

# Does feed fishing divert fish from human consumption?

Ragnar Tveterås

3. March 2010

# Issues

- What factors determine demand (or willingness to pay) for the two alternative uses?
- Should we do something about the current status?

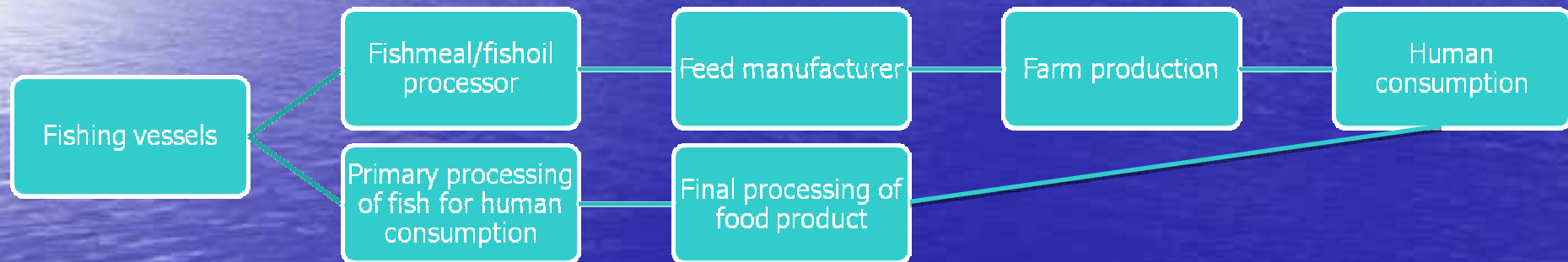


Would you like to eat this fish, or...



...have it converted to this fish?

# Simplified value chains



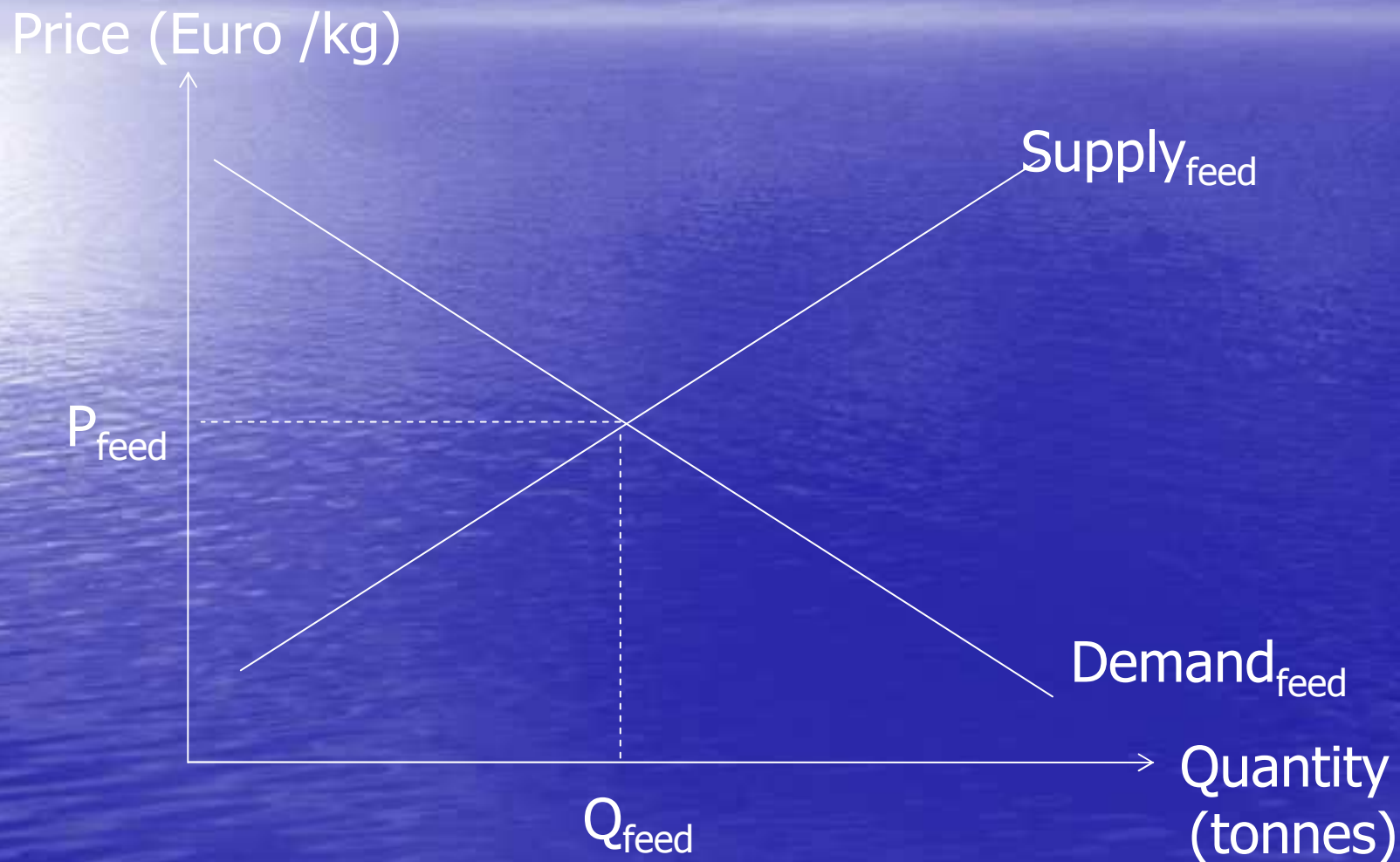
# Supply and demand side determinants of use

