



SUSTAINABLE DEVELOPMENT

Production and Consumption

Module Recap

- Definitions – numerous
- Quality of life central
- Developing a Strategy
- Use of indicators – measured performance
- Sustainable cities
- Sustainable agriculture & water shortage
- Built Environment
- Sustainable Forestry
- Sustainable Production & Consumption → Review Swansea Strategy

Moving forward sustainably – why does it take so long for there to be a noticeable change?

- **“Someone else’s responsibility”**
- **“Don’t want to think about it”**
- **“Don’t want to reduce my standard of living”**
- **Attitude / behaviour gap**
- **Price!**

Sustainable Production and Consumption

- “ to promote sustainable production and consumption through appropriate use of environmentally sound technologies and effective demand management”

(Newman and Jennings, 2008:188)

Production and Consumption

- Divorce of consciousness
- Aim of producers – sell as much as possible
- Aim of consumers – buy as much as possible
- Zero waste
- Integration
- Human creativity – living, producing and consuming



Sustainable consumption

- **“Each year until 2030, at least 150 million people will be entering the middle class. This will bring almost 60% of the world’s population into a middle income bracket. Over the same period energy demand is projected to increase by 40%, and water demand is expected to outstrip supply by 40%” (World Economic Forum, 2010:1)**



- 450 million people - lifted out of poverty
- Number of households from emerging and developed world living on more than US\$ 3,000 p.a ↑by 28%.
- At a cost! :
 - higher resource consumption
 - continued environmental degradation
 - greater social and health imbalances.
- 21 million hectares of forest lost, 9.1 billion tonnes of municipal solid waste generated and 50 billion tonnes of fossil fuels were consumed. (FAO, 2010; BP, 2011)

- Billions of new consumers in emerging markets present an opportunity for more sustainable consumption, yet uptake of sustainable products by consumers in more mature markets is limited
- 45% of Chinese respondents said they were willing to pay a 5-10% premium for green products.
- In developed markets, aspirations and actions are often mismatched.
- A 2011 European Commission survey suggests that 72% of European respondents were willing to buy green products - only 17% actually did so in the month preceding the survey



Challenges:

- Consumer preferences are driven by price, not sustainability
- 88% of consumers see cost reductions as the main driver for better energy practices in their homes; only 66% also value the environmental benefits



- New products, services and value chains can embrace "absolute sustainability".



