

# A framework for shaping sustainable lifestyles

determinants  
and strategies



## Acknowledgements

Authors:	Lewis Akenji (IGES), Huizhen Chen
Contributors:	Garrette Clark (UN Environment), Stefanos Fotiou (UN ESCAP), Mari Nishimura (UN Environment)
Reviewers:	We would like to thank the following for their valuable technical inputs: Midori Aoyagi (National Institute for Environmental Studies), Julian Borra (ThinAirFactory), Kate Burningham (University of Surrey), Maite Cortés (Colectivo Ecologista Jalisco), Gunilla Elsasser (WWF), Maria Ghiso (Rainforest Alliance), Bronwyn Hayward (University of Canterbury), Tim Jackson (University of Surrey), Vimlendu Kumar JHA (Swechha India), Michael Lettenmeier (D-mat), Nguyen Hong Long (GetGreen Vietnam), Charlie Mathews (JUCCCE), Zipporah Musyoki-Webola (WWF), Kenneth Ochoa (Universidad El Bosque), Peter Repinski (Stockholm Environment Institute), Ingrid Joan Schudel (Rhodes University), Burcu Tuncer (SWITCH-Med), and UN Environment (Khairon Abbas, Kamala Ernest, Bettina Heller, Arab Hoballah, Rob de Jong, James Lomax, Llorenç Milà i Canals, Martina Otto, Liazzat Rabbiosi, Helena Rey de Assis, Janet Salem, Steven Stone, Elisa Tonda, and Adriana Zacarias).
Concept of Figures:	Jeremy Blanks
Design:	Viola Kup (UN Environment)
Cover Photo:	Hong Kong Market © Yusuke Nishimura
Back Photo:	Smiling Youth © Jerome Sessini/ Magnum Photos for UN Environment

## DTI/1717/PA

© United Nations Environment Programme, 2016

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. The United Nations Environment Programme would appreciate receiving a copy of any publication that uses this publication as a source.

No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme.

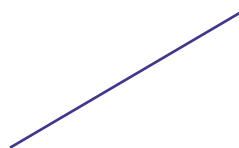
### Disclaimer

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the United Nations Environment Programme concerning the legal status of any country, territory, city or area or of its authorities, or concerning delimitation of its frontiers or boundaries. Moreover, the views expressed do not necessarily represent the decision or the stated policy of the United Nations Environment Programme, nor does citing of trade names or commercial processes constitute endorsement.

The contents of this report do not necessarily reflect the views or policies of UN Environment or the editors, nor are they an official record. The designations employed and the presentation do not imply the expressions of any opinion whatsoever on the part of UN Environment concerning the legal status of any country, territory or city or its authority or concerning the delimitation of its frontiers or boundaries.

UN Environment  
promotes environmentally sound  
practices globally and in its  
own activities. This report is printed on  
paper from sustainable forests including  
recycled fibre. The paper is chlorine free.  
Our distribution policy aims to reduce  
UN Environment's carbon footprint.

A framework for shaping  
sustainable lifestyles



determinants and  
strategies





# Table of Contents

<b>Preface: Sustainable Lifestyles as an Engine for Change</b>	<b>vi</b>
--	-----------

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	The need to promote sustainable lifestyles	2
1.2	Key lifestyles domains and the environment	6
	Food	6
	Housing	7
	Mobility	8
	Consumer goods	9
	Leisure	9
<b>2</b>	<b>Lifestyles in Context</b>	<b>11</b>
2.1	Theoretical framing of lifestyles from a sustainability lens	12
2.2	Influencing factors of consumption and lifestyles	15
2.2.1	Motivations of lifestyles	16
2.2.2	Drivers of lifestyles	18
2.2.3	Determinants of lifestyles	22
<b>3</b>	<b>Developing strategies for sustainable lifestyles</b>	<b>25</b>
3.1	Spurring bottom-up action: the Refuse, Effuse, Diffuse (REDuse) framework	26
3.2	The Attitude-Facilitators-Infrastructure (AFI) framework	30
3.2.1	Attitude – pro-sustainability value orientation	31
3.2.2	Facilitators/Access – institutional arrangements and enablers	32
3.2.3	Sustainability infrastructure – the hardware and systems of provision	33
<b>4</b>	<b>Concluding notes</b>	<b>37</b>

## List of Figures

Figure 1:	Lifestyle aspects and the food supply chain	6
Figure 2:	Lifestyle aspects and the housing supply chain	7
Figure 3:	Lifestyle aspects and the mobility supply chain	8
Figure 4:	The ring of lifestyles: layers of influence on needs and wants	19
Figure 5:	Factors influencing of sustainable lifestyles	23
Figure 6:	The REDuse (Refuse-Effuse-Diffuse) framework for sustainable lifestyles	28
Figure 7:	Key elements of policy design to enable sustainable lifestyles	30
Figure 8:	Stakeholder attitudes as a pre-condition for sustainable lifestyles	31
Figure 9:	Facilitators of sustainable lifestyles	32
Figure 10:	Sustainable infrastructure as a pre-condition for sustainable lifestyles	33

## List of Tables

Table 1:	Examples of REDuse actions by consumers in high-impact consumption domains	29
Table 2:	Examples of use of AFI to address key sustainable lifestyle objectives	34
Table 3:	Sample AFI worksheet to assess sustainability action for key domains of consumption	34

# Preface: Sustainable Lifestyles as an Engine for Change

Humans make hundreds of thousands of decisions during the course of their lives. For the lucky among us, those decisions will vary wildly. What food will I eat? what house will I live in? How will I get to work in the morning? What type of clothes will I wear? How will I spend my spare time? The list is endless.

No matter how we choose to answer these questions, the lifestyles we end up living – or, in some cases, are forced to live – have a profound impact on our planet, affecting everything from how our economies grow to the health of our environment.

Our consumption habits are putting our resources levels at great risk. The amount of stuff we use in order to live has exploded in many parts of the world, highlighted by the fact that the global extraction of materials has tripled over the past four decades, rising to an enormous 70 billion tonnes in 2010. If current trends continue, then this dramatic increase in the amount of material we consume will continue to rise as populations grow, the middle class expands, and incomes increase.

Today, cities are associated with 60 to 80 per cent of all greenhouse gas emissions, consume 75 per cent of natural resources, and account for 50 per cent of all waste (UNEP, 2012). By 2050, the number of people living in urban areas is expected to reach 6.3 billion – roughly two-thirds of the global population. This will have a profound effect on what and how individuals and societies consume, especially when it comes to food, mobility, housing, consumer goods and leisure.

As a result, this urban shift carries with it immense social implications. The extra pressure these new urban consumers will place on the world's increasingly scarce resources will exacerbate existing tensions between the world's wealthiest 10 per cent, whose lifestyles contribute half of global carbon emissions, and the growing numbers of urban poor, who are responsible for only 10 per cent of carbon emissions (Oxfam, 2015).

If current trends continue, by 2030, humanity will need the equivalent of two Earths to support itself, according to some experts. This is clearly not viable in a world where climate change will make it even harder for the natural world to provide for our needs.

There are encouraging signs that society is beginning to understand the impact of our daily choices. Terms like “quality of life” and “sustainable lifestyles” regularly appear in the media, illustrating that people are already weaving sustainability into their daily

decision-making. Carbon footprinting, food waste reduction campaigns, urban gardening, vehicle sharing models, and surveys to understand the values and motivations of youth are all ways that are helping people to live more sustainable lifestyles.

Yet these actions, in general, are piecemeal. They are not yet framed within a holistic vision of what constitutes a sustainable lifestyle. Living sustainably is not just about individual choice: it is also about ensuring that governments and businesses enact policies that guide people towards these type of lifestyles. Often ignored is the role that public sector institutions can play in shaping better policy and the role of businesses in providing more sustainable goods and services.

Fortunately, sustainable lifestyles are now solidly anchored in policy. The COP21 Paris Agreement made it clear that sustainable lifestyles and sustainable patterns of consumption and production (SCP) will be key in the fight against climate change. The goals set out in the 2030 Agenda for Sustainable Development and intergovernmental processes like the 10 Year Framework of Programmes on SCP give further support to champions of sustainable lifestyles by acknowledging the powerful role they can play in lifting people out of poverty, ending hunger, and reducing inequality while protecting the environment. At least two of the eight themes at the World Economic Forum 2016 in Davos, Switzerland, highlighted the impacts of climate change on our lives and the effects of increasing wealth inequality on economic development. This clearly shows that sustainable consumption and lifestyles are growing in importance on the international stage.

With this solid foundation in place, it is now time to develop a more structured, life-cycle, and evidence-based understanding of sustainable lifestyles to facilitate global dialogue and measure progress. This will enable us to focus on the ‘hotspots’ on where critical action can be taken.


For individuals, this means understanding the impacts of their daily decisions and embracing more sustainable lifestyles. For governments, it implies setting a conducive regulatory context, facilitating and inspiring better citizen decision-making, creating market demand through sustainable public procurement, and supporting research, development, and innovation. For the private sector, it implies integrating sustainability into core business strategies to develop innovative ways to meet the needs of people while reducing the pressure on the world’s dwindling resources. This includes communicating about product

sustainability performance to enhance informed decision-making.

This publication contributes to this understanding. It reviews the current knowledge about what factors influence lifestyles and proposes strategies for assessing policies and developing necessary actions. The Refuse, Effuse, Diffuse (REDuse) framework, for example, facilitates individual actions and bottom-up initiatives. The Attitudes-Facilitators-Infrastructure (AFI) framework enables policymakers to assess policies and initiatives to develop sustainable lifestyles policies. Worksheets and examples illustrate how these approaches can be used to improve decisions related to the core lifestyle areas of food, mobility, housing, consumer goods and leisure.

