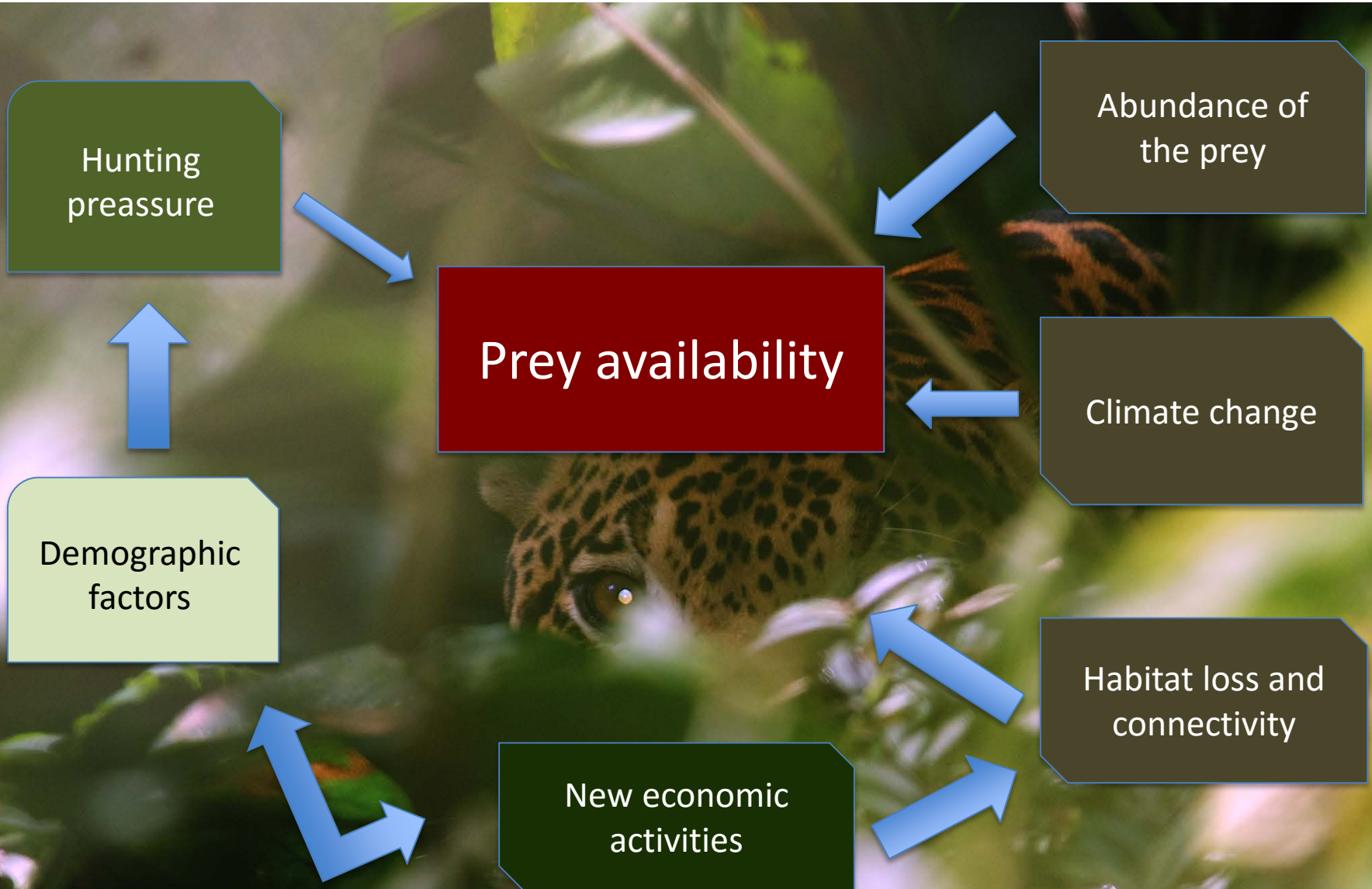


Tom Koene



- About 14.000 years of human presence
- Large indigenous Reserves and protected areas
- Difficult conditions for agriculture
- Limited food availability
- Need of complementarity between hunting and fishing
- New economic models