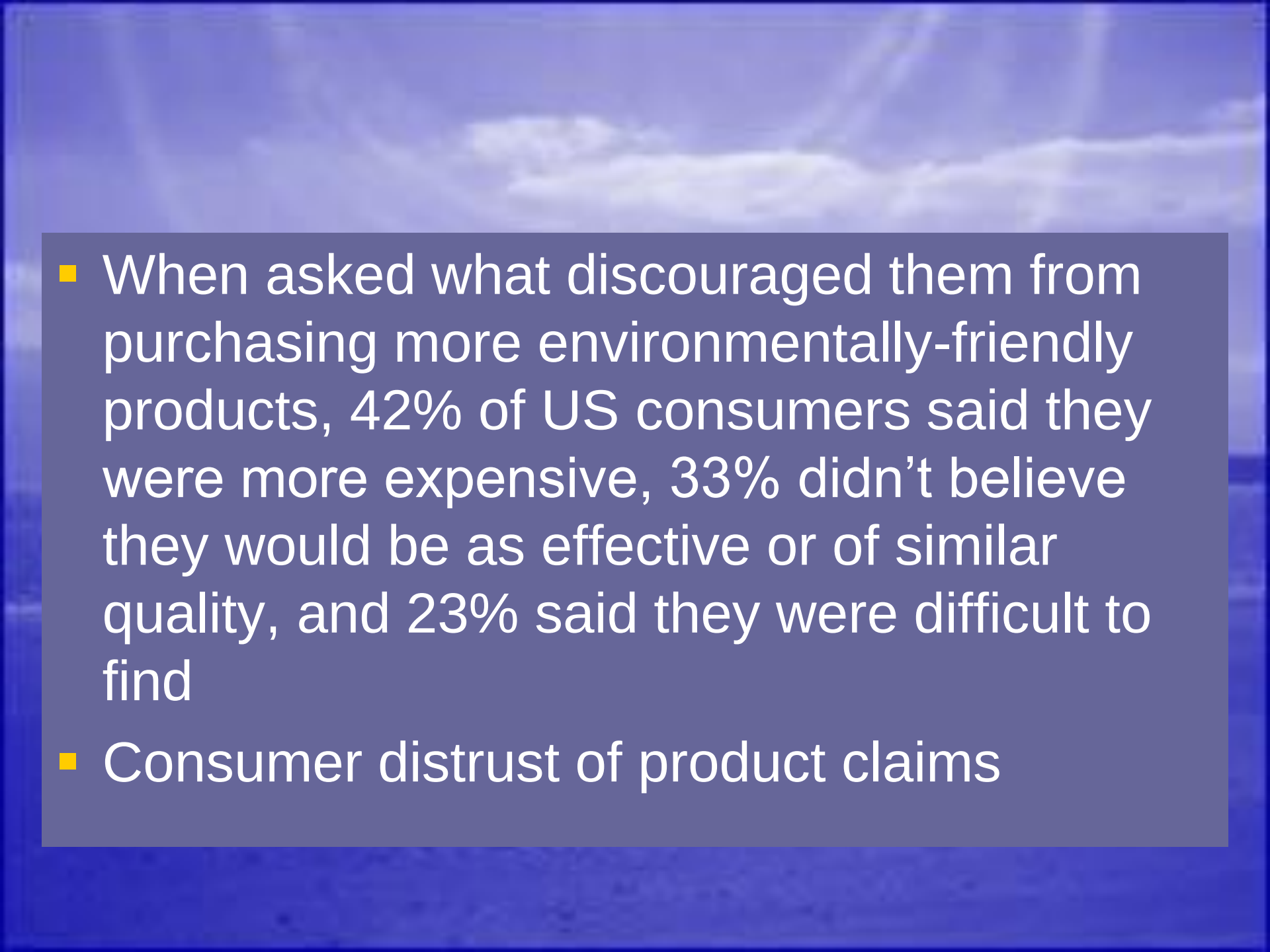


- *How can companies engage consumers to trigger simple behavioural shifts that enable more sustainable lifestyles, grow demand for more sustainable products and create business value?”*



Sustainability needs a make-over:

- Consumers need to be excited and motivated by sustainability.
- Business needs to use language that is more familiar and offer consumers incentives and sustainable choices that are more relevant to their lives and aspirations.

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- When asked what discouraged them from purchasing more environmentally-friendly products, 42% of US consumers said they were more expensive, 33% didn't believe they would be as effective or of similar quality, and 23% said they were difficult to find
 - Consumer distrust of product claims



- Millennials present the greatest opportunity for engagement:
 - born between 1981 and 1995. They are receptive to and engaged in global issues, and they enjoy growing influence and incomes, especially urban Asian millennials.

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- A photograph of two young men in an outdoor setting. The man on the left is wearing a grey ribbed shirt and has a slight smile. The man on the right is wearing a blue t-shirt and black-rimmed glasses, looking down with a focused expression. They appear to be looking at something on the ground. The background is a blurred green field.
- 60% said they'd volunteer to test new products
 - *"...what compelled me was being given specific examples on how to easily change small, everyday actions that will benefit the environment."*
 - Dominant consumer group – 25% of global population
 - Influential shoppers – 88% think it's their duty to improve the world
 - Fundamentally digital & reliant on social networking



- Companies can use six key strategies to seize the opportunity and enable more sustainable lifestyles:
 - strengthen the consumer case for sustainability
 - engage marketers
 - better integrate sustainability in R&D
 - create platforms for consumer collaboration
 - activate employees as advocates
 - quantify outcomes

- Current sustainability language reflects sacrifice (“to be sustainable, I have to give something up”). This can be de-motivating for the consumer.
- Marketers need to emphasise extra value and tangible benefits
- Re-imagine the product lifecycle
- Engage people of product design

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Strategies for Sustainable Consumption

1. Voluntary Simplicity - Simplicity Circles
2. Education programmes
3. Procurement programmes
4. "Slow Movement"

1. Voluntary Circles

- Attacks consumerism
- Individual or community basis
- Gathering and sharing experiences
- Social, creative and spiritual needs – seasonal festivals, sharing meals, community garden, conducting talks
- Duane Elgin (1981): *Voluntary Simplicity: Toward a way of life that is outwardly simple, inwardly rich*