We hope it will help policymakers, individuals, and other stakeholders understand what a holistic approach to lifestyle means and how different contexts require different lifestyle solutions. Sustainability is relative and it varies depending on geography and local conditions. As a result, this publication does not set out to define what “the” sustainable lifestyle looks like. Instead, it can help guide a range of initiatives that enable lifestyle choices that contribute to sustainability.

Simply put, if current trends continue, then the evidence says that there are not enough resources to meet the demands of consumers. So the vital question is: how can the way we live our lives – the hundreds of decisions we make every day as individuals and policymakers – be transformed into lifestyles that are sustainable? This publication is an evidence-based framework designed to engage in this dialogue.



---

Arab Hoballah





# Introduction



# The need to promote sustainable lifestyles

Lifestyles are social prints of how we live – they guide our habits, frame our behavioural and consumption choices, shape our identity, influence our health, and welcome or exclude us from social relationships. Everyone has a lifestyle, and yet lifestyles remain challenging to understand systemically and to directly address in the context of social transformation. Still, there is ample evidence that lifestyles can be influenced and that they change.

If our lifestyles shape our behavioural patterns, then from a sustainability perspective, lifestyles also define our footprint. Everyone has a responsibility to deliver a better human society and a better planet to future generations. This responsibility is operationalized through our preferences and the choices we make. As individuals and households, how we live – how we exercise our pursuit of well-being and happiness – affects others and has an impact on the environment. On the community or institutional level, governments are responsible for policies and initiatives that frame the societal context in which people, households and communities operate. Businesses, and the value chains they comprise, have a responsibility through their operations and the goods and services they offer. Each and every one of us has an impact on the world. Thus sustainable lifestyles are essential to our pursuit of happiness and at the heart of sustainable development.

Discussions around lifestyles are age old. From the beginning of civilization, among ancient Greek and Chinese philosophers, to today, among the ecological and behavioural scientists, many efforts have been made to define the essence of “the good life.” Thornstein Veblen (1902) in *The Theory of the Leisure Class* was an early influence in the study of material consumption. He linked the underlying motive of “conspicuous consumption” to expressions of identity – a display of social status where people seek to affiliate with or differentiate from others and to differentiate between membership in a superior “leisure class” and the wider majority of those in the labour classes. This is different from “inconspicuous consumption” – ordinary everyday consumption, not oriented toward display but rather meeting needs, convenience, habit, practice, and social norms. In the 21st century, the discussion has acquired new complexities as globalization results in value chains that span the earth and changes in communication and information technologies have made the world a smaller, more interconnected place. Though many people are better off, there are increasing social inequalities (across and within countries) and global ecological trends which threaten the ability to meet all human needs and the stability of our intertwined societies, and which test planetary boundaries.

There is now recognition that current consumption, defined by lifestyles, is one of the underlying drivers of unsustainable trends. His Holiness Pope Francis is only one of the most recent public leaders who have directly addressed consumption. His encyclical (Pope Francis, 2015) criticizes consumerism and irresponsible development, laments environmental

degradation and global warming, and calls on all people of the world to take swift and unified global action.

Evidence qualifying impacts of lifestyles on sustainable development is mounting. By 2050, without radical changes in production-consumption

Box 1

## What is a sustainable lifestyle?

A definition of sustainable lifestyles should address the role of material consumption as well as the broader context within which lifestyles occur – acknowledging people's aspirations for happiness, recognizing the ecological and material limits to meet demands, and the interdependence among people in a shared consumption space. This publication uses the following definition:

**A “sustainable lifestyle” is a cluster of habits and patterns of behaviour embedded in a society and facilitated by institutions, norms and infrastructures that frame individual choice, in order to minimize the use of natural resources and generation of wastes, while supporting fairness and prosperity for all.**

Creating sustainable lifestyles requires a change in social norms and in the design of the systems that support lifestyles. It means rethinking our ways of living – including how we buy and organize our everyday lives. There are also implications for how we socialize, exchange, share, educate, and develop our identities. At the macro level, it is about transforming societies to better meet people's needs in balance with the natural environment. As citizens, at home and at work, the choices we make on food, housing, mobility, consumer goods (including clothes and appliances, etc.), leisure (including tourism products and services), communication, and interaction contribute to building sustainable lifestyles.

*(This is an updated definition based on UNEP (2010), the Taskforce on Sustainable Lifestyles (Sweden, n.d.), and recent research as referenced in this publication.)*

systems, three planets' worth of resources will be required to support projected consumption levels (Global Footprint Network, n.d.). For transformative change, interventions should target the most influential lifestyles, those with the highest impacts on the environment and those which drive global aspirations. This publication targets these middle-class urban lifestyles, the largest consuming segment of people in industrialized regions and increasingly in all other regions. While the environmental impacts of highly consumptive, unsustainable lifestyles of industrialized countries are well documented, more needs to be done to address their influence on emerging regions. This influence is strengthened by upholding the North American and European "dream" which continues to define appetites of the new urban middle-class everywhere.

The global middle class is anticipated to grow from 1.8 billion to 4.9 billion in population between now and 2030 (Kharas, 2011) and the vast majority of this will be youth and will live in Asia, though many others will live in burgeoning urban environments in Africa and Latin America. It is estimated that between 2009 and 2030 the global middle class demand could grow from US\$21 trillion to US\$56 trillion (Ernst & Young, 2011). They will be increasingly ready to spend as they aspire (and set aspirations for others) to a higher quality of life. Hence, as well as addressing lifestyles of industrialized societies, targeting the middle class of emerging economies will play a significant role in ensuring the sustainability of the planet. The global policy agenda now specifically references sustainable lifestyles, as evidenced by the Paris Climate Change Agreement and the recently adopted Sustainable Development Goals (SDGs). Goal 12.8 sets the target: "By 2030 ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature."



## Key lifestyles domains and the environment

Given that consumption is heavily embedded in lifestyles, researchers have been able to identify key domains where consumption and lifestyles have the highest environmental impacts by combining an understanding of consumption patterns, life-cycle analysis and sustainability indicators for carbon, material, and ecological footprinting. For example, the International Resource Panel (IRP) produced a synthesis report (Hertwich, van der Voet, & Tukker, 2010) with a global assessment of final consumption categories and product groups that have the highest environmental impacts across their life cycle. The top three impact categories are food and agriculture, housing and building construction, and mobility and transportation. Other studies which focus on national (e.g.: Lettenmeier, Liedtke, & Rohn, 2014; Michaelis & Lorek, 2004) and regional (Backhaus, Breukers, Mont, Paukovic, & Mourik, n.d.; EEA, 2012; OECD, 2002) levels draw similar conclusions. In addition they all highlight the large footprints of consumer products and services, including those related to tourism and entertainment.

There are, however, limitations to relying only on footprint calculations for policy design and action. These include: problems with data, the number of individual product life cycles that would need to be analysed to provide a comprehensive impact assessment, and the fact that most assessments carried out reflect consumption in industrialized countries and regions. For a broader picture of lifestyle impacts, quantitative methods (such as footprint analysis) need to be complemented with normative, qualitative assessments, especially in the case of emerging economies. This report highlights that sustainable lifestyles imply more than material consumption alone. Beyond just environmental impacts, the social impacts of lifestyles and consumption can be equally or even more problematic.

For the purposes of developing research-based, practical strategies and responsive interventions towards sustainable lifestyles, the key domains of final consumption highlighted in this report are: food, housing, mobility, consumer goods and leisure. Water, energy, and waste are not addressed in isolation but as cross-cutting elements that affect and are affected by almost every lifestyle domain. The emerging practice of hotspot analysis to highlight where action could be taken along supply chains and potential impacts, though not covered in this report, is instrumental in the next steps (Barthel et al., 2014; Tukker et al., 2006; UNEP, 2010b). Similarly, understanding the political economy around consumption and the power dynamics in the supply chain would further highlight which stakeholder(s) has the most potential for sustainability.

# Food.



What we eat and drink – how it is produced, processed and provided – and how we dispose of it all have impacts on the environment and society.

People make decisions related to food based on both objective and subjective factors, including cost, freshness, health impacts, presentation (e.g., packaging), place of origin, convenience, taste, and culture. At the use phase in the food system, some

factors that have impacts on the environment include outlet of purchase, storage period and facilities, preparation process, and consumption. Apart from environmental impacts, concerns around lifestyles and food include health, obesity, an increasing number and intensity of allergies, and social impacts of agricultural practices. Globally, almost a third of food harvested is wasted or lost; contributing to this are changing dietary trends, particularly in urban environments which increasingly favor more resource intensive (GHG producing) foods such as processed foods and meats. This occurs in a global context where 1 in 9 people are hungry and 2 in 10 are obese. There is clearly potential to shift to more sustainable patterns. Cities can encourage more sustainable diets that ensure adequate nutrition while reducing environmental footprint, raising awareness, and changing behaviour around food waste. Enacting policies in planning, housing and transportation can also support more sustainable low carbon food systems and encourage more sustainable local food production such as backyard and community gardens.

