



Ministry of Food, Agriculture and Fisheries
Danish Institute for Fisheries Research



Seafood traceability for the industry in the global trade

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Why the global trade?

- **The WTO – The World Trade Organisation**
- **“Globalisation” – what is that?**
- **The seafood industry – a description of a sector – the main characteristics**
- **Traceability and its perception in different parts of the world**



Globalisation

OECD definition

- “ a dynamic and multidimensional process of economic integration whereby national resources become more and more internationally mobile while economies become increasingly interdependent”
- OECD (2004), Handbook on Economic globalisation Indicators,



The Fisheries sector and Globalisation

- **Globalisations has two faces**
- **One is to supply the best product at the lowest price and increase welfare of consumers**
- **The other is to spread the problem of over-fishing and get more economic gains through fish trade among countries**



World Fishery Production and Export in million tons

	1977	1989	2003
1:World Fishery production	68	101,6	132,5
2:World Fishery export	19,7	35	48,6
Export % of production	29,1	34,5	36,7



An old story that I have used for years

- Herring fishing in the Middle Ages in the Ore-Sound
- Salt and transport from Germany
- Fishermen from Denmark/Sweden
- Tax money to the king



Result = Full Traceability



At that time there were full traceability

- **Because that was the only income that the state had, the individual taxation system of yearly income is a relative new invention**
- **So – traceability was there in the old days and was lost – and now we have to find it again**



Traceability

Different point of view

- The perception of traceability depend of who you are asking and in what part of the world that you are asking the question
- And that brings us back to the global perspective
- In the Western world the politicians will tell you that traceability is for the protection of the consumers



Traceability

Different point of view

- The industry claims that the politicians don't want to take the part of the responsibility for future food scares
- The processing industry says that the retailers want traceability so that they can put the blame on the producers
- And the consumers don't want huge amounts of information – only safe and healthy products



Traceability and the seafood industry

- There is the “General Food law” in EU Regulation 178/2002 – a very short version
- Art. 18, § 1
 - The areas of the rules
- Art. 18, § 2+3
 - Demand of one link forward and one link backward.
- Art. 18, § 4
 - Demand of documentation
- Art. 18, § 5
 - How the § can be used in different sectors

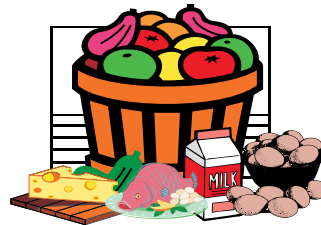


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U.S. Department of Health and Human Services

Food and Drug Administration



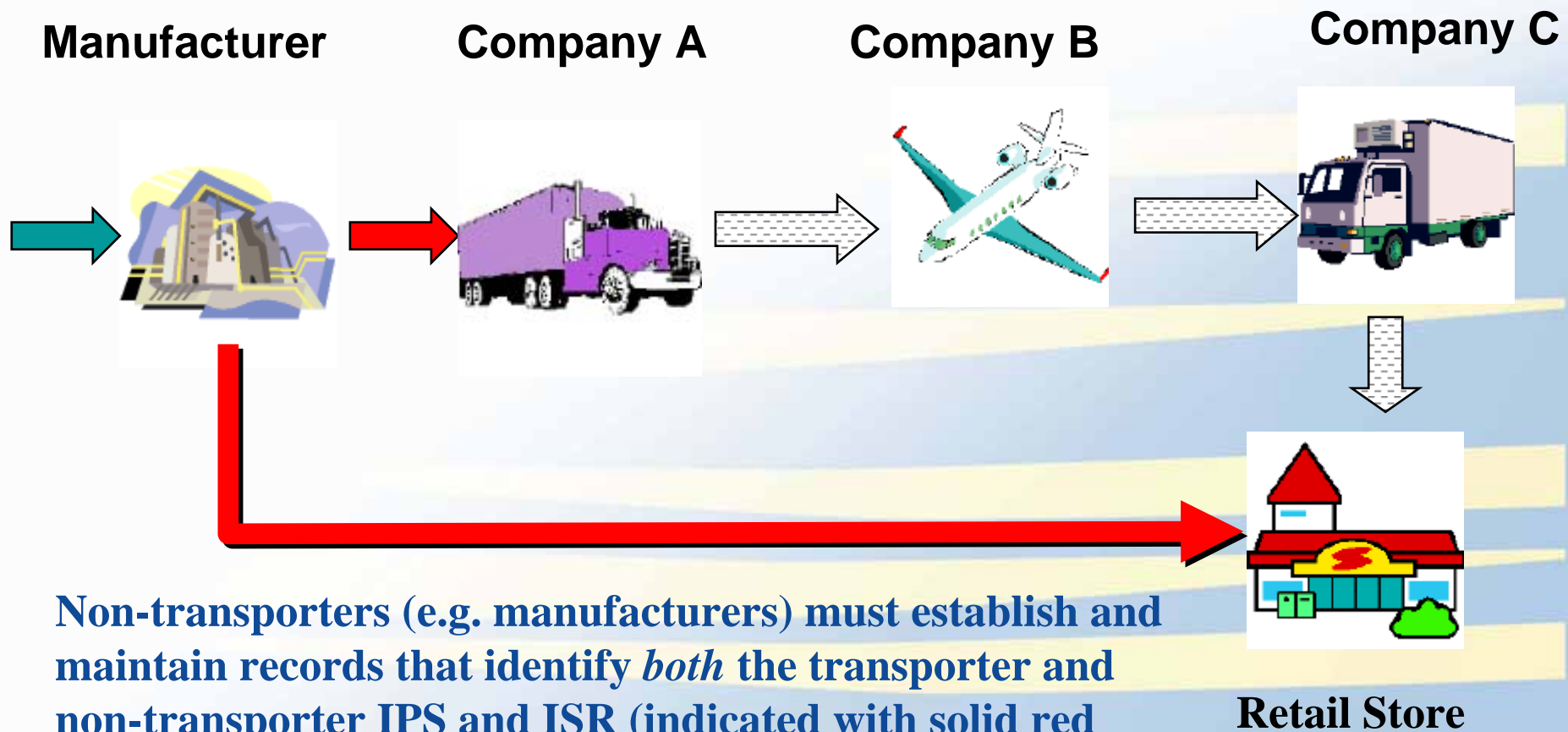
Overview of Bioterrorism Act Establishment and Maintenance of Records Final Rule

For current information on FDA's efforts under the
Bioterrorism Act or to sign up on our listserv:

<http://www.fda.gov/oc/bioterrorism/bioact.html>



Establishment and Maintenance of Records by Non-Transporters





Here is one big difference between EU and US

Manufacturer

Company A

Company B

Company C



Non-transporters (e.g. manufacturers) must establish and maintain records that identify *both* the transporter and non-transporter IPS and ISR (indicated with solid red arrows above)

Retail Store



Types of traceability

- **Internal traceability**
 - Your own data – data of raw material and produced product are related
 - SEAFOODplus modelling
- **External traceability**
 - Chain traceability – information accompanying the product between links in the chain
 - SEAFOODplus reengineering



RTD 6 Traceability

- **Validated traceability systems**
- **To supply the consumer with seafood of the demanded quality and functionality**
- **Applied to imported seafood**
- **Increased competitiveness of the seafood processing industry**



RTD 6 Traceability major activities

- **Development of an agreed vocabulary**
- **Guidelines for Good Traceability Practice**
- **Testing and development of technology**
 - Data capture, reengineering
- **Overview of methods for authentication**
 - Selected methods tested and validated



Achievements in RTD 6

- **The Vocabulary files have been completed**
- **A new map service has been developed**
- **A new standard for shellfish has been planned**
- **A description of how to analyse a chain has been developed and tested several times.**



Achievements in RTD 6

- **Testing and evaluating different RF temperature loggers have been done**
- **Passive tags for ID have been tested in the harsh seafood environment**
- **New generation of tags are going to be tested**
- **Development of a free software programme to be used on board fishing ships**



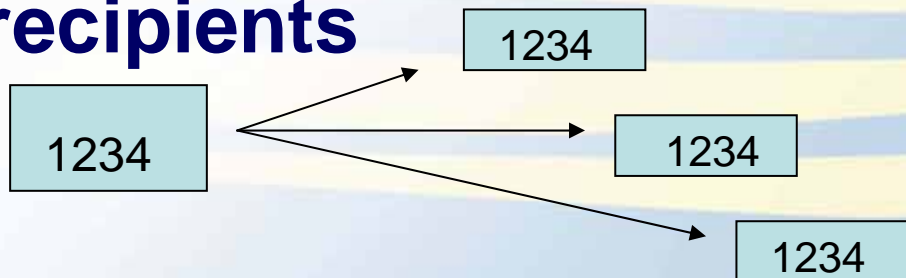
Achievements in RTD 6

- **Report of authenticity kits and methods available**
- **Compilation of DNA sequences in a database**
- **Report of quality assessment methods used in the chains**
- **Modelling of data in a selected chain**



Experience from case studies in SEAFOODplus

- The most important information gaps occur when the producers subdivide a batch with the same batch number as the original batch number. Then the sub batches are sent to individual recipients



P. Olsen, NIFA, Norway



Validated Traceability

the track to the future

- Traceability shall ensure that the consumer gets the expected commodity or product
- Traceability is a “tool” that can be used both by the producer and the controlling bodies
- If the traceability system is **VALIDATED**
 - as it will be in SEAFOODplus - the creditability is improved considerably





Mass production contra Innovation

	Mass production	Innovation and consumer adapted
Product	Standardized	Consumer adapted
Success criteria	Low cost, adequate quality,	High value, high quality, adaptive, new product
Work force	Homogeneous, specialized, focus on details	Multiplicity, different qualifications, focus on the whole product
Education and development	Avoid failures and loss, improve processes	Understand the costumers need, new trends and technologies
Communication	Specifications, plans	Storytelling, value, culture

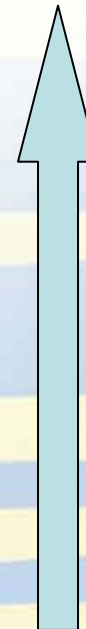
Adapted after L. Kolind: The Second Cycle, 2006



Power is now multi-level

- Global
- Regional / continental
- National
- Sub-national
- Local / community

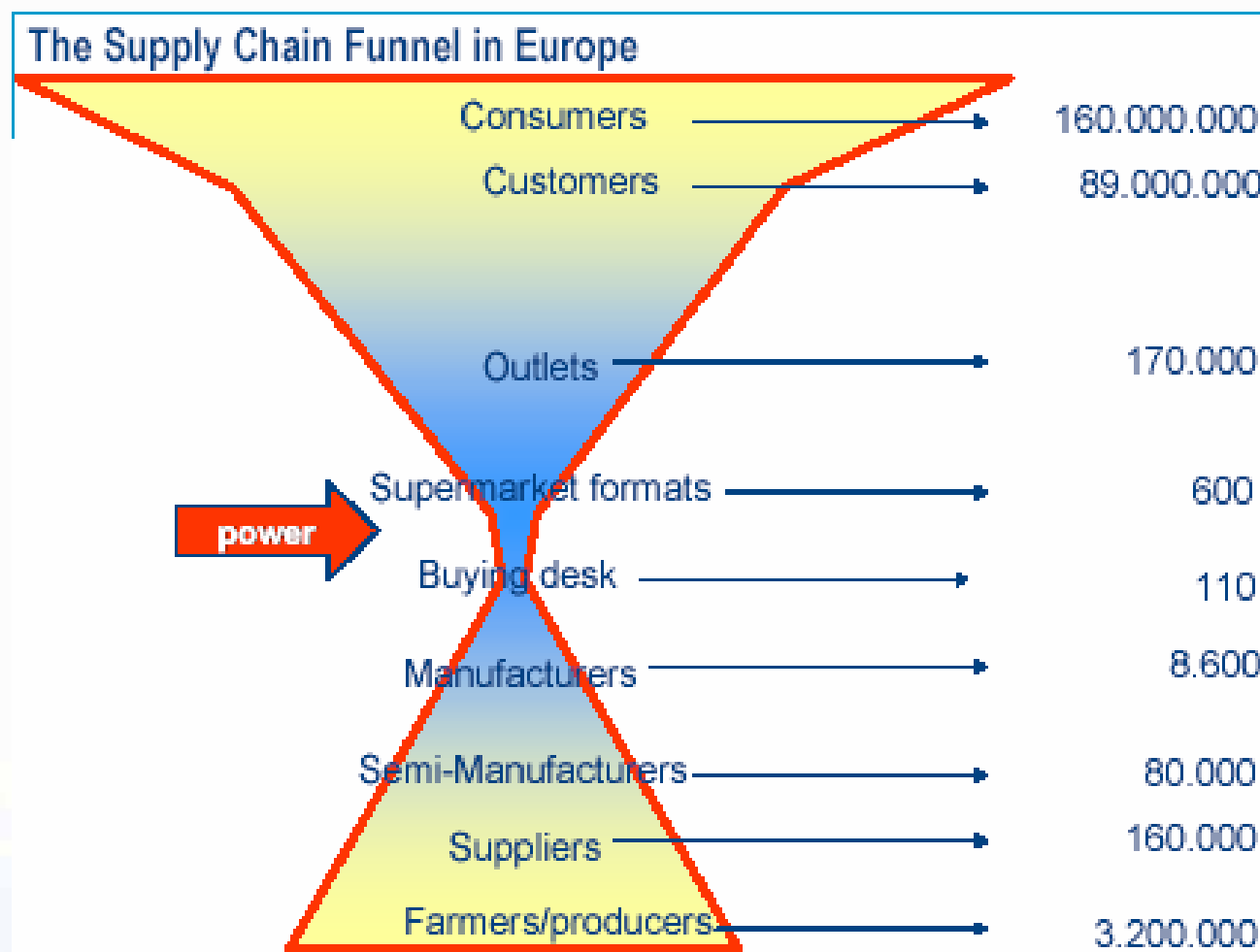
Increasing
influence



*Source: Tim Lang,
Centre for Food Policy,
City University, London,
UK
'Power in the food chain'
conference.
Academy for Technical
Sciences & Danish
Agricultural Society,
Copenhagen, January 12,
2006*



The reason why retailers are the dominating power – bottle neck effect



Source: J-PGrievink, Cap Gemini, OECD 2003



The industry perspective

- The consumer
- The end-user
- = The depending link
- The customer
- The retailer
- = The deciding link
- Difference between North and South EU
- Lack of competition in the Northern part of EU
- The retailers / multiples wants ownership of e.g. traceability information



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