“Affluenza”: Society’s sickness

- *“ a dysfunctional relationship with money/wealth or pursuit of it. ...symptoms are : an inability to delay gratification and tolerate frustration; a false sense of entitlement; low self esteem and self confidence; preoccupation with externals...”*
(Hamilton and Dennis, 2005:192)

2. Demand Management

- Seeks to educate consumers
- Seeks to meet current needs without damaging future generations' needs.
- Reduce - Re-use - Recycle
- *Factor Four* - von Weizsäcker, Lovins and and Lovins (1997) – halve resource use and double wealth.
- The TravelSmart Workplace programme – Australia – green travel plans



Living Smart – education programme

- Western Australia – energy, water, waste, travel and gardens in one integrated plan
- Effective – reducing resource consumption
- Empowered people
- Helped them set goals
- Advice sharing
- Next stage – make it mainstream - media

3. Sustainable Purchasing Programmes

- Quantity and Quality
- Government can set a good example
- Scale and visibility
- EU Directive on sustainable procurement – innovations in purchasing policy
- Ordinary consumer – price and speed of purchase – Fast and cheap

4. Slow Movement

- Challenges speed and global markets by promoting reflection and ethical action to achieve something that can only be appreciated if it is slow and local
- Promoting ethical action – slow food, slow cities, slow traffic
- **Slow food:** 1989 Italy
 - Non profit, ecogastronomic organisation
 - Recapture local food traditions
 - Food traceability
 - Impact of food choice
 - 80,000 + members globally

Slow Movement

- Slow cities:
 - Slow food philosophy and applied to how we design and manage cities
 - “Cittaslow” network
 - <50,000 occupants
 - Based on medieval city, with a central piazza for social gathering

Slow Movement

- Slow traffic –
 - Began in Germany and Netherlands 1970s
 - Traffic calming and capacity reduction
 - Encouraged other modes
 - Challenging
 - Usually seen in historic centres; rarely in new cities
 - Slower traffic – more fuel consumption – but cities overall use less as modal switch occurs
 - “Naked signs”

Sustainable Production

- Sustainable Production is the creation of goods and services using processes and systems that are:
 - Non-polluting
 - Conserving of energy and natural resources
 - Economically viable
 - Safe and healthy for workers, communities, and consumers
 - Socially and creatively rewarding for all working people.
- If production is sustainable, then the environment, employees, communities, and organizations—all benefit.
- These conditions can lead to more economically viable and productive enterprises.

10 Principles of Sustainable Production:

1. Products and packaging designed to be safe and ecologically sound throughout their life cycle.
2. Services organized to satisfy real human needs and promote equity and fairness.
3. Wastes and ecologically incompatible by-products are reduced, eliminated or recycled
4. Chemical substances or physical agents are eliminated.
5. Energy and materials are conserved, and most appropriate forms of energy and materials used.
6. Work places and technologies are designed to minimize or eliminate chemical, ergonomic and physical hazards.
7. Work organized to conserve and enhance efficiency and creativity of employees.
8. Security and well-being of all employees is a priority, as is staff development.
9. The communities around workplaces are respected and enhanced economically, socially, culturally and physically.
10. The long-term economic viability of the enterprise or institution is enhanced.

(Lowell Centre for Sustainable Production, 2010:1)

Sustainable Production

- Converts renewable and non-renewable resources into products and services to meet human needs and wants
- Strategies:
 1. Community technology
 2. Biomimicry
 3. Eco-efficiency
 4. Integrated technologies
 5. Technology assessment

Sustainable Production

1. Community Technology:

- Small scale systems
- Businesses in partnership
- Green Valleys Initiative

2. Biomimicry:

- The use of natural systems in design
- Desalinisation membranes
- Creation water-based glue

Sustainable Production

3. Industrial Ecology / Eco-efficiency

- Based on the process of waste recycling that occurs naturally in ecosystems
- Re-evaluating waste raw materials for other processes.
- Reducing energy intensity in industrial production
- Simplifying industrial processes

4. Integrated Technologies

- The use of waste in food production

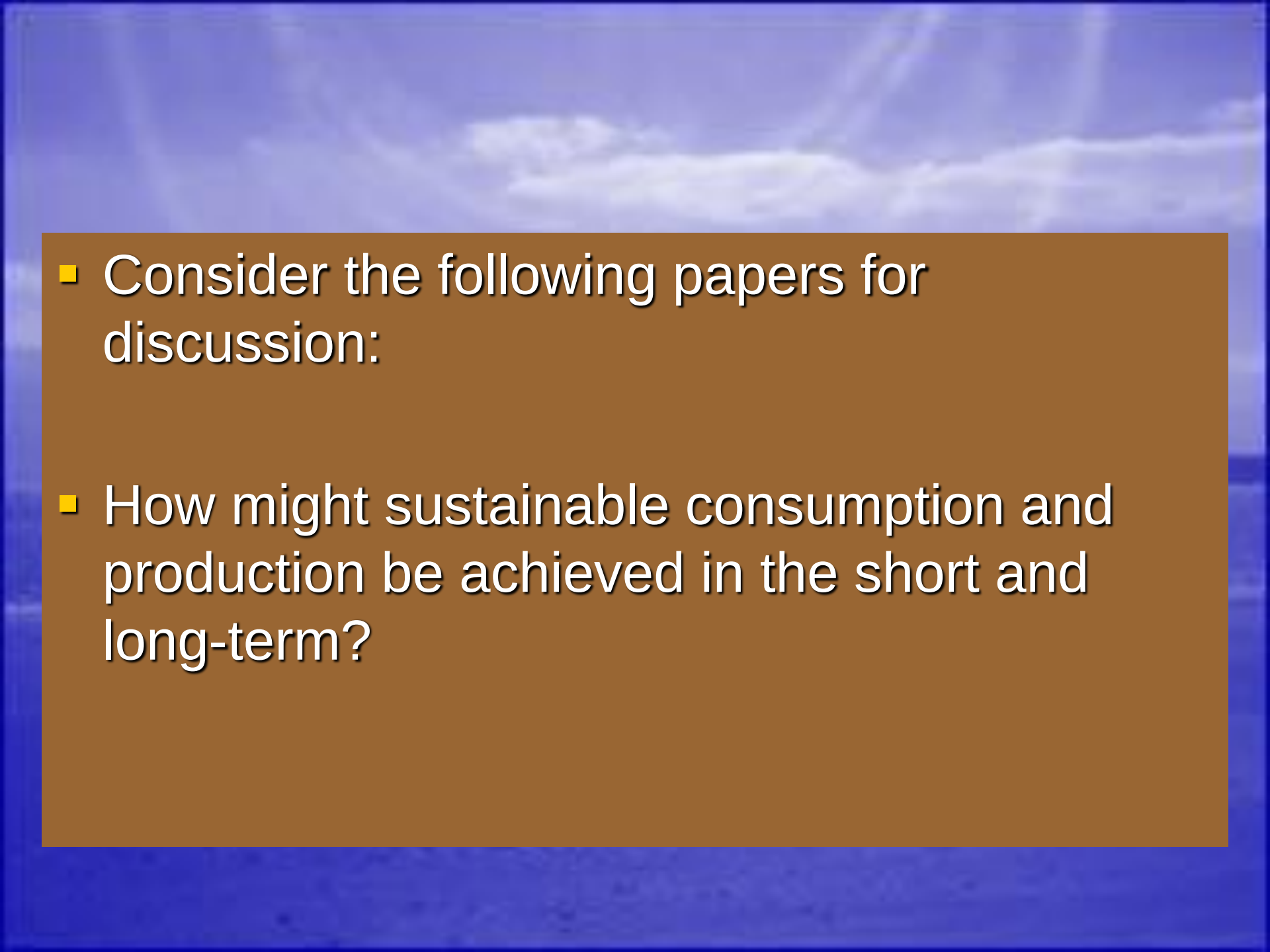
Sustainable Production

5. Technology Assessment

- Co-operation and sharing ideas is crucial
- ESTIS programme – Environmental Sound Technologies Information Systems
- Can be used for project assessment processes and developmental control in local planning approval processes.

Conclusion

- Cities have increasingly separated consumption and production activities
- In nature, these are integrated
- Reducing resource consumption has to go hand in hand with technological efficiencies
- New systems that are bioregional, networked and adopt biomimicry principles are needed
- *“We are not going to recycle, compost or talk our way out of this impending crisis” (Dervaes, 2008:214)*

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- Consider the following papers for discussion:
 - How might sustainable consumption and production be achieved in the short and long-term?