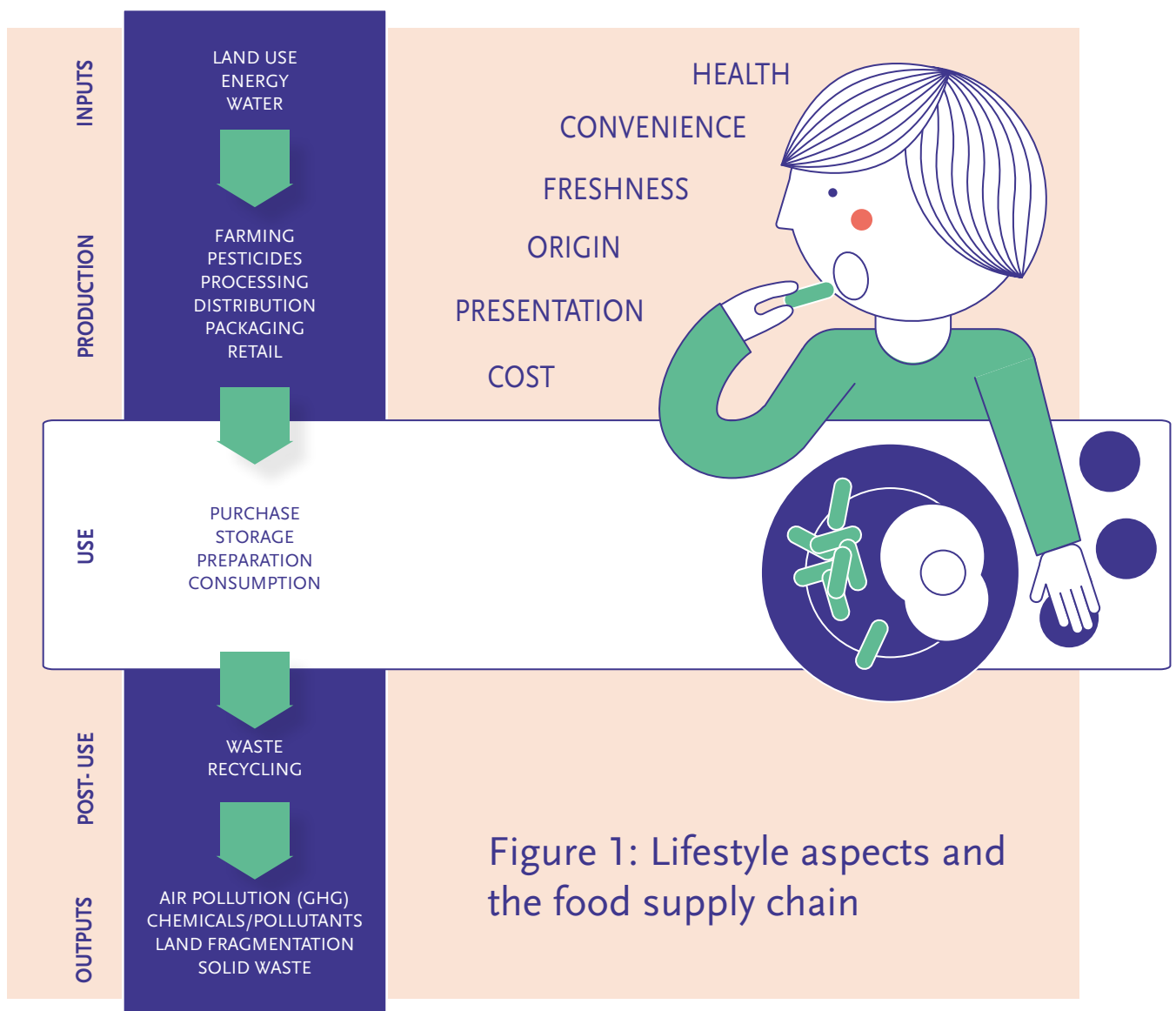


Figure 1: Lifestyle aspects and the food supply chain

# Housing.



How we live, where we live, what is used to build, heat and cool our living spaces and what we install in our houses have social and environmental impacts.

The building sector contributes up to 30 per cent of global annual greenhouse gas emissions and uses up to 40% of all energy (UNEP, 2009). In order to address this, we need innovative solutions on what future buildings and cities will look like. Building

construction requires resources such as sand, wood and metals. Many of the materials require pre-processing and some of them are sourced through mining. The mining process alone causes biodiversity loss, deforestation, emissions of GHGs and use of hazardous chemicals. People make decisions related to housing based on both objective and subjective factors, including cost and size of the building, building characteristics, aesthetics, the neighbourhood, and available amenities. While living in houses we use energy and water, and dispose of waste: important energy considerations include efficiency insulation and heating and/or cooling. The way neighbourhoods are built affects many aspects of society, including the rate of crime, commuting distances, the opportunities for neighbours to create strong ties and form vibrant communities and the general well-being of inhabitants. Finally, at the end of a house's life cycle, the building needs to be demolished, requiring energy and producing waste.

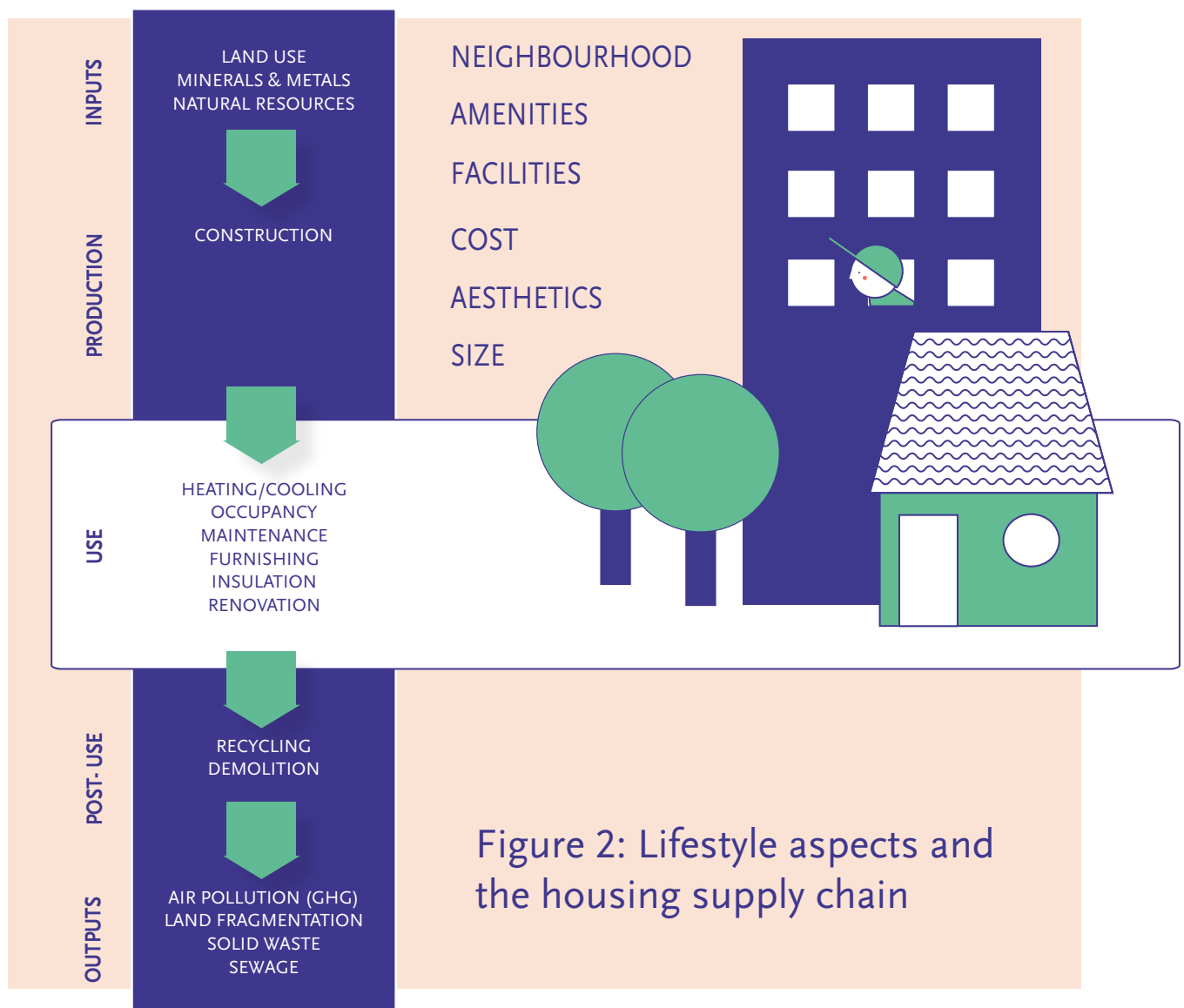


Figure 2: Lifestyle aspects and the housing supply chain



# Mobility.



What forms of transport we choose, how often we travel, and the distance travelled as well as the supporting systems and infrastructure have impacts on society and the environment.

The transport sector is responsible for 13 per cent of greenhouse gas emissions and 23% of CO2 emissions from global energy consumption (GEF-STAP, 2010). Citizens make mobility decisions based on cost, choice

of transportation mode, congestion, convenience, time efficiency, connectedness, and environmental impacts. Mode of transportation is particularly significant – flying tends to have the highest environmental impact, followed by private car use. Other factors, such as distance covered, number of people in the vehicle per use, technology efficiency, and type of fuel used also contribute substantially. Awareness of climate change has led to increased understanding of mobility impacts on society and the environment. However, more can be done to understand how people's mobility needs can be addressed in a more sustainable way. Part of this involves questioning the need for mobility in given situations, and in making living choices that require less transportation (e.g. residential housing configurations that require less commuting and less travel for shopping and entertainment). For example, policy responses can include combinations of measures that discourage unnecessary transportation, adopt more sustainable modes of transport, and improve existing systems of transport.

