

# Wool in an ecologically aware world

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# Outline

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- The environmentally aware consumer:
  - What do they want?
  - How can we deliver it?
  - How can they identify it?
- Environmental labelling and the consumer:
  - Truth or Greenwash?
  - Type 1 and Type 2 eco-labels
- Implementation of the EU Eco-label in wool demand chains
- Next stage:
  - Clean, ethical, sustainable Australian wool

# Importance for wool: keep the customer in mind

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**Juan Casanovas, President, International Wool  
Textile Organisation, 2004**

- The wool industry does not belong any more to a supply chain.
- The wool industry is part of a demand chain. This is precisely the main issue.
- The wool demand chain starts in the shop and not in the sheep.

# What is the customer saying?

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'LOHAS' market is worth \$230 B in US alone.

2007 AWI survey

- shows 31% of consumers in N hemisphere countries prefer natural or organic apparel.
- 'Natural' is the word most associated with wool.
- AWI CEO: organic, natural, eco is a 'Megatrend'

# What is the customer saying?

- **Retailers and Brands:**
  - **Tesco, £500M eco-initiative,**
  - **M&S £200M eco-friendly initiative, 'Look behind the Label',**
  - **Walmart – commitment to sustainability, organic?**
  - **H&M – organic fashion range.**
  - **Timberland, Nike, North Face: Carbon emissions on labels**
- **Organic cotton increasing 30% annually, M&S Organic wool trial.**
- **In Australia Green Building Council requires sustainable carpets/furnishing fabrics**

**Tesco sells Hamnett**  
An organic clothing range by designer Katharine Hamnett is being launched by UK retailer Tesco. The collection is expected to catapult organic clothes into the mainstream, dispelling their hippy image.

# What is the customer saying?

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'Green and sustainable' is now mainstream in Northern Hemisphere developed countries.

- Consumers trust Non-Government Organisations (NGOs), such as Greenpeace, for environmental and health advice.
- NGOs are directly targeting and influencing retailers.
- Consumers want to make ecological purchasing decisions, but only if cost, fashion, functionality and quality are not compromised.
- Environmental legislation is becoming comprehensive.

# Why does wool need to prove its environmental credentials?

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Perception: wool is natural, sustainable and renewable.

Issues:

- Just because it's natural, doesn't mean it's environmentally friendly.
- What do the terms 'natural', 'sustainable' and 'environmentally friendly' actually mean?
- Can we support these claims?

# What does 'sustainable' mean?

## Where are the pressure points for wool?

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### On-farm:

- Land management?
- Water?
- Biodiversity?
- Greenhouse gas?
- Pesticides?
- Animal welfare?

### Post-farm

- Scouring (detergents, BOD, COD, potassium, pesticides)?
- Shrink resist (chlorine, AOX)?
- Dyes (after chrome, prechrome, water colouration, insect resist agents, pH, temperature)?
- Transport miles, recycling, packaging, washing, dry cleaning?
- Labour standards?



# Greenwash and environmental claims

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## **Concise Oxford English Dictionary:**

Greenwash:

- *Disinformation disseminated by an organisation so as to present an environmentally responsible public image. Origin from green on the pattern of whitewash.*

## **Total Environment Centre (Australian NGO)**

Greenwash:

- *...other key communications or actions by an organisation that create a reputation of being more responsible or sustainable than they actually are. This can be applied to a product, service, company or sector.*

# Type I and Type II eco-labels

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**Type I eco-labels (ISO 14024)** claims are based on criteria set by a third party and are based on the product's life cycle.

**Type II claims (ISO 14021)** are based on self-declaration by manufacturers or retailers. This type of claim presents difficulties in terms of verifiability and credibility.

Some research has shown that consumers often do not distinguish between Type I and Type II claims, or between third-party verified and self-declared claims. They often assume that all environmental claims have some kind of official backing.

<http://www.oecd.org/dataoecd/46/19/1895757.pdf>

## False/misleading environmental claims confuse and de-motivate consumers

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- The International Standard **AS/NZS ISO 14021:2000** *Environmental labels and declarations – self-declared environmental claims (or Type II eco-labels)* is very particular about requirements when making environmental claims.
- **Avoid vague and non-specific claims** This includes terms such as; 'environmentally friendly', 'earth friendly', 'green', 'non-polluting', 'ozone friendly'.
- **Avoid claims that cannot be substantiated or verified** Any environmental claim such as '100% renewable energy' needs to be verified and substantiated.
- **Avoid implied certification**, for example, use of a graphic designed to look like a certification.