- Feed ingredients - fishmeal and fishoil
  - Processing costs
  - Transportation & storage costs
  - Biological & economic substitution opportunities in animal & fish feeds
  - Consumers' willingness to pay for final animal/fish products with different fishmeal/fishoil inclusion rates
- Food for direct human consumption
  - Processing costs
  - Transportation & storage costs
  - Consumers' willingness to pay for final products

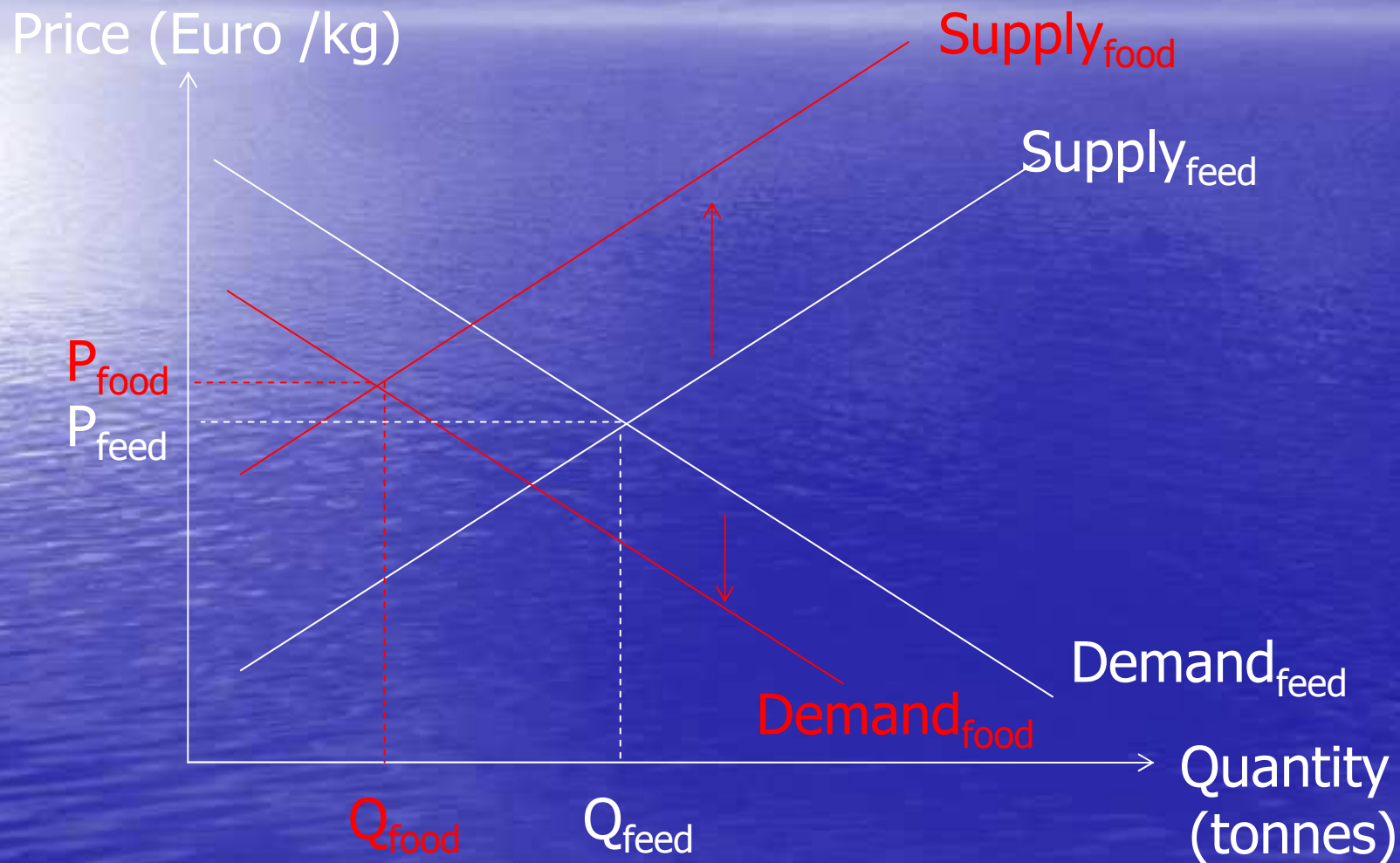
# Determinants of consumers' willingness to pay

- Income
- Taste
- Texture
- Health benefits (perceived or real)
- Status

# Market for pelagic fish for feed (fishmeal and fishoil)



# Market for pelagic fish for food



# Examples of 'feed' and 'food' pelagic species

- Feed
  - Anchoveta
  - Blue whiting
- Food
  - Mackerel
  - Herring

# Global welfare gains from shifting from feed to food?

- Reduce malnutrition among poor people?
- Improve income of fishers?
- A shift from feed to food would require both supply and demand side measures

# Supply and demand side measures to shift from feed to food

- Innovation and investments in fishing, processing, transportation and storage technologies to lower supply chain cost
- Improve taste, texture, visual attractiveness of food products
- Generic promotion of food products and their benefits to targeted consumers

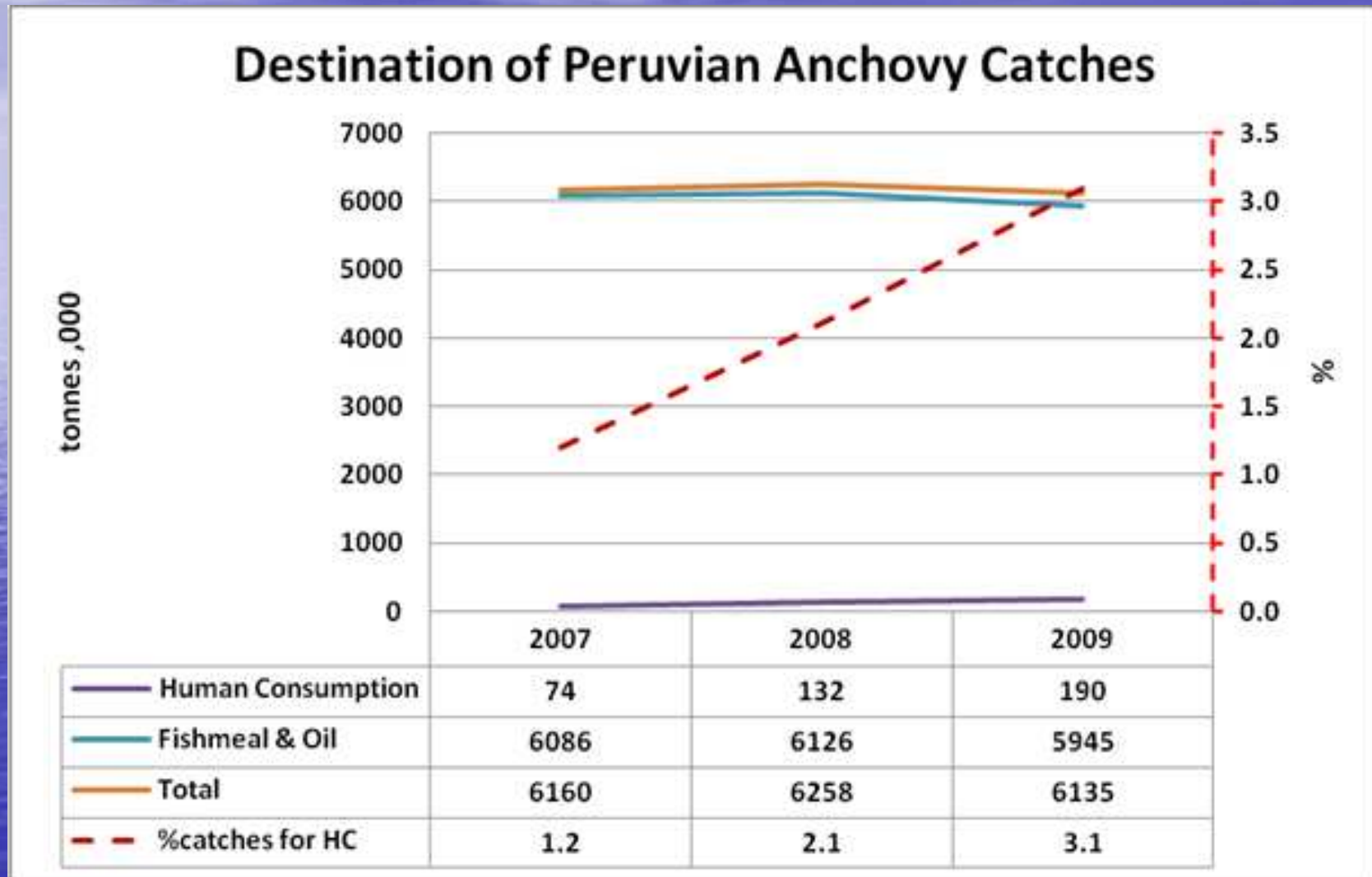
# Is there a role for governments?

- Value chains with private agents distribute pelagic fish as fishmeal&oil instead of food because they earn higher profits
- If private agents expect higher future economic returns from shifting to food products they should invest in R&D and capital equipment

# Is there a role for governments?

- *Economic risks* and *public good problems* may lead to private under-investment
- Economic risks
  - Food products aimed at poor, volatile markets vs feed products aimed at rich, stable markets