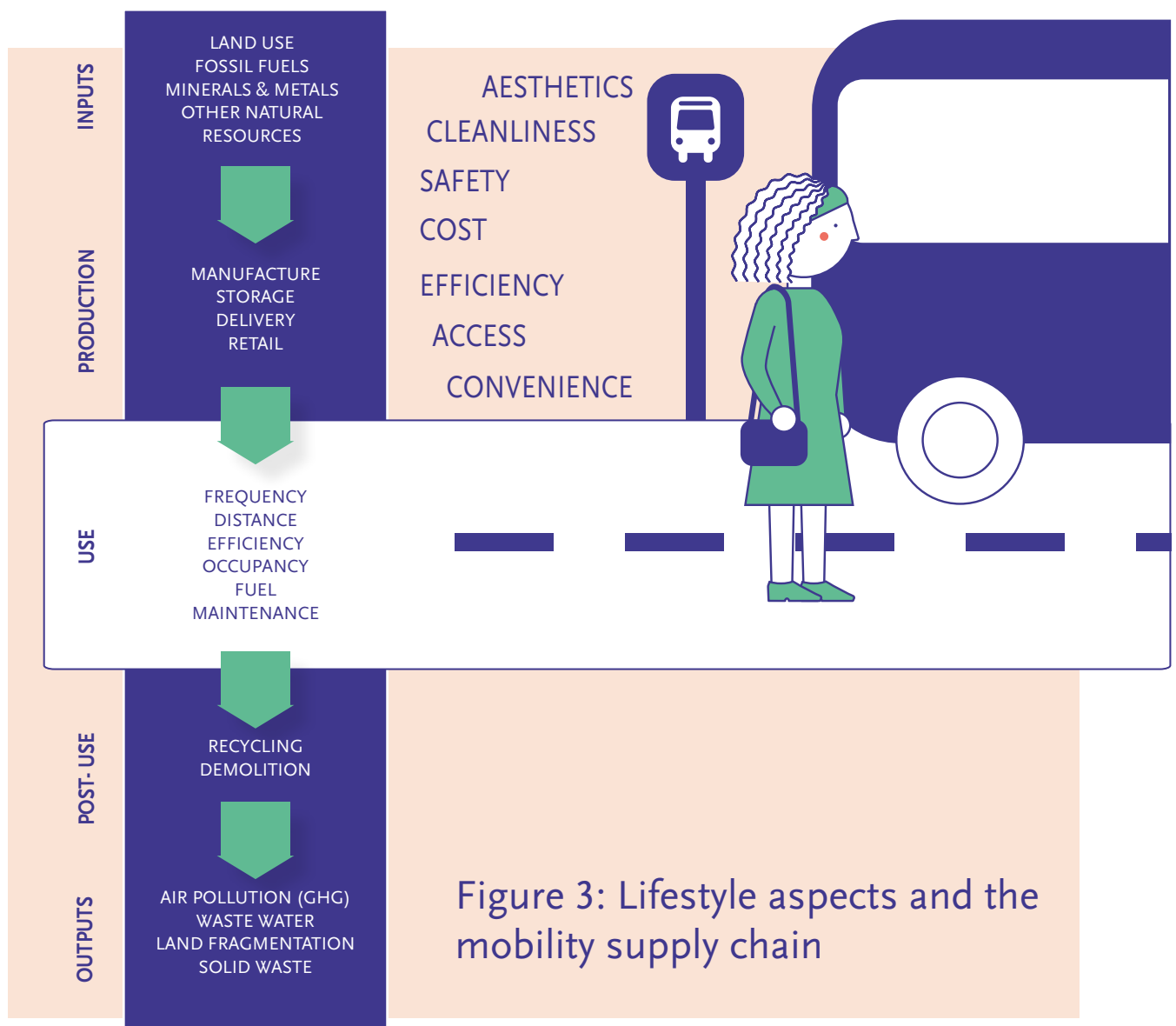


Figure 3: Lifestyle aspects and the mobility supply chain



# Consumer goods.



The products we buy, the type and quantity of materials that are used in producing them, how we use them, and how often we replace them have impacts on society and the environment.

Examples include electric and electronic appliances, clothing and shoes, cosmetics and personal care, jewellery, furniture and paper products. Products which tend to have the highest impacts are those produced using mined materials and fossil fuels. Consumer goods are important because of their daily use and their role in defining our image and habits.

The expanding role in modern lifestyles of electric and electronic products (e.g. mobile phones and other information communication products) means related environmental impacts are increasing, through the growth of electronic waste, pollution, and mining of rare earth metals. However, they also have a strong potential to unleash sustainability efforts because of their role in disseminating information and enhancing knowledge/experience exchange, and their global reach.

The fashion and textile industries have evolved to embrace a fast-fashion phenomenon, characterized by tens of “micro-seasons” and some popular brands introducing hundreds of new styles a week. For some middle class consumers, clothes are rarely, if ever, worn and move quickly to landfills. These consumption patterns have huge implications for resource scarcity and pollution, with impacts that vary according to fabrics, dyes, chemicals, transportation, and packaging method used. Clothes help us to define who we are and what we stand for, and are connected to our daily lives on a very personal level. With women spending tens to hundreds of hours shopping for clothing every year, fashion has the unique ability to be a highly visible engine for change and even a medium for consumer education.

# Leisure.



How we spend leisure time, our choice of tourism destinations and activities, and the facilities we use have significant contributions to the environment and society.

Leisure embodies a wide variety of activities – from meditation and reading to flying and watching television; or swimming, golfing,

weekend trips, and owning second homes. Each reflects different levels of materialism and social interaction. Staying at and using the services of a five-star hotel, for example, has a higher impact than staying in a three-star hotel. Entertainment activities increasingly involve electronic equipment and information communication technologies; this has led to higher levels of individualism while at the same time increasing energy use and electronic waste production. Tourism products and services, if not well managed, can contribute to biodiversity loss, stress on key resources, land fragmentation, social disruption, and loss of cultural heritage. On the other hand, volunteering for social causes, meditation, and engagement in handicrafts, when sustainably managed, have been shown to contribute to a better sense of wellbeing and social cohesion.



# Lifestyles in Context

# 12

## Theoretical framing of lifestyles from a sustainability lens

Sustainable lifestyles as a research area is still an emerging field. It currently depends heavily on theories of consumer behaviour. But lifestyles are not all about consumption. Furthermore, people's behaviours are difficult to explain and predict. As sustainable lifestyles research evolves, more is being done to apply a behavioural and sustainability lens to some traditional framings of social sciences. A few examples are briefly covered in this section and a synthesis of contemporary research on sustainable lifestyles is presented.

Neo-classical economic framing has tended to assume that people always act out of self-interest to maximize their utility, that people make rational decisions, and that the market provides enough information for people to make these rational choices. But these so-called individualistic and "Homo economicus" assumptions have been debunked. Further research has expanded this framework to include social influences on consumer decisions. Consumer preferences are based on pursuit of individual well-being, through use of personal capital (consumption and experience that affects well-being) and social capital (influence of actions by others in the social network) (Becker, 1998). This supports the emerging theory that consumption is partly a social phenomenon and recognises the importance of peer pressure and social status (OECD, 2002). This framework emphasizes the key driving factors of income, price, social norms and peer pressure. The emerging theory of social practice attempts to understand lifestyles not through the individual but through the practices in which individuals and households engage. Everyday activities such as bathing, eating and travelling are basic, and individuals engage in them to fit within the larger social context. Social practice theory suggests that lifestyles and household consumption embody a whole set of behavioural practices that are common and carried out according to common rules and social norms.

This theory is further supported by the 'system of provisions' framework, which looks at the infrastructure that shapes daily consumption. For example, people's behaviours are influenced by the technology and infrastructure that delivers water and energy use, waste management, and transportation systems. For mobility, given that people always need to travel, the absence of (clean, safe, accessible and affordable) public transportation systems could heavily influence use of alternative options (e.g. private cars).