# ISO 14000 Standards

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- **14000s** EMS Specifications and GUIDANCE
- **14010s** Environmental Auditing
- **14020s** Environmental Labelling
- **14030s** Environmental Performance Evaluation
- **14040s** Life Cycle Assessment
- **14050s** Terms and Definitions
- **14060s** Environmental Aspects in Product Standards

# Eco-labels



Abb. 5 Öko-Label der Textilgruppe Hof

Abb. 6 Kennzeichen «Öko-Text Standard

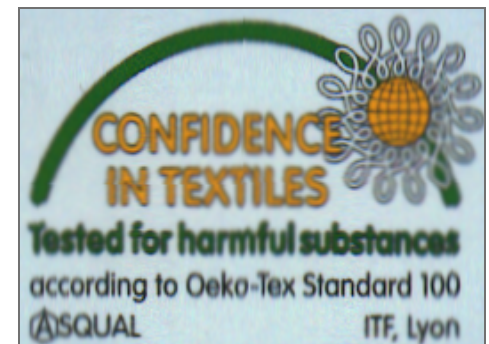
Individual eco-labels need to gain market share to be recognised by consumers.

# Two eco-label types (in textiles)

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## Human ecology:

- Example: Oeko-Tex 100 (privately owned).
- Concerned with chemical analysis of trace contaminants in final garment.
- Silent on discharges in processing.
- Cannot be used to support claims of 'sustainable' or 'environmentally friendly'.



## Sustainability and overall environmental impact:

- Example: 'official' EU Eco-label.
- Criteria based on 'cradle-to-grave' or 'life cycle'.
- Independent, transparent.
- Traceable back to ISO 14040 and ISO 14024 standards.



# Comparison of EU eco-label and Oeko-tex 100

Product test	EU eco-label	Oeko-tex
▪ Formaldehyde	X	X
▪ Metals/organotins	X	X
▪ Pesticides	X	X
▪ Chlorinated phenols	X	
▪ Carcinogenic/allergenic dyes	X	X
▪ Chlorinated carriers	X	X
▪ Colour fastness	X	X
▪ Odour		X

Test methods and limit values differ

Oeko-tex tests apply only to product. EU Eco-label criteria set on the basis of interaction with the environment during life-cycle of product.

The EU Eco-label applies across all member states and is available not just for textiles but for paints, paper, computers, shoes, bedding, light bulbs, laundry detergents, soil improvers, dishwashers and holiday accommodation.

Textiles is the biggest product area (but only 68 registrations).





# EU Eco-label for Textiles

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- Criteria are reviewed on three to five-year cycle.
- 2002 criteria can be used until 2007
- Criteria set by NGOs (Greenpeace, WWF, Friends of the Earth), textile industry, retailers, EU Environment Directorate, independent experts.
- 2007 revision is in progress, with an aim to increase uptake.

Aim: to identify the best one-third of processors.

# Revision of EU Eco-label 2007-2012

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The main objectives of this third revision are:

- to update the scope of the textile eco-label and the existing criteria
- to take the new regulations or mandated standards into account
- to create a synergy between Oeko-tex and EU Eco-label to facilitate the access to the applicants
- to consider new criteria, especially as far as environment and sustainable development are concerned.

# EU Eco-label for Textiles

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Three main categories for criteria:

- textile fibre (all fibres have criteria)
- processes and chemicals
- fitness for use.

Provides a simple, easy-to-understand summary of overall environmental ‘footprint’ of products.



## EU Eco-label Clean Fibre Criteria for wool: Greasy Wool Criteria 2002-2007

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- Sum of organochlorines 0.5 mg/kg
- Sum of synthetic pyrethroids 0.5 mg/kg
- Sum of organophosphates 2 mg/kg
- Sum of insect growth regulators 2 mg/kg
  - diflubenzuron, triflumuron

Note that cyromazine, dicyclanil, spinosad are exempt
- 40% of Australian wool complies -
  - but compliant processing lots cannot be put together by random selection of sales lots.

# EU Eco-label Clean Processing Criteria

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- Consistent with (and ahead of) EU BREF
- Scour discharge limits (COD per kg of wool scoured)
- No use of 'non-biodegradable' detergents, especially alkylphenolethoxylates (APEOs, NPEOs)
- Processing additives must be biodegradable. No use is allowed of substances or with any of the following risk phrases:
  - R50 - 53 (toxic to aquatic organisms)
  - R40 - 49 (carcinogenic)
  - R60 - 68 (mutagenic)
- No use of after chrome dyestuffs
- No use of dyes that degrade to carcinogenic amines

# EU Eco-label Fitness for Use Criteria

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Minimum performance requirements:

- Limits on shrinkage, colour fastness
- Provides a consumer guarantee
- Reduces environmental impact by ensuring that durable products are identified.

# EU Eco-label and European Textile Industry

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**To stay in the business, companies have to look for differentiating factors by designing high-value textiles and clothing.**

**The European Textile Eco-label is a differentiation factor for European companies.**

**Challenges for the European textile industry include:**

- labour cost disadvantages
- trade barriers in certain important export markets,
- a growing shortage of qualified human resources
- strict environmental and safety legislation imposed by European political will but not adequately rewarded by European consumer choice.



# Australian ecolabel for textile products

## Good Environmental Choice Australia

Picks up most EU eco-label criteria,  
including raw wool criteria.

Adds:

legislative compliance,  
fair wages,  
antidiscrimination, and  
safety

Important in interior textiles



The Australian Environmental Labeling Association, Inc.  
Managers Of the Australian Ecolabel Program

Final Standard No: AELA 18-2004  
Issued: May 2004  
Validity: 2 years

**The Australian Ecolabel Program**

**Australian Voluntary Environmental Labelling Standard**

**Textile Products**





# EU Integrated Product Policy (IPP)

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IPP (environmental product policy) takes three approaches to increasing the uptake of 'green' products:

- Reduced taxes for 'green' products
- Promotion of 'green' production by integrating eco-design and environment into product standards
- Use of eco-labels to give information on manufacturing processes, to allow consumers and public sector purchasing bodies to make conscious purchasing decisions.

# IPP and EU public purchasing

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ITS Newsletter No. 6 / March 26, 2002

## **Italian textile reprocessor receives European Eco-label**

Industria Tessile Sanesi, domiciled in the Italian textile and fibre reprocessing stronghold of Prato, has received the European Eco-label award for its 100% ecological fibre reprocessing method. The Italian authorities have decided that about 30% of its textile procurement potential will stem from production substantiated by the Eco-label. [www.sanesi.it](http://www.sanesi.it)

- EU public procurement is valued at 12-14% of GDP (850-1000 billion €).
- Environmental purchasing preference for eco-label products will:
  - educate producers
  - increase availability
  - reduce costs by economies of scale.

# Consumer recognition: Australian supply chain example

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- i-Merino
- Australian manufacturing supply chain
- Active outdoor/extreme sports
- Pure wool next-to-skin for warmth, moisture and odour control
- Garments must perform:
  - shrink-resist, anti-pill, colourfast
- Target: major US and EU outdoor wear companies
- Environmental credentials are essential in this market

# Consumer recognition: Australian supply chain example.

## The challenges

- EU eco-label begins from raw wool. Wool supply chain is long.
  - synthetic fibres are readily available at top/staple stage.
- While EU eco-label compliant wool is plentiful, brokers are slow in developing QA systems to identify and deliver commercial quantities
- Middle levels of supply chain have little understanding of QA and eco-label requirements
  - Processors are reluctant to change established procedures or recipes unless they see future benefits.

# Consumer recognition: Australian supply chain example.

- EU Eco-label certification achieved late 2003. Several EU Eco-label and Australian eco-label supply chains are now operating.

# How does your supply chain demonstrate its compliance with the EU Eco-label?

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## Initial grant of label:

- Complete documentation set (tests + declarations) is required for submission to accrediting body in EU country where goods will be first sold
- Testing from ISO accredited laboratories is generally required. Declaration of non-use, usually from mill management, is required from each stage of processing.

## Subsequent batches:

- Random audit is possible. Need to maintain quality control records (declarations + tests) for each batch.

# Why choose EU Eco-label criteria as a residue target for eco-wool?

1. Consumers in the EU can recognise products made from eco-wool.
  - It is important that wool and other natural fibres retain a high profile in the eco-marketing game.
2. It is an important environmental 'good practice' standard that other bodies accept.
3. EU Eco-label wool will meet IPPC reporting needs of EU top makers and dye houses.
  - The EU Eco-label criteria for greasy wool were based on IPPC environmental requirements.

# How to deliver processing lot quantities (20–50 tonnes) of low-residue wool?

## EU Eco-Label Wool Pesticide Treatment Declaration

1 June 2002



This declaration is **optional** and should only be used when the treatment status is known and meets the criteria stated.

