Using community to conserve a great coastal ecosystem

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Peru and the Humboldt Current

- Super upwelling system
- Great marine productivity and biodiversity
- Supports the largest single species fishery of the world
  - Anchoveta: *Engraulis ringens*
  - 10% of the global marine landings
Main threats to marine biodiversity in Peru:

- Pollution
- Overfishing
- Coastal development
- Resource extraction
- Oil and gas development
- Climate change

Source: Chatwin (2007)
Peruvian fisheries

- **Industrial fleet**
  - Over 1700 fishing vessels
  - Huge overcapacity
  - Catches mainly anchoveta
    - Over 90% of the total registered landings
    - 98% used for fishmeal and fish oil production

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\begin{align*}
4.3 \text{ MT of anchoveta} &= 1 \text{ MT of Fishmeal} \\
20 \text{ MT of anchoveta} &= 1 \text{ MT of Fish oil}
\end{align*}
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Peruvian fisheries

• Artisanal fleet:
  – Real number of vessels and average fishing capacity is **unknown**
  – Over 1200 vessels with more than 50000 fishermen
  – Capture over 300 species of fish and invertebrates
  – This fishery feeds Peruvians

Almost all the fish caught by artisanal fishermen in Peru is Unregulated and Unreported
What are we seeing?

• Evidence of “Fishing Down” the food web
• Ineffective and poor monitoring systems
• Poor compliance of management strategies
• Severe discards of “non-commercial resources”
• Constant demand of a handful of “tasty” resources
• Poorly educated consumers
MOVING TOWARDS A SOLUTION
Some thoughts on Peruvian food

- Delicious
- Diverse (ingredients, regional cuisines)
- The kitchen table is an altar to multiculturalism
- Chefs are pop stars
Can gastronomy be a driver for marine conservation?
The formula

SUSTAINABLE GASTRONOMY

= Good tasting nutritious food
  + Sustainably used resources
  + Sustainable harvests (fishing and aquaculture)
  + Sustainable energy usage (from electricity and natural gas to cooking oil)
  + Effective waste management (from kitchen garbage to sewage treatment)
Our strategy

• Understand the resource:
  – From natural history to net protein content
• Understand the fishery:
  – From seasons to minimum landing sizes
• Understand the consumer:
  – Preferences and attitudes towards different resources
• Understand the market:
  – How does seafood end up in our restaurants and houses?
• Identify gaps:
  – Information, regulations, etc.
Our strategy

- Develop interactive platforms:
  - Inform the general public
  - Foster sustainable practices

- Develop cultural interventions:
  - Engage the general public
  - Use chefs as mass communicators
  - Use gastronomy as a driver for sustainability
Success stories

• Semana de la Anchoveta (I, II & III)
  – Over 50 top restaurants in Lima served anchoveta for a week (2006, 2007 & 2009) to more than 60 thousand people in total.
  – About 90% of these had never tried it and over 95% of the consumers liked it, would eat it again and serve it to their families.
Come Anchoveta pe!

Este espacio ha sido creado para revalorar la anchoveta, promoviendo usos más sostenibles que: nutran a nuestra gente, generen mayores divisas, empleo, y favorezcan la recuperación de las riquezas y diversidad de usos de nuestro mar.

La anchoveta es la base de la riqueza del mar peruano y fuente de extraordinarios nutrientes para el consumo humano. Sin embargo actualmente se usa casi exclusivamente para hacer harina y aceite que se exportan para alimentar animales en otras partes del mundo.

La anchoveta es mucho más que un simple pez, entérate, cómela y forma parte del cambio.

NOTA: Esta página está evolucionando y las secciones van cambiando en el tiempo.
Success stories: Mistura 2010

• Largest gastronomic festival in South America

• We build the bridge of marine sustainability

http://www.youtube.com/watch?v=8RNFF1zvmOQ
More positive results

- Various members of APEGA now use “the fish of the day” and have stopped serving threatened species.
- Restaurants ask us to train their personnel in sustainability related topics.
Next steps

• Mistura 2011
• Semana de la Anchoveta IV (Lima & Piura)
• And in 2012:
  – Certification process
  – Develop an educational program at the UPCH on Sustainable Gastronomy together with APEGA
Final remarks

• Key elements that have places us on right track:
  – All our work is based on strategic partnerships between chefs and scientist
  – We have used chefs and the Peruvian love for food to engage all stakeholders at once
  – Chefs are better communicators than scientists

• Up scaling towards a sustainable gastronomic movement is ambitious but, it must be done, it can be done and it WILL be done
Eat more anchovies!