## Box 2

# Key messages from research on sustainable lifestyles

1

**There is no universal sustainable lifestyle.**

What is sustainable in one locality may not be sustainable in another

2

**Lifestyles occur within – and are enabled and constrained by – social norms and the physical environment.**

It is important to differentiate between the factors that can be addressed at the individual or the household level, and those that are beyond individual control (Akenji, 2014)

3

**Lifestyles are not static.**

They change with society's dynamism. People's visions and aspirations in life change as their personal situation evolves, as society evolves and as knowledge, norms, and technology change (UNEP, 2011). These offer opportunities for shaping the future

4

**Needs and desires are influenced by time and society.**

As society evolves, or becomes more complex and/or affluent, what constitute basic social needs evolve. For example, a mobile phone was perceived as a luxury two decades ago, now it is a perceived need for most adults in industrialized cities, yet it remains a luxury in some parts of the developing world

5

**Beyond enabling basic necessities and needs to operate with dignity within a society, increases in income not directly translate into happiness.**

People's expressions of happiness correlate with the level of trust, social ties, education, health and meaningful employment (Easterlin, 2003). There is little evidence, especially in industrialized nations, to support the assumption that economic growth through gross domestic product translates to increase in well-being (Jackson, 2009)

**6** **Efforts must be made to address the extremes of poverty and wealth in society in order to ensure sustainable lifestyles.**

Manifestations of social tension get stronger as the disparity of economic conditions between the social classes get wider (Death, 2014; Hilton, 2007)

**7** **The environmental impacts of lifestyles are not intentional but rather a consequence of people aspiring to fulfil needs and desires, as well as to function in society.**

It is important to examine how society is organized to provide for the well-being of citizens (Shove, 2006; Spaargaren, 2004)

**8** **Most environmental impacts of lifestyles can be addressed by targeting the following key domains of final consumption: food, mobility, housing, consumer goods, and leisure.**

This cannot be done piecemeal and must address the underlying value systems (including what contributes to well-being) and review the choice of architecture and infrastructure that support lifestyles

**9** **Knowledge or awareness of sustainable consumption and lifestyle options does not usually lead to intended actions.**

This knowledge-action or intention-behaviour gap suggests that awareness is easily subordinated by lack of access or lock-in to available options

**10** **Top-down approaches to changing lifestyles will only succeed with participation of civil society.**

Bottom-up approaches, including social innovations, social movements, and grassroots experiments, are pivotal in opening up new avenues and fostering acceptability of sustainable solutions (Heiskanen, Lovio, & Jalas, 2011)

## Influencing factors of consumption and lifestyles

There is vast literature addressing lifestyles and consumption and sustainability (Akenji, 2014; T Jackson, 2005; Mont & Power, 2013; OECD, 2002; Tukker, Cohen, Hubacek, & Mont, 2010; Vergragt, Akenji, & Dewick, 2014). Though the study of lifestyles is not new, looking at “sustainable” lifestyles increases the complexity of intervening factors and their interdependence. This is because sustainability (unlike health, safety and ethics) is not a criterion engrained in operations of many communities, the impacts are not felt immediately or directly, and the translation from theory to policy and practice remains ineffective. What works or does not work is still subject to experiment and debate.

There is consensus that, to have more effective sustainable lifestyles policies and practices, it is critical to get context-specific to understand why people consume and what shapes their related behaviours. This context-specific understanding can be derived through three interlinked underlying lifestyle factors: i) motivations; ii) drivers; and iii) determinants. These should be the focus of policies, institutional frameworks, programmes and infrastructure when influencing lifestyle design.

- i. **Motivations** refer to the immediate personal and social reasons and justifications that compel people and society to take certain actions or make certain decisions – e.g. the desire to spend time with friends and family, or the seductive presentation of a product.
- ii. **Drivers** refer to circumstances that support motivation, normalising it, or making it practicable – e.g. cultural norms or media marketing.
- iii. **Determinants** are super-factors that decide on the possibility of lifestyle or consumer action. Three key determinants explain types of lifestyles: attitudes, facilitators (access), and infrastructure.



2.2.1

## Motivations of lifestyles



CC BY-NC-SA Hans Jörg Aleff



## Box 3

# Why do people consume?

Studies and empirical evidence suggest that people do not consume with the intention to harm the environment. Resulting environmental impacts are an unintended consequence of the pursuit of well-being. Viable approaches to changing lifestyles need to address underlying reasons and motivations for particular consumption patterns. Among other reasons, people consume:

- **To meet basic needs**  
e.g. nutrition and subsistence, health, housing, mobility
- **To fulfil social functions/expectations**  
e.g. convenience, connectedness, maintaining relationships, traditions
- **To satisfy personal desires, preferences and tastes**  
e.g. leisure, food preferences, consumer goods (electronics or cars)
- **Due to the influence of advertising/marketing**  
e.g. creation of new product markets such as pet food and cosmetics, planned obsolescence, or enhanced functionality such as mobile phones that do more than make calls and
- **Because they have no choice**  
e.g. lock-in design of mobility infrastructure favours private car use or urban zoning laws and administrative procedures make urban agriculture difficult

There are a few core models on what motivates people's consumption behaviour. The widely referenced Needs-Opportunities-Ability model looks at consumption from the macro-level of society and the micro-level of the household (Gatersleben & Vlek, 1998; OECD, 2002). It assumes that given the opportunities and the necessary abilities, people would pursue fulfilling their needs and desires to improve their quality of life. According to Vlek, needs include relationships, development, comfort, work, health, money, status and safety. Max-Neef, in his

widely accepted work (Max-Neef, 1991), has identified some universally present needs: subsistence, protection, affection, understanding, participation, recreation, creation, identity and freedom. These resonate with the motivation behind consumption and lifestyles.

## 2.2.2

# Drivers of lifestyles

Lifestyles and consumption are governed by a set of complex and dynamic drivers, which reflect the personal situation (income, identity, individual taste, and values) and external socio-technical and economic conditions (culture, social context, peer pressures, etc.). There are also physical or natural boundaries which allow or constrain lifestyle options. Studies on consumer decision-making in several fields show that cognitive abilities, psychological, social, economic, and policy and institutional frameworks all come into play, highlighting that driving factors behind lifestyles are inter-linked, and sometimes contradictory.

Factors influencing lifestyles can be pictured in overlapping layers as presented in Figure 4. In the centre are the needs and desires of people, with examples from Vlek's and Max-Neef's work.<sup>1</sup> These needs and wants contribute to, and are also determined by one's personal situation and the socio-technical environment. Finally, to stay within sustainable limits, needs and wants can only be fulfilled within natural or eco-system boundaries. This presents a gradation of factors from the micro-level to the macro-level. In essence, how we fulfil needs and wants (lifestyles) is framed by factors that range from the personal situation, through the enablers or constraints of broader external socio-technical conditions, to ultimately physical and natural boundaries. Defra (2011) has referred to this as a distinction between behavioural factors and situational factors.

---

<sup>1</sup> Although important, this paper does not distinguish needs from wants and desires – all of which are driven by psychological, social and physical mechanisms and whose fulfilment or absence would have impacts on lifestyles and sense of satisfaction.

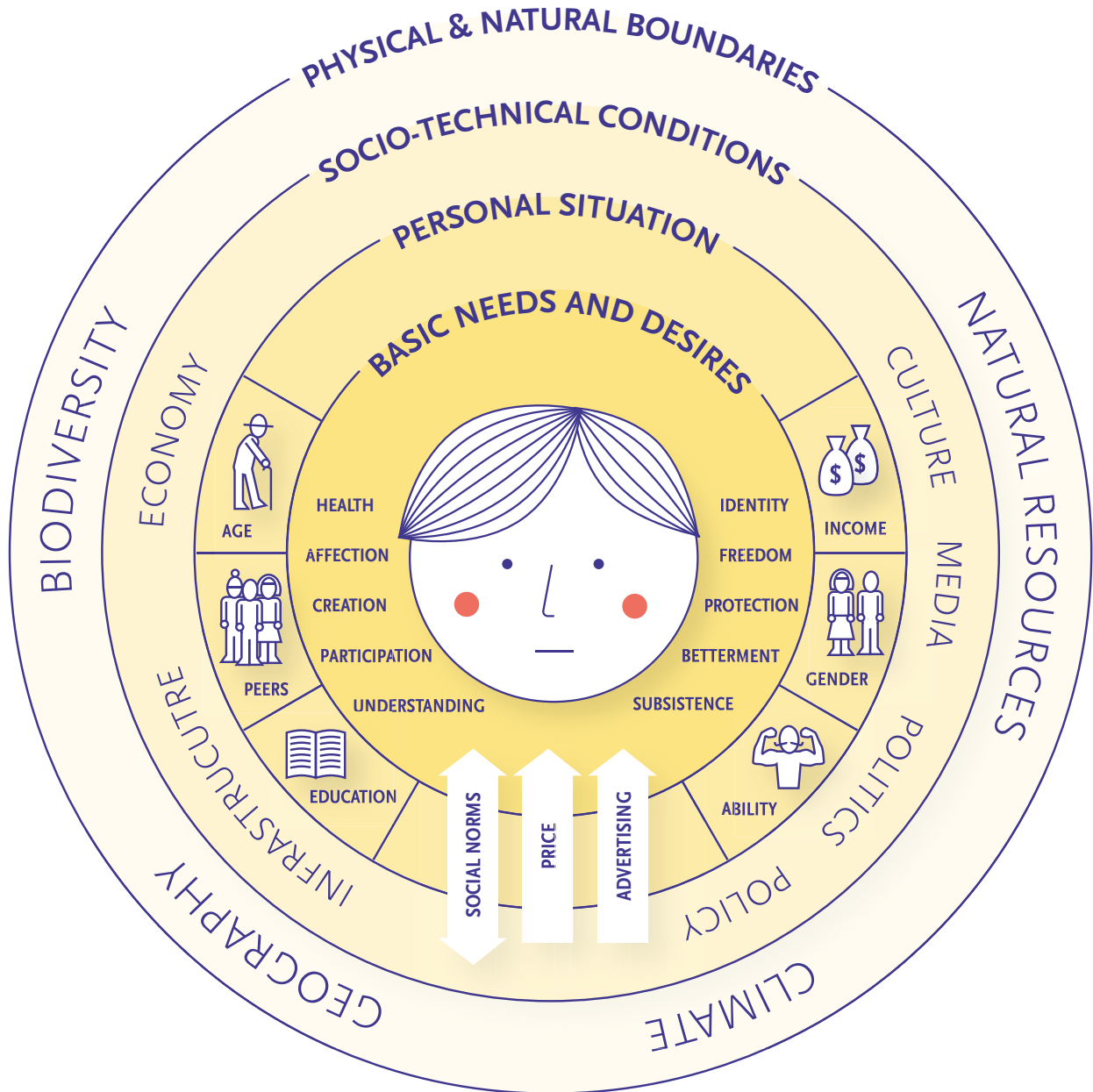


Figure 4: The ring of lifestyles: layers of influence on needs and wants

**Below some of the main lifestyle drivers:**

- i. **Income level:** This is one of the strongest lifestyle indicators and drivers of consumption. More disposable income means greater affordability of goods and services and easier access to more credit, that can further consumerism (Girod & De Haan, 2010; Tukker et al., 2010). In addition, there is compounded social pressure to maintain lifestyle levels once adopted.
- ii. **Values:** Values are powerful determinants of attitudes and actions (Brodhag, 2010). Many consider them the foundation of lifestyle decisions as people tend to consume to fulfil value-laden objectives. Values can be at the personal or broader cultural or ethical levels (Mont & Power, 2013).
- iii. **Ability:** People's abilities are influenced by many things e.g. age, geography, climatic conditions, which in turn affect lifestyle

decisions (OECD 2002). For example, cognitive and physical abilities influence health, fitness, capacity and related decisions like which health procedures to undertake or which sport activities to participate in.