Hunting



Target species

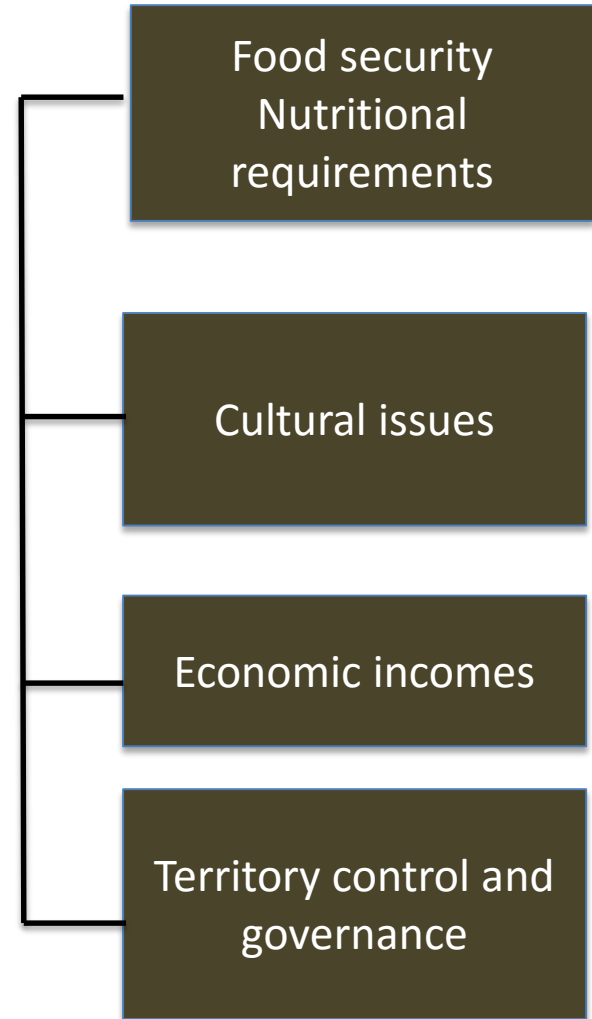
Large mammals



Medium and small size mammals



Additionally birds, reptiles and insects



Factors affecting the hunting

- Seasonality of prey availability
- Habitat loss and disturbance
- Technological improvements
- New economic activities in the region
- Demographic factors (growing human population).
Hunters should move far away from communities to find animals