  - Inherent risks in R&D and large capital investment projects
- Public goods problems
  - Protect innovations (R&D) from competitors
  - Private returns on promotion of food products

# The case of Peruvian Anchovy



Source: IFFO

# Recommendations for a pragmatic approach to 'food conversion'?

- Examine critically the biological challenges associated with the particular species both on the supply and demand side
- Understand economic risks and market failures
- Remember that poor people also have taste buds!



**III Semana de la Anchoveta**  
29 Nov - 06 Dic

**Portola**  
Gran Venta de Conservas  
A S/. 1.00 Sol




Celebrando la III Semana de la Anchoveta, La Municipalidad de Surco y Austral Group SAA, tienen el placer de invitarlo a la Gran Venta de Conservas a realizarse en su distrito.

**Día: Sábado 05 de Diciembre**

**Hora:**  
✓ Desde las 9:00 a.m. hasta las 2:00 p.m.

**Donde:**  
✓ Paseo de la República esquina con el Jirón José Gabriel Aguilar Segura Urb. Precursores, costado institución Educativa N° 7086 Los Precursores (Alt. Cdra.7 de la Av. Los Proceres)  
✓ Plaza de Armas de Santiago de Surco

**¡Aproveche esta gran oportunidad de adquirir nuestras deliciosas Anchovetas en Salsa de Tomate 100% Natural y 100% Peruanas!**

  Municipalidad de Santiago de Surco   CSA Centro para la Sostenibilidad Ambiental UNEP