I..... trading as .....

of.....

address..... Phone.....

advise that all the information provided in this declaration is true and correct and have read all the accompanying explanatory notes before completing this declaration.

Wool bale Brand .....

No pesticide treatments have been used on this wool at or since the previous shearing and I have records of all external pesticide treatments applied to sheep on the property to confirm the status of this wool.

or

Pesticide treatments used on this wool meet the following criteria and I have records to confirm the status of this wool.

- No use of any synthetic pyrethroids ( group A), diflubenzuron (group B) or triflumuron (group C) at or since the previous shearing
- No shower or plunge dipping of any sheep more than 6 weeks after the previous shearing
- No use of organophosphates (group D) in the last 7 months before this shearing
- No use of any other pesticide (group E) in the last 2 months before this shearing.
- There is no withholding period for spinosad (group F)





## Explanatory Notes

Random testing of the pesticide status will be carried out to ensure that declarations are correct. It is an offence under the Agricultural and Veterinary Chemicals (Control of Use) Act 1995 to make a false or misleading declaration. The maximum penalty is a fine of \$10,000.

If this is the first time you have shorn the sheep since you became responsible for husbandry, either obtain a similar declaration from the previous person in charge, register the treatment history of the sheep, or do not use this declaration.

All products should be applied only as directed on the label.

Take special note of individually treated sheep. It is recommended that wool from such sheep should be sold separately from untreated lines of wool.

Random  
chemical testing  
of one line of wool  
from each  
property



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# Definitions: organic

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- The term 'organic' is strictly defined in Australia **for export**.
- On-farm: mostly natural materials required:
  - for lice control -
    - magnesium fluorosilicate, Spinosad
  - Standards vary -
    - synthetic pyrethroids allowed on UK sheep (veterinary medicine). If organophosphate dips are used, meat must not be labelled organic.
  - Less than 0.05% of Australian wool is organic
- Organic processing standards:
  - Many standards are available.
  - Many allow synthetic dyes; some require natural dyes + mordants
  - UK Soil Association, NASAA, BFA, US Standards,
  - Global Organic Textile Standard (GOTS).
    - GOTS has been adopted by 'brands' (especially for cotton).
    - Allows use of synthetic dyes, synthetic processing additives.
    - It is generally silent on wool processing – needs work (in progress).
    - Pesticide limits on raw wool: 0.5 mg/kg.

# How to supply EU eco-label compliant consignments of wool?

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- EU eco-label compliance is voluntary, on a lot-by-lot basis
  - Growers can opt in or out depending on pesticide use
  - Organic accredits the whole farm
    - Pesticide use disqualifies sheep
- Residue testing can be conducted on 'composite' samples.
  - Options:
    - Before sale – on wool lines from a mob of sheep
    - By new owner of wool after sale –
      - On AWTA 'keeper' samples
      - Re-core wool in store.

# Australian wool: clean, ethical, sustainable

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- Many US brands, especially in active outdoor wear, are seeking assurances of on-farm practices in wool production, as well as post-farm.
- EU Eco-label applies to both natural and synthetic fibres and does not involve on-farm requirements.
- If we add on-farm requirements, what should they be?
  - Criteria must be measurable, achievable and within control of the farmer.
  - Who will audit? How much will it cost?
  - Criteria must be compatible with systems being developed by cropping/meat industries.
  - A supply chain management system is needed to inform and provide evidence to customers.

# Australian wool: clean, ethical, sustainable

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- 'Clean, ethical, sustainable' wool will fit between 'organic' wool and 'eco' wool in the marketplace.

# Working definition of eco-wool

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- Wool identified and processed according to requirements of a Type 1 eco-label as defined by ISO 14024.
- Type 1 eco-label:
  - award-type label
  - criteria are set by third parties (i.e. not by the manufacturer or retailer themselves)
  - criteria are based on life cycle impacts.=
  - criteria are independently set, tested and monitored
- Type 1 eco-labels are fairly demanding, but this depends on how strict the criteria are and on the body that controls the criteria:
  - Examples are the EU Eco-label and national labelling schemes.

# Australian Wool Industry Stewardship Project 2005-2007

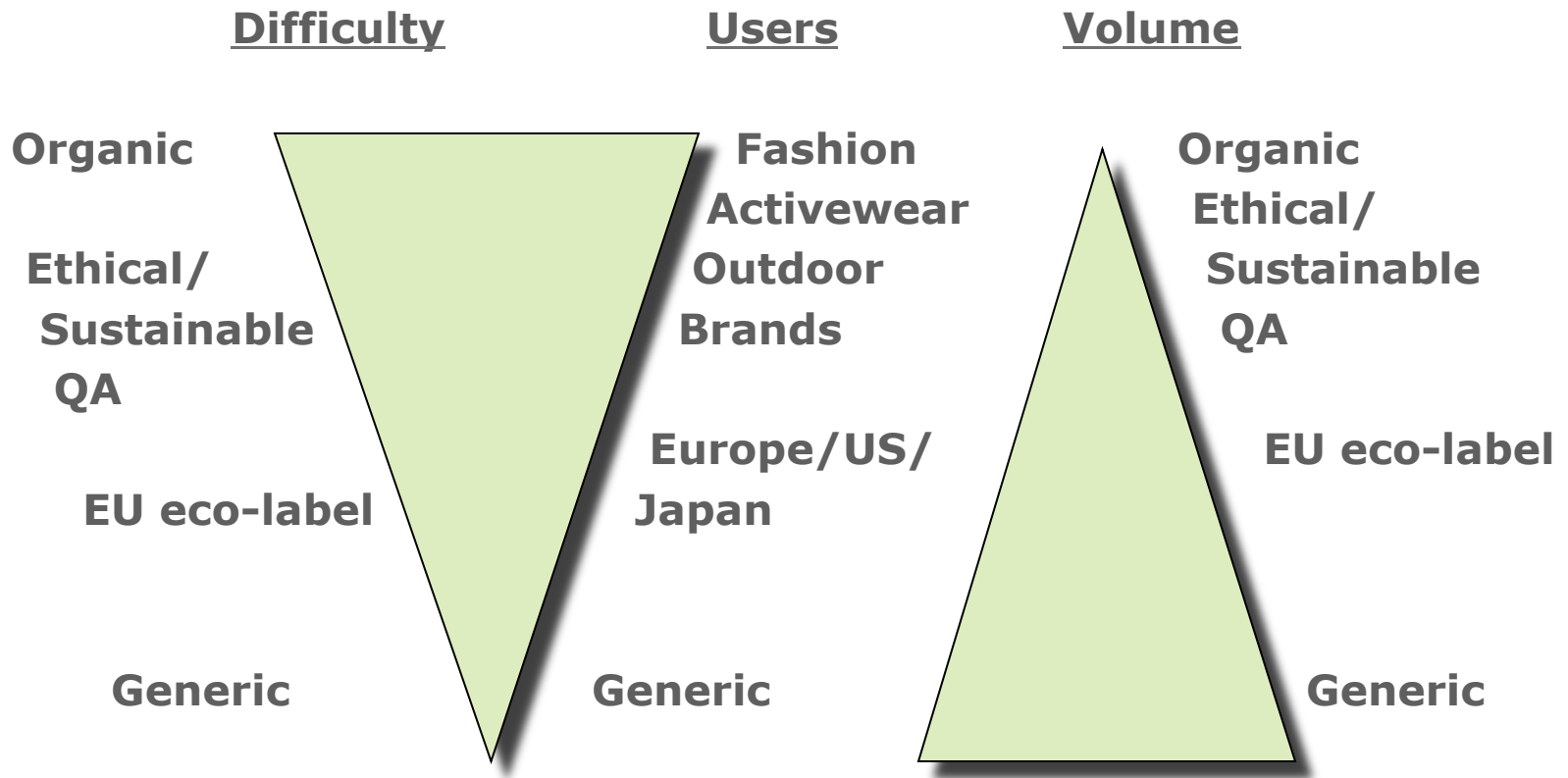
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Development of voluntary management systems for production of clean, ethical, sustainable Australian wool

- Four key modules will form the environmental stewardship program:
  - Sustainable use of natural resources (soil, water and vegetation)
  - Animal welfare
  - Chemical usage on farm to produce low residue wool
  - Best practice processing.
- An online auditing and reporting system is being developed to transfer information to customers.
- Standards will be high....."Beyond organic?"



# Wool demand chains



# Summary

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- We have developed systems that potentially can deliver large quantities of environmental low-impact, differentiated, identifiable wool to global demand chains.
- The product will currently cost a little more, mainly because special supply chains from farm to consumer are needed.
- An on-farm extension to include animal welfare and land stewardship is in preparation.

# Will these initiatives be successful?

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- Every square metre of retail showroom floor must return a margin!
- In an ecologically aware world, can wool afford **not** to do this?