F. Trujillo



Adriano Gamberini



Juan Forero



F. Trujillo

Seasonal changes and hunting and fishing opportunities



Low
water
period

Transitional
periods

High
water
period

Mammals close to
wetlands
Turtles nesting



Easy fishing



Fish migration

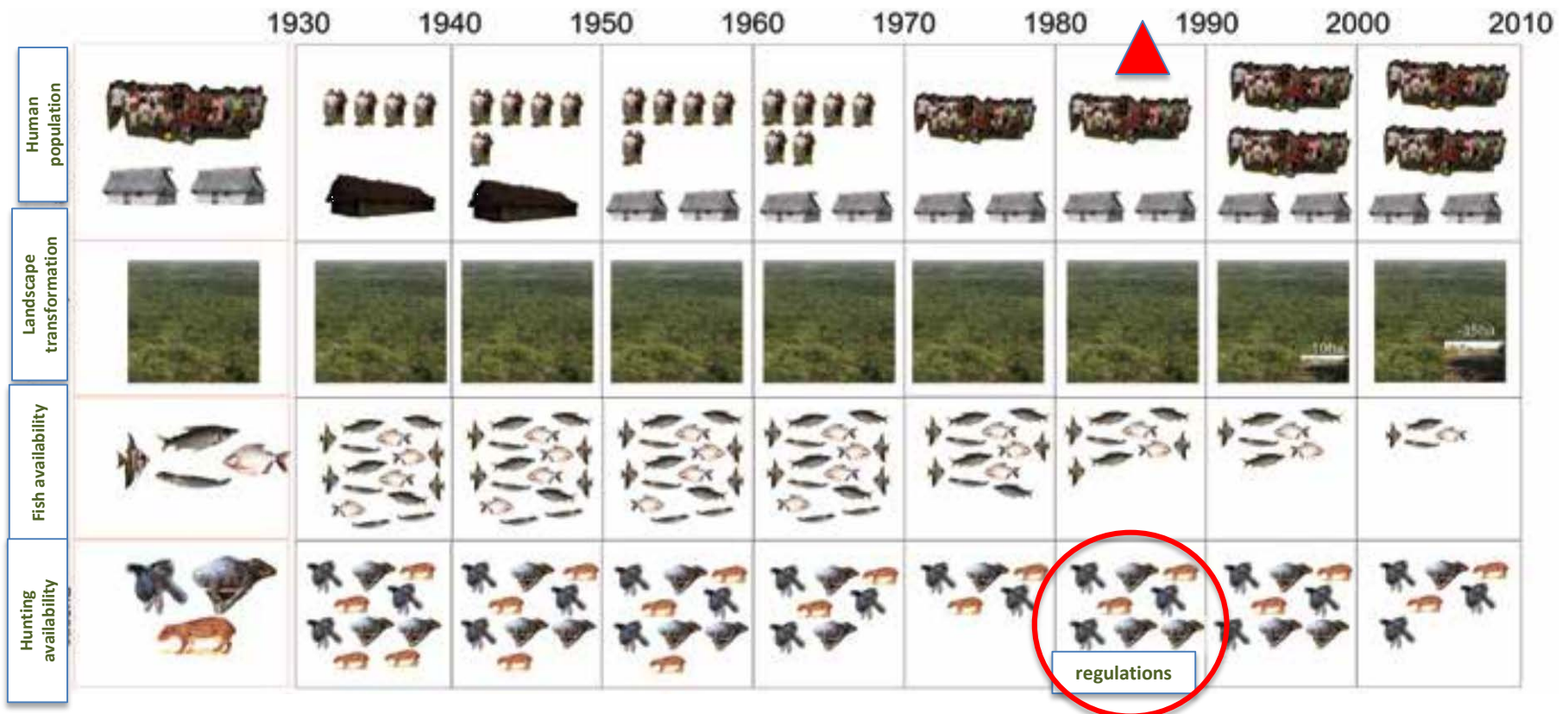
Mammals dispersed
Access to caimans



Fish dispersed

Changes along the years

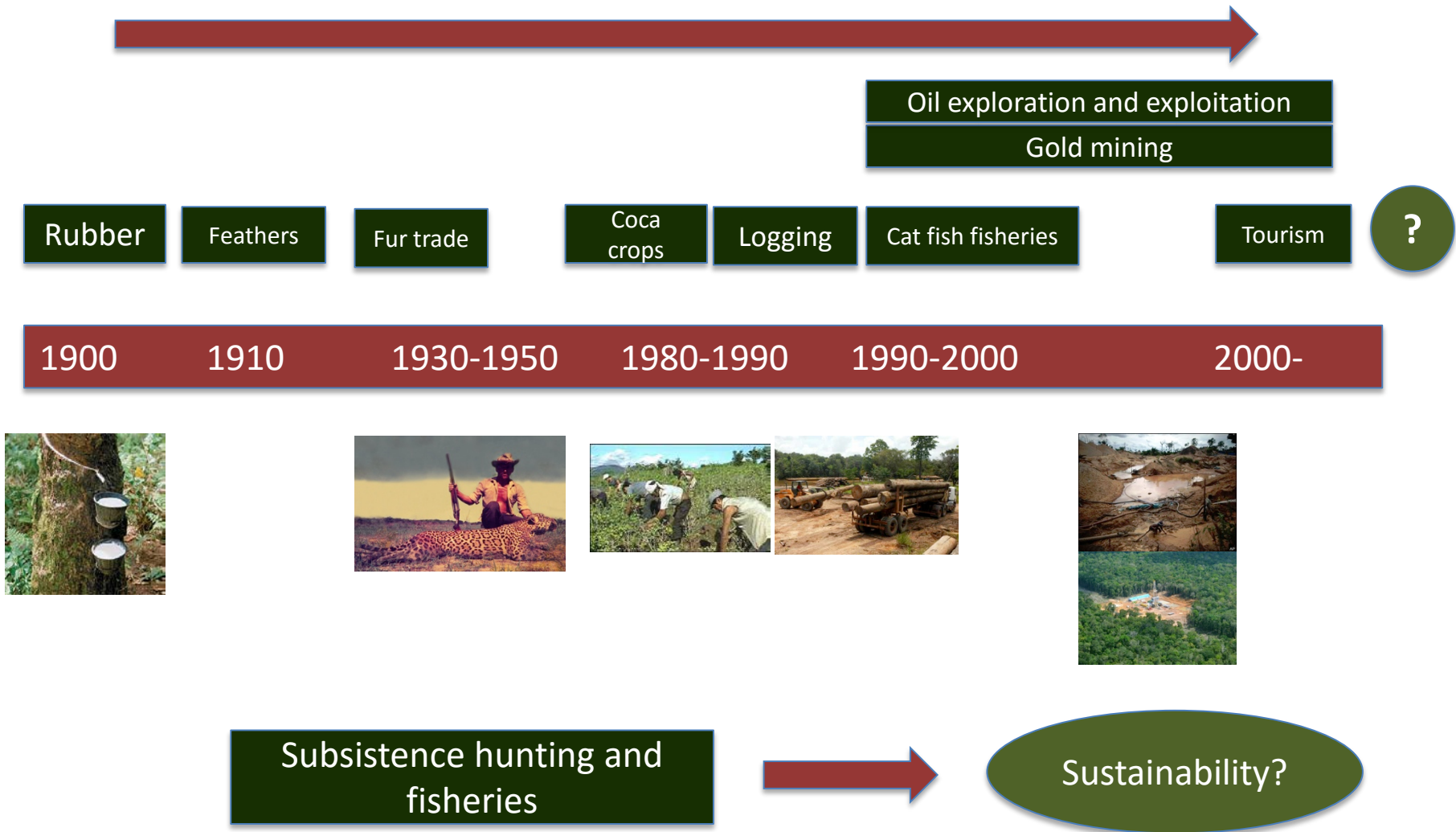
Puinawe and Piaroa pattern of availability of resources



▲ Outside religions coming to the area increase hunting pressure with new celebrations

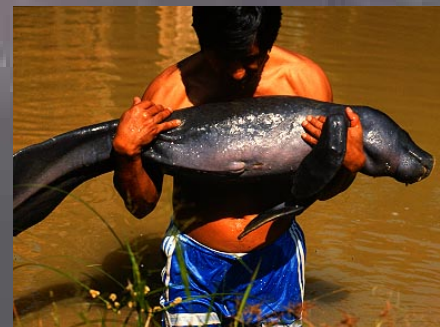
86% of indigenous of Latin-American rely on hunting for protein (Ojasti, 1993)

Economic pulses in the Amazon



Manatee hunting

- Historic captures and hunting
- High valuable aquatic mammal for river communities
- Specific hunting skills
- Knowledge about movements, feeding and daily patterns



- About 200.000 manatees hunted from 1943-1954
- Protected by law since 1969
- Declared as Endanger species
- Low densities of manatees induced disappearance of hunters.
- Young indigenous people have other interests and now there are very few hunters that are mainly focused on pirarucu fish



Subsistence

- In most Latin-American countries subsistence hunting is focused in the right of indigenous people and local communities to get protein access for their food security.
- The commercial hunting is prohibited and in many cases there are restrictions and bans for local people to sale surplus of hunting.
- Restrictions include the sale of parts of the animals (i.e. bones, fur, skin, claws, etc)



Cultural changes

- With the growing human population and consolidation of large villages and towns indigenous people got other external “needs”: salt, machetes, knives, pots, flashlights, shotguns among other). At the beginning the way to access this was with barter.
- The main principle of the hunting was also share in the communities. Today the sharing have a family approach rather than community one.
- During the last decade, the diversity of “needs” increase and include western goods such TV, Mobil phones, radios, tablets, etc.
- In this point the economic market created a need for money availability (i.e. schools)



-
- Indigenous communities are asking governments to allow the sale of hunting surplus to have access to other products and goods.
 - The main point of discussion is the sustainability of the hunting regarding the considerable increase of human populations (about 20 millions).
 - In most cases, the income generation for indigenous communities come from fisheries, agriculture, crafts and tourism.
 - In other cases the income is coming from illegal activities such as logging, gold mining and coca crops.



URBAN vs RURAL USE OF WILDLIFE

- Indigenous children in towns go to schools and in most cases get other cultural features. Dramatically they are losing their own culture and get a new one that do not include hunting or fishing skills.
- Indigenous leaders now are young people that may negotiate with the politic and economic values of the governments.
- Contact with urban lifestyles leads to increased dependency on goods and services
- Migrating groups often maintain a link to the forest through rural-urban networks.
- They start to look for other ways to live

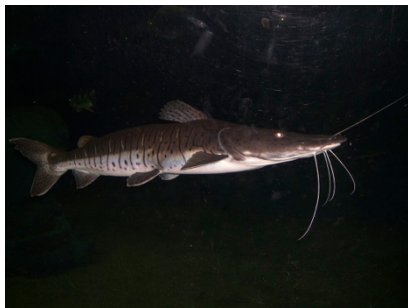


Fishing

- There are about 3.000 species of fish in the Amazon basin and at least 200 have commercial value.
- As the hunting, the fisheries are regulated for climate periods that induce large migrations of fish.
- Local riverine communities switch from hunting to fisheries according the the time of the year.
- Indigenous people prefer fish with flakes rather than cat fish. But the commercial fish corresponded to the last ones.

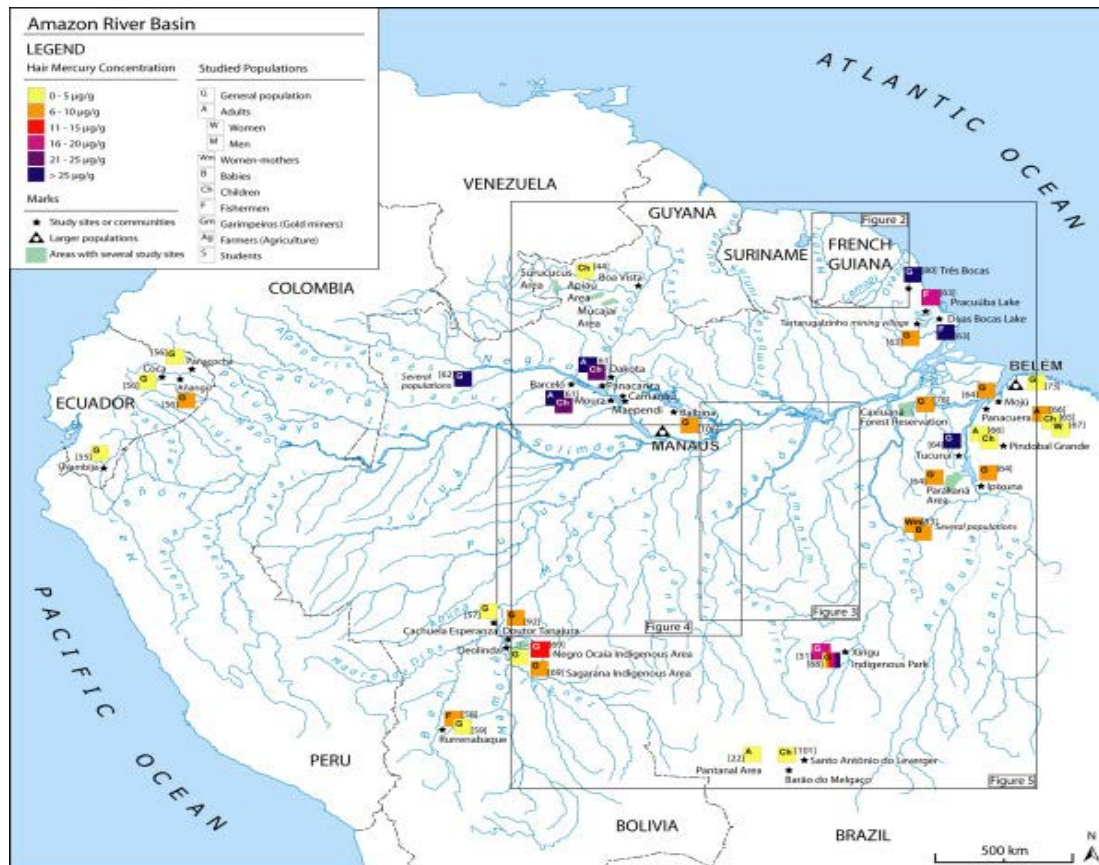


- A production of about 200.000 ton/year of fish is estimated in the Amazon basin.
- More than US\$100 millions per year is the income of commercial fisheries (Fischer *et al.* 1992).
- Many species showed overfishing patterns such as the case of large cat fish and the pirarucu (*Arapaima gigas*).
- With the collapse of cat fish fisheries the market moved to the species used for food security in the region.

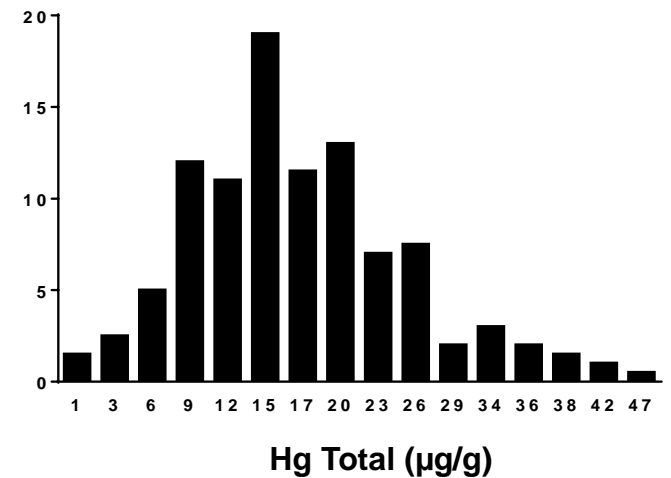
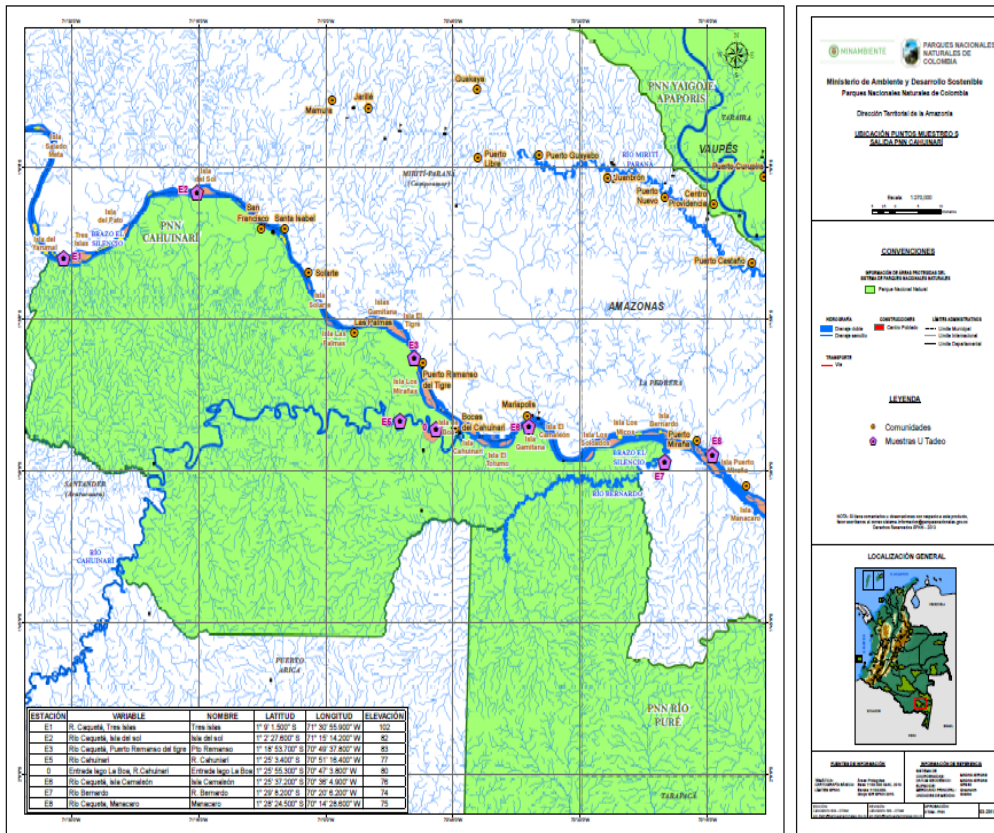


Safety of the fishing and Hunting

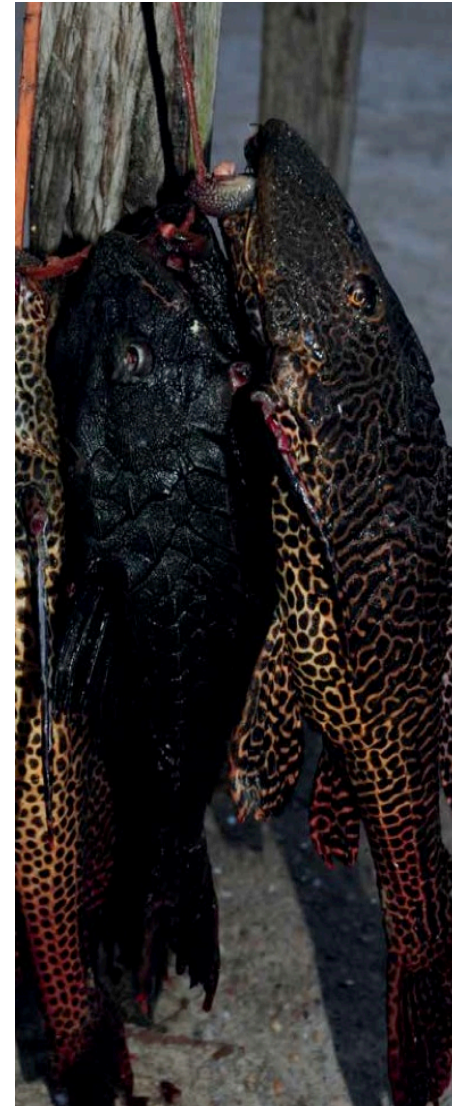
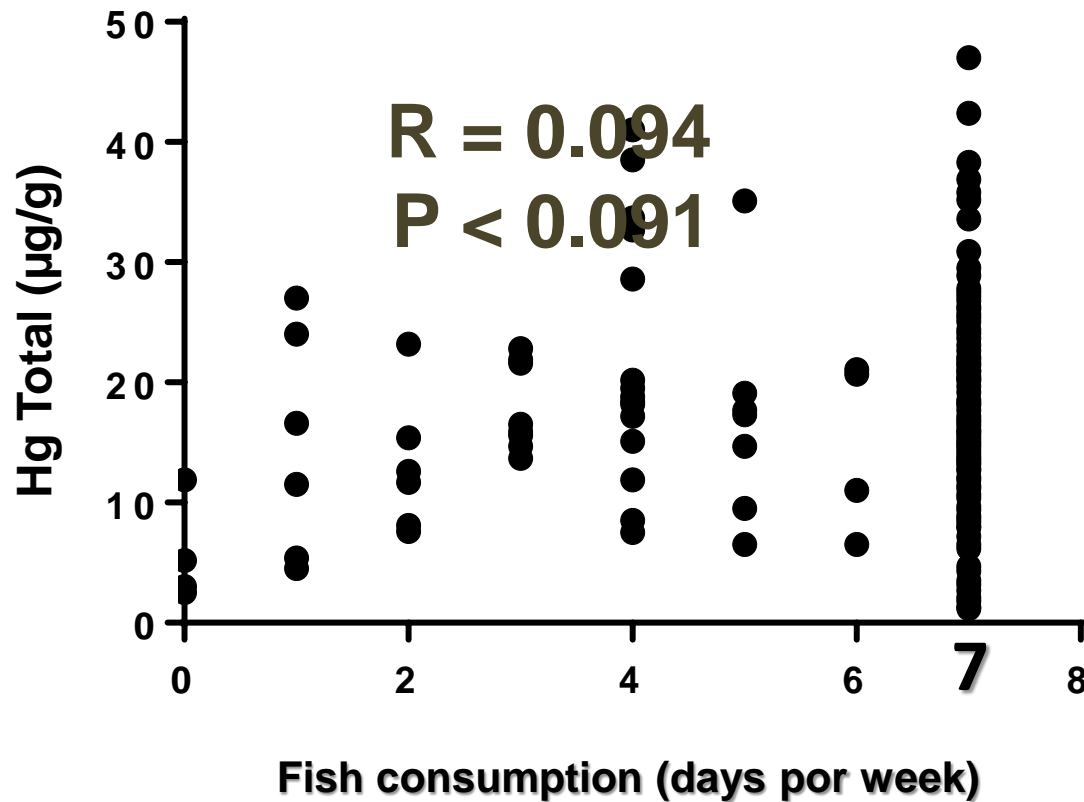
- Gold mining along four centuries and about 200.000 tons of mercury in the rivers, generating a dramatic pollution in the Amazon



The Caquetá River: a story of mercury pollution

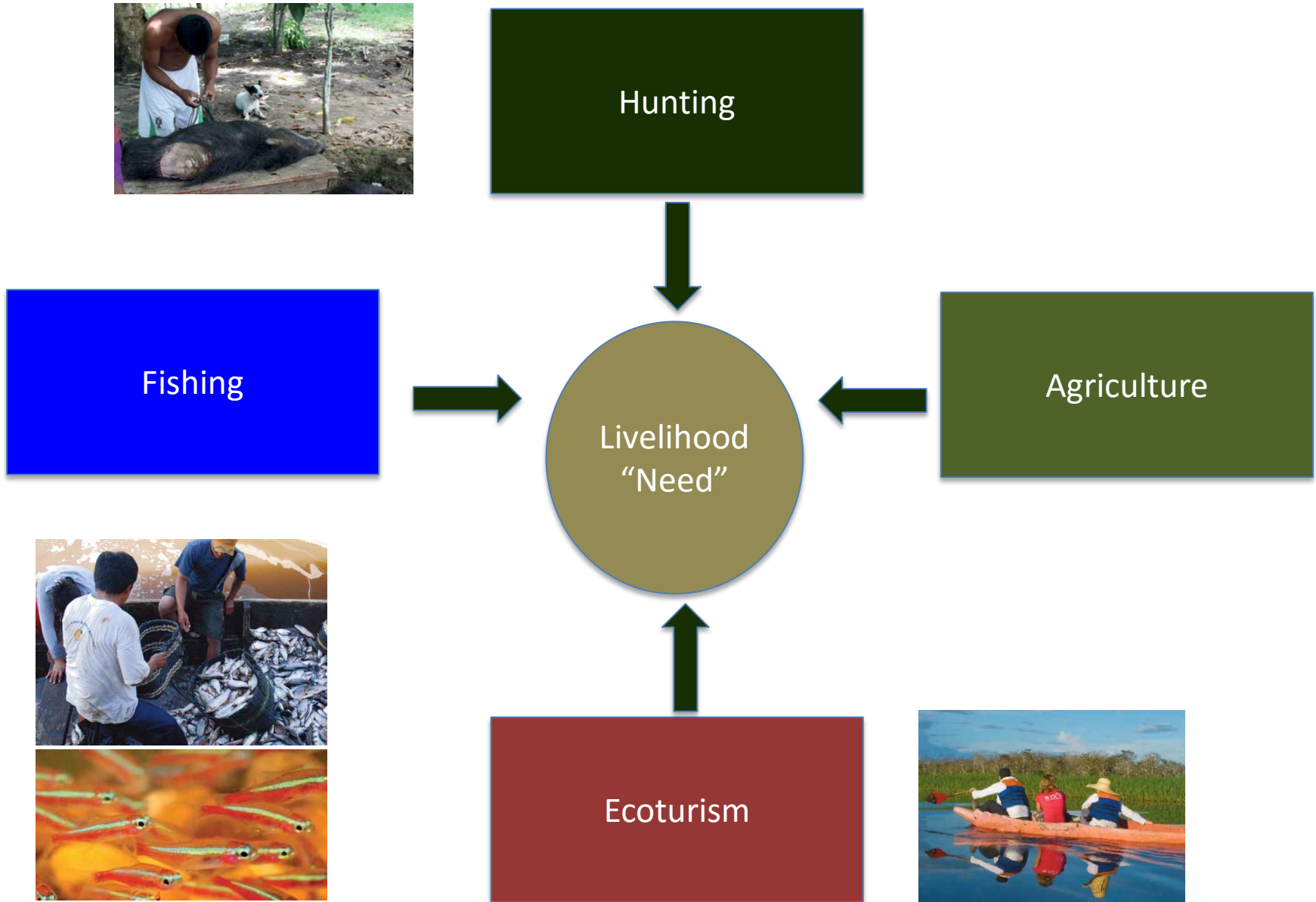


Fish consumption and mercury



It is fundamental that indigenous communities have access to safe food. It is a right

Need of complementarity





Dolphin
watching

Managment
plan

RAMSAR

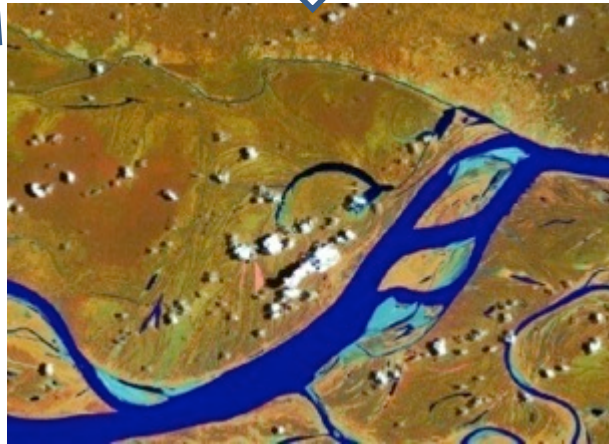
Fishery
agreements

Hunting
agreements

Forest
recuperation

First
touristic
destination
certify

The Tarapoto lake case



INTEGRATING ECONOMIC ALTERNATIVES WITH MANAGEMENT

- Tarapoto lakes
- Fishery agreements: recuperation of species
- Hunting agreements to secure food diversity
- Dolphin watching (US\$ 8 millions/year)
- Fish processing women association of the Amazon (AMAPROPEZ)
- Craft association and national market
- Forest restorations paid by carbon mitigation

FINAL CONSIDERATIONS

- Indigenous communities are part now of new markets.
- Hunting agreements are positive but not the only solution.
- Global and local economies are creating threats for indigenous communities and the biodiversity in the Amazon.
- Food security is under threat for prey availability reduction and also for contamination (mercury) affecting human health.
- Provision for ecosystem management is needed.
- Cultural changes should evaluate at short, medium and large term.



- Evaluate future scenarios where hunting will not be sustainable and food security is a need.
- Hunting and fisheries will move to domestication and aquaculture?
- International agreements focused on indigenous people and sustainable use of biodiversity should incorporate. One of these is the Addis Ababa 14 principles and guidelines for the sustainable use of biodiversity (CBD, PNUMA, United Nations).

THANKS!