- iv. **Awareness:** Awareness is important to enable people's search for suitable lifestyle alternatives. Awareness of consumption impacts, at the individual and collective levels, can shape choices. Awareness can have a multiplier effect: groups can lead by example and an individual can influence family, friends or communities in contact. Awareness on its own is not enough – it must be accompanied and channelled (e.g. by policy, incentives, etc.) towards actionable outcomes. While awareness can change behaviour, sometimes practice or experimentation alters awareness (Guagnano, Stern, & Dietz, 1995). Hence, awareness of environmental impacts is not a major determining factor in lifestyle choices, which is an assumption made by many awareness-raising campaigns (Akenji, 2014).
- v. **Knowledge:** The availability (or the lack) of knowledge and information on products, services, and alternative options can often encourage or hinder lifestyles choices. Knowledge is influenced by formal and informal education, employment (type of job), and exposure to informal information sharing such as media, family and friends (Barth et al., 2012; UNDESA, 2010).
- vi. **Social norms and peers:** Our lifestyles are heavily influenced by those around us: family background, social circles, colleague expectations, professional decorum and social practices, etc. As social beings, humans have a need to identify with groups and there is peer pressure to fit in and engage in similar activities, rituals, conspicuous consumption, etc. There is also a tendency within the emerging culture of mass customisation, for people to differentiate themselves (to a limited degree) to express uniqueness (Baudrillard, 1998) or a status level within a social group hierarchy. Social and cultural institutions are custodians of culture and adherents to principles that propagate value systems, and hence are important in shaping values, social norms and lifestyle choices.
- vii. **Media:** The media with its far reach into our lives is one of the strongest influences on values, social norms and lifestyles, spreading and accelerating the social norms of consumerism. Advertising and marketing strategies often help create new (sometimes false) 'needs' and trends, encouraging consumers to replace still-functioning products for newer ones (Cooper, 2004). With increasing exposure to different media channels, including social media, facilitated by technology, the role of media to shape consumer preferences is steadily getting even stronger.
- viii. **Market prices:** Market prices determine who can afford market options. Thus pricing of luxury goods or sustainable products predetermines who can access them. When more sustainable products or services are priced higher than the less sustainable alternatives, the sustainable option is less competitive (Alcott, 2008; Godfray et al., 2010). As disposable income increases, people are less susceptible to price variations; i.e. expensive or luxury goods can become relatively more affordable. Hence the perception that higher priced organic or fair-trade products are fashionable items for the wealthy.
- ix. **Technology:** Technology can change ways of doing things (Christensen et al., 2007; Shove, 2004) – shopping by internet and e-commerce are key examples. Characteristics such as complexity, resource efficiency, indigenouness, and affordability influence the uptake and use of technologies. As they get into wider use, they often generate new eco-systems, such as supporting products, new systems of provisions, infrastructures, social practices and even sub-cultures. For example, mobile phones now often come with accessories such as casings and purchasable apps and new communities or subcultures around the apps. Technology can raise standards of living, e.g. through electricity, agriculture, and communication, but are also known to be coupled with unsustainable production and consumption patterns, which result in higher overall consumption of natural resources, goods, and services.
- x. **Infrastructure:** This refers to the hardware such as buildings, provision systems for water and sewage, electricity, waste management, telecommunications networks, and public transportation networks. They tend to have long lifespans and their designs lock people into specific use patterns, hence getting their design right from the start is important (Kivimaa & Mickwitz, 2011; Sahakian & Steinberger, 2011).

- xi. **Policies and institutional frameworks:** These have a powerful influence on all stakeholders and lifestyle directions. Hard (e.g. penalties and subsidies) and soft (e.g. nudging and voluntary standards) policy instruments can shift the entire consumption architecture by changing available market options, editing out less sustainable options, encouraging more sustainable alternatives, and creating platforms for innovation by both businesses and society. It has been argued that, “the most significant agency is usually found in addressing the wider contextual issues, for instance by changing the law or by amending the public procurement process for major projects such that sustainable development issues may more reliably be incorporated in the design” (Ballard, 2005; Pg 143).

## 2.2.3

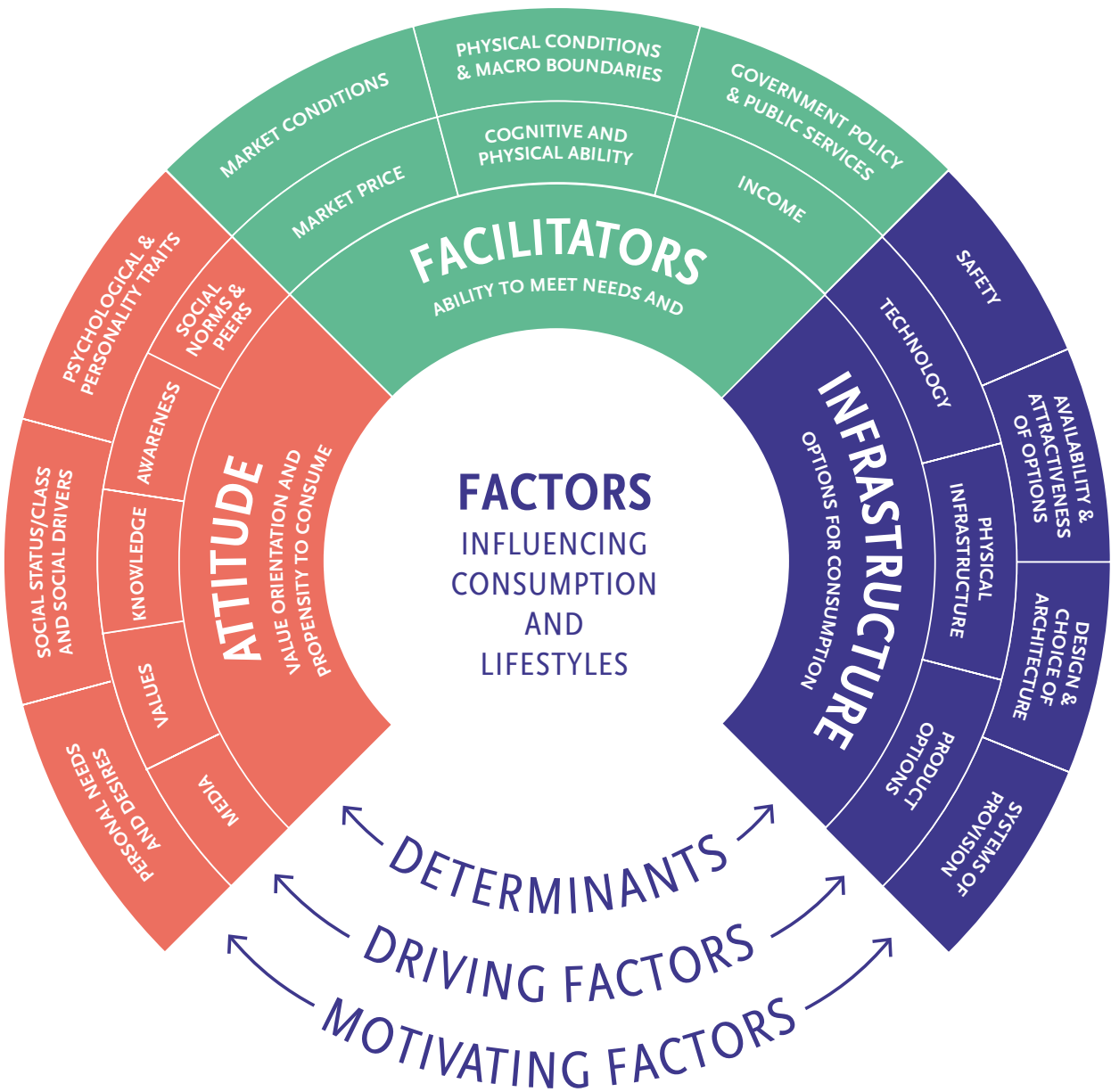
# Determinants of lifestyles

While motivations and driving factors explain the need or desire for a particular lifestyle or consumption practice, they translate into action only when certain determinants are in place. Determinants are meta-factors that establish whether or not a lifestyle is practiced and/or sustainable. Based on their characteristics, determinants can be grouped as: i) attitudes, ii) facilitators/access, and iii) infrastructure.

- i. **Attitudes.** Attitudes are a cluster of factors that contribute to a person's value orientation and their likelihood to consume. They determine preferences and choices – e.g. people who are health-conscious and eat less meat or are vegetarian tend to express pro-environment or religious attitudes. They include cultural ethics, social norms, professional and peer principles, media messages, and awareness. They create an 'appetite' tailored towards a particular direction. Attitudes can refer to individual orientation as well as collective social values and are heavily influenced social practices and movements.
- ii. **Facilitators/Access.** Belonging to a community network can facilitate access to certain local goods or services. In the same vein, a government policy can facilitate development of more competitive renewable energy options. Facilitators are a set of factors that contribute to the possibility for certain behavioural patterns or a lifestyle to actualize. Having a propensity to lead a consumerist lifestyle is not enough; one must have access to the consumer goods and services, social networks, etc., that make up that lifestyle. Access reflects 'agency,' or the ability to take personally meaningful actions. This manifests through the availability of options or choices that allow for tailored responses. Purchasing power (e.g. through income), availability of time, social networks, and cognitive and physical abilities can all contribute towards access.
- iii. **Infrastructure.** This refers to socio-ecological interfaces that support consumption activities. They include the physical infrastructure (for housing, mobility, and leisure) and the design of systems of provision (e.g. pricing and capacities of utilities like water and energy). Infrastructure around housing and transportation, for example, would need to be accessible, safe, dependable, etc., and because it lasts a long time and tends to lock users into particular behaviour pattern patterns throughout their operational lifespan, need to be highly sustainable.

Overall, the three sets of influencing factors can be seen in ascendancy, based on the impact they have on consumption and lifestyles, starting from having the motivation, to the drivers and to the presence of determinants. The three are summarized in Figure 5 below.

Figure 5: Factors influencing sustainable lifestyles









Developing strategies  
for sustainable lifestyles

3

## 3.1

# Encouraging bottom-up action: the REDuse framework

Understanding the factors that influence lifestyles allows for more strategic design of targeted sustainability interventions. Though lifestyles are primarily manifested in individual actions, support is required of all stakeholders including governments, businesses, and institutions. This section introduces two approaches to assess and design sustainable lifestyle policies and actions. The Refuse, Effuse and Diffuse (REDuse) framework, supports bottom-up approaches, encourages programmes and actions that directly empower individuals and households in their daily lives (and, indirectly, communities), enabling them to understand, create and/or choose the more sustainable lifestyle options. The Attitude-Facilitator-Infrastructure (AFI) framework is a top-down approach to support government policy, business models, institutional arrangements, and actions that set the conditions necessary for sustainable lifestyles to thrive.

Sustainable lifestyle interventions that target individuals or the grassroots level have three basic components. The first involves targeting change of individual behaviour that perpetuates negative impacts on the environment or society. This is referred to as the Refuse component. Examples could include reduction of food waste or buying over-packaged products. The Effuse component, seeks to encourage behaviours that have minimal and/or positive impacts. Using a bicycle instead of a private car or composting of organic waste are examples. While the Refuse component discourages harmful choices, Effuse encourages positive behavioural aspects. The third component Diffuse goes beyond the individual and seeks multiplier effects through engaging communities in collective sustainable behaviour. An example is in sharing or collaborative consumption – such as community gardens or farms and car-pooling. (See Box 4)

Together Refuse, Effuse and Diffuse form components of the REDuse framework. Centred on everyday sustainability actions, REDuse brings together a complementary set of practices that gradually expand from those taken by individuals to engagement on a community level.

## Box 4

## Diffuse: Examples of community-led activities that contribute to sustainable lifestyle activities

- **Cooperative purchasing groups:**  
people buy in bulk directly from suppliers
- **Local trading exchanges:**  
people exchange services and skills with each other
- **Shared playing spaces:**  
families and friends could meet to play together
- **Car-pooling:**  
individual cars are shared by groups of people
- **Community agriculture exchanges:**  
connecting urban and rural producers
- **Elderly community care:**  
run by and for senior citizens to support each other
- **Urban vegetable gardens:**  
run by community groups
- **Community nurseries:**  
parents run small, local nurseries for children
- **Communal washing centres:**  
neighbours share washing machines as an alternative to privately owned laundry machines.

*Source: Sweden, n.d. Taskforce on Sustainable Lifestyles. UNEP, Paris.*

Figure 6: The REDuse (Refuse-Effuse-Diffuse) framework for sustainable lifestyles



The REDuse framework can be used to develop complementary actions in different areas and at different levels, for example, by national and municipal governments, for campaign organisation, by businesses and for/by citizens. A city could develop action plans and activities for itself (through multi-stakeholder consultations and workshops). Table 1 provides an example of a worksheet to address key sustainability actions by individuals, households and communities.

The REDuse framework supports individual, household, and community actions and is good for campaigns and communication, but it alone cannot deliver sustainable lifestyles across society. More is needed to address lifestyle determinants, including the social and physical conditions beyond individual control. A broader strategy is also needed to engage business and institutional interests and government policy and planning to assure preconditions for sustainable lifestyles. The Attitudes-Facilitators-Infrastructure framework addresses these dimensions.






Lifestyle domain	Refuse	Effuse	Diffuse
<b>Generic examples</b>	<ul style="list-style-type: none"> <li>boycott</li> <li>avoid</li> </ul>	<ul style="list-style-type: none"> <li>eco-innovate</li> <li>do-it-yourself (DIY)</li> <li>reuse</li> <li>conserve</li> </ul>	<ul style="list-style-type: none"> <li>share</li> <li>collaborate</li> <li>localize</li> <li>eco-innovate</li> </ul>
<b>Food</b> 	<ul style="list-style-type: none"> <li>food waste</li> <li>distinguish the 'sell by', 'best before' and 'use by' dates. i.e. some food are safe to consume even after use by dates</li> <li>excessive consumption of animal products, particularly red meat</li> </ul>	<ul style="list-style-type: none"> <li>choose local, fresh, in-season and/or organic produce over exotic and out-of-season options</li> </ul>	<ul style="list-style-type: none"> <li>initiate healthy, delicious and balanced low-impact meals at work canteen or schools</li> <li>participate in local farmers market</li> <li>support and invest in Food coop</li> </ul>
<b>Mobility</b> 	<ul style="list-style-type: none"> <li>private car use; single-occupancy driving</li> </ul>	<ul style="list-style-type: none"> <li>public transport as part of or all the way to work</li> <li>walk or cycle for very short journeys such as the ones to local convenient store</li> </ul>	<ul style="list-style-type: none"> <li>car-pooling scheme or car club</li> <li>car-sharing for work commute</li> <li>teleconferencing facilities instead of long-distance face-to-face meetings</li> </ul>
<b>Housing</b> 	<ul style="list-style-type: none"> <li>large houses (with low occupancy)</li> <li>unnecessary product promotions/discounts</li> <li>multiple and/or large electronic and electrical appliances such as TV sets and fridges</li> </ul>	<ul style="list-style-type: none"> <li>home insulation</li> <li>energy and water efficient behaviour</li> <li>opt for renewable energy option</li> <li>construct "passive houses"</li> </ul>	<ul style="list-style-type: none"> <li>initiate or join a (neighbourhood) tools library or rarely used household tools and appliances</li> </ul>
<b>Consumer goods</b> 	<ul style="list-style-type: none"> <li>one-time use products such as plastic bags, razors, plastic cups, single use cleaning products</li> </ul>	<ul style="list-style-type: none"> <li>repair, recycle</li> </ul>	<ul style="list-style-type: none"> <li>give away old but still usable items (clothing, electronics, furniture)</li> <li>rent less-frequently used goods instead of buying</li> </ul>
<b>Leisure</b> 	<ul style="list-style-type: none"> <li>tourism to sensitive biodiversity hotspots</li> </ul>	<ul style="list-style-type: none"> <li>choose low impact yet enjoyable activities/experience for leisure (gardening, visit parks and local museums and theatre, cycling, volunteering, family party/picnic)</li> </ul>	<ul style="list-style-type: none"> <li>participate in or initiate a community allotment project;</li> </ul>

Table 1: Examples of REDuse actions by consumers in high-impact consumption domains

## The Attitude-Facilitators-Infrastructure (AFI) framework.

The Attitudes-Facilitators-Infrastructure (AFI) framework draws from the three lifestyle determinants, and describes the elements needed to design a sustainable lifestyles policy package at a systems level: pro-sustainability stakeholder attitudes, facilitators or access to sustainable options, and the supporting infrastructure. It focuses on changing the context that shapes lifestyles, addressing the macro-factors beyond an individual's control. It is aimed at governments and other major stakeholders, to aid in the design of policies, programmes, and actions that 'edit out' unsustainable options and to make sustainable lifestyles the default option (Akenji, 2014).

PRE-CONDITIONS  
FOR SUSTAINABLE  
LIFESTYLES

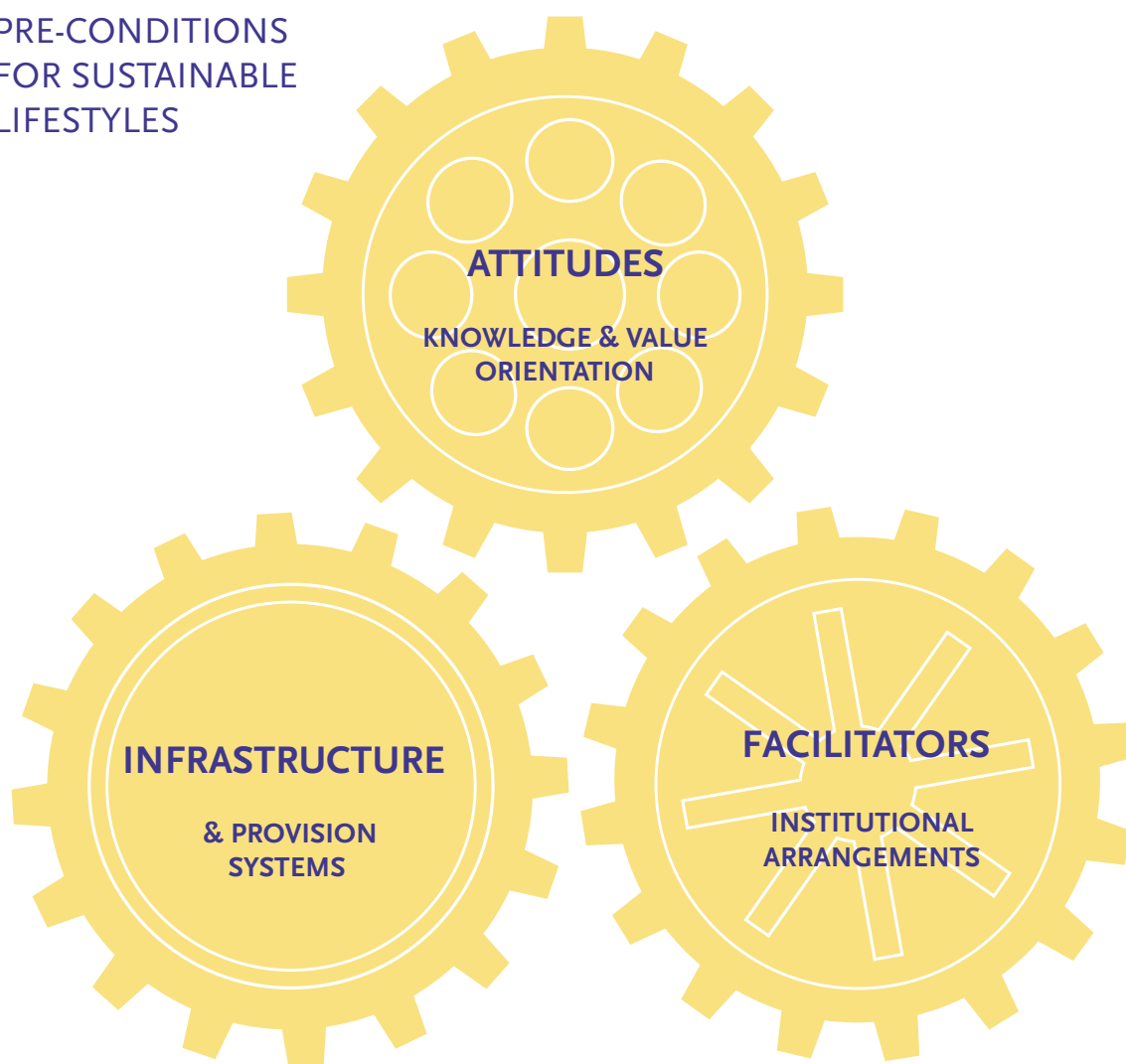
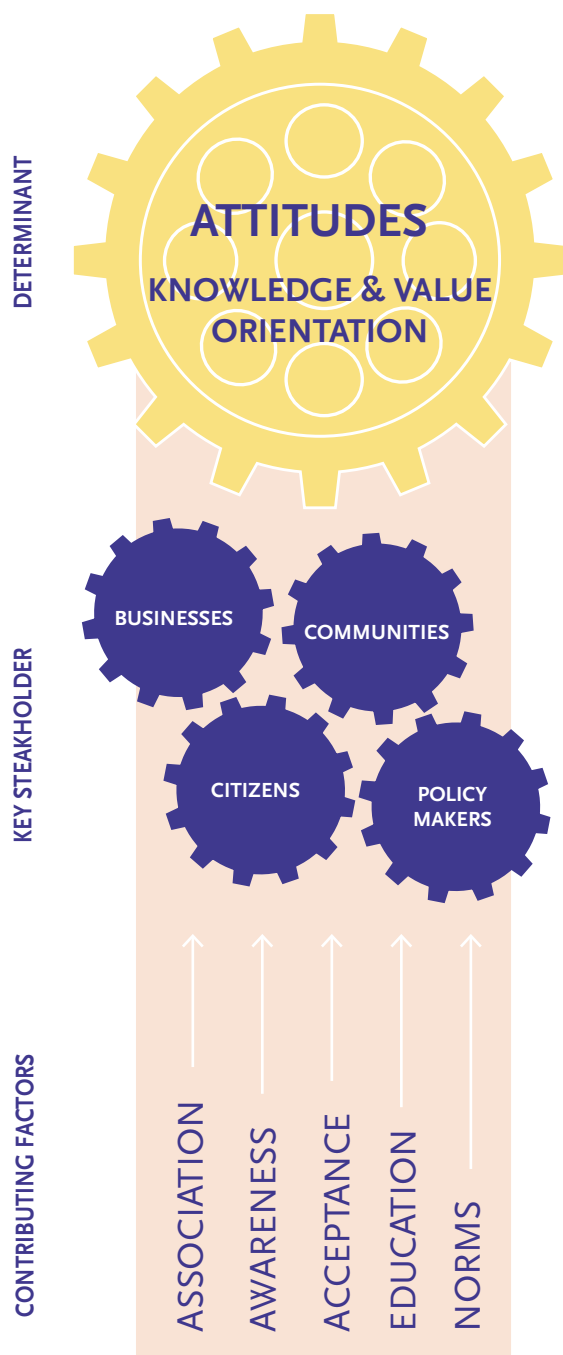


Figure 7: Key elements of policy design to enable sustainable lifestyles

## Attitude – pro-sustainability value orientation



The 'right' attitude refers to a set of positive values that lead to a predisposition to act sustainably. Attitudes include those of individuals and other influential stakeholders – businesses, policymakers, legal practitioners, farmers, designers, community leaders, politicians, teachers, and so on. As Figure 8 illustrates, attitudes are shaped by knowledge and value orientation. Stakeholders should be instilled with attitudes that demonstrate a comprehensive understanding of the sustainability agenda and the need for system change from top to bottom.

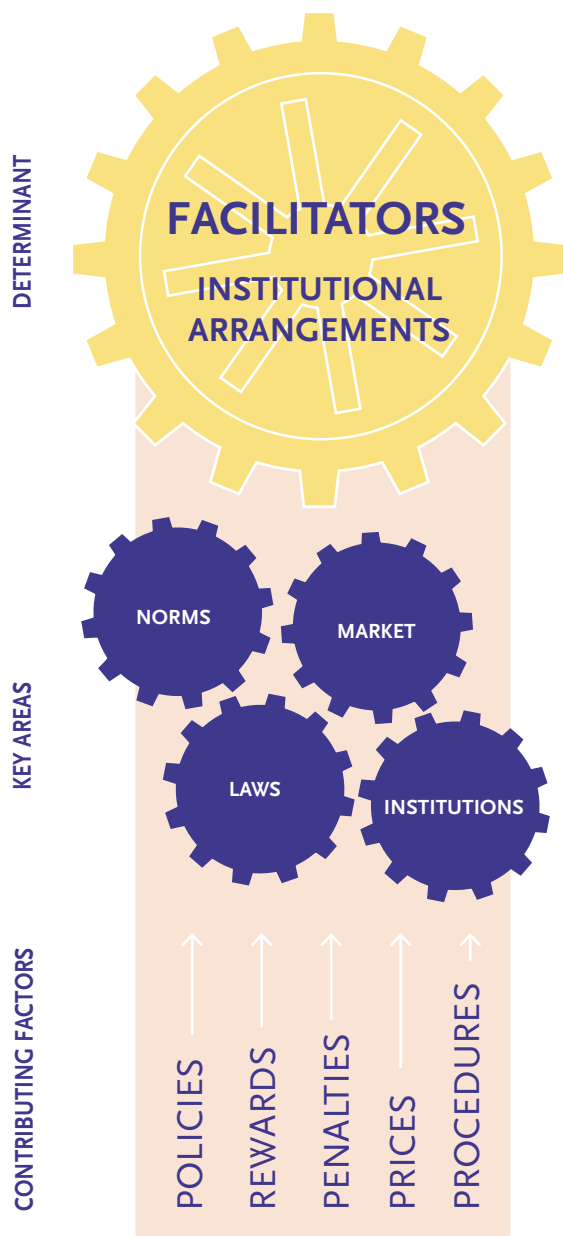
Governments are uniquely well-placed to set the conditions for sustainable lifestyles to flourish, addressing how policies can promote or contradict this objective, and how competing influences on policy design reflect different interests as well as the power dynamics of winners and losers in society. Businesses need to understand and communicate the needs their products or services serve, what lifestyles they promote, and the impact these products and services have on the environment and society. Communities need to understand what social norms they promote and how they influence citizen lifestyle decisions. Individuals and households need to understand the impacts of their choices, the potential available alternatives, and recognize that solutions – while difficult at the individual level – may contribute to the sustainability of the larger society and environment. Optimally, all stakeholders should understand the importance of sustainable lifestyles and the attitudes needed to make them a reality.

Beyond technical and marginal adjustments in production-consumption systems, realigned attitudes towards more sustainable lifestyles requires that citizens, businesses, and policