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Turning EMA to the social - the case of Australian Aquaculture

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Message to take away

- Aquaculture industry targets sustainable development in South Australia
- Need to turn EMA practice towards the broader aspects of sustainable development
- Supply chain EMA push information being driven towards demand chain pull information

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Structure

- The Australian aquaculture industry
- Main Global ESD issues in Aquaculture
- Strategic challenges and EMA
- Concluding comments

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Australian aquaculture

- All forms of culture of aquatic animals and plants (e.g., fish, shellfish, crustacea, aquatic plants) in fresh, brackish and marine environments (Pillay and Kutty 2005)
- 94% of total value in five main aquaculture industries (Australian Government 2004)
  - prawn farming,
  - tuna farming
  - marine salmon farming
  - pearl oyster farming
  - edible oyster farming

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Sustainability focus

- Australian Government assessment and reporting framework has been developed
  - strategic environmental assessments for Commonwealth managed fisheries
  - s.516 of the Commonwealth *Environmental Protection and Biodiversity Act* 1999 (the EPBC Act), requires government bodies to report on their ecologically sustainable development performance
  - first in the world to address all perceived environmental, social and economic issues in aquaculture (Australian Government 2004)

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Main global ESD issues in aquaculture

- Social and environmental
  - Over-concentration
  - Overloading
  - Poor control - disease transfer
  - Destruction of mangroves/ livelihoods
  - Over-provision
  - Reduced self-sufficiency of farmers

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Economic issues

- Advantages
  - Demand for farmed fish assured
  - Intensity can be increased
- Problems
  - Increasing energy costs
  - Lower cost rivals in Asia
  - Power of super- markets strong – leads to lower margins
- Problems
  - Skilled labour shortages
  - Country of origin product labelling needed
  - Rising community expectations – participation in use and management of natural resources

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Strategic challenges and EMA

- Five strategic sustainability challenges in next 20 years (Australian Government 2005)
  - Natural Resources Sustainability
  - Resource Access and Resource Allocation
  - Profitable Response to Rising Demand
  - People Development
  - Community and Consumer Support
- Information for demand chains is critical
  - Sourcing and quality of products
  - Environmental impacts
  - Animal ethics
  - Social impacts of the industry and its companies

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Integration of supply chain information and demand chain

- In Australia radio frequencies are being trialed that allow buyers to purchase produce
  - knowing who the producer was
  - where it was produced
  - when it was harvested
  - what chemicals were used
- Species will be barcoded before being sent to market
- Using their mobile telephones, customers will be able to scan the code and read the name of the fisher, the enterprise to which the boat belongs, the time and place of the catch, and details of subsequent handling

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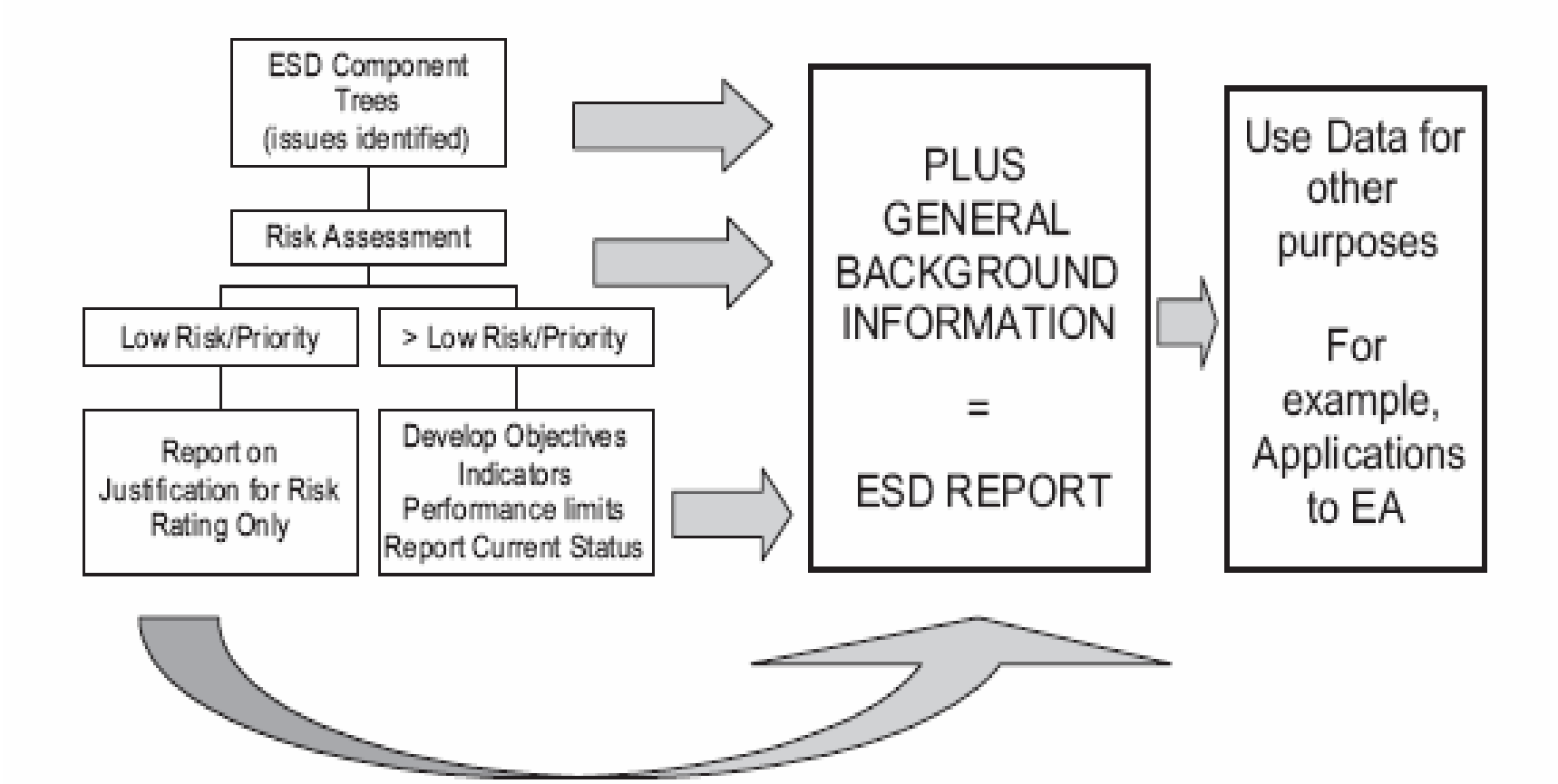
Risk based ESD reporting



Source: Australian Government 2004

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South Australia case study

- Produces 40% of Australian product (PIRSA 2004)
- Leads in relation to the pursuit of sustainable aquaculture and movement towards demand chain management
- SA Aquaculture Act 2001- to regulate and develop industry in an ES manner
- SA Government has Strategic Plan to make SA ‘clean, green and sustainable’

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Concluding comments

- Demand chain and supply chain – poor quality of upstream and downstream information remains a problem, but demand chain is market based information
- Need to integrate internal and external aspects of full ESD accounting and reporting (extended business reporting?)
- Piecemeal actions likely to dominate decision processes until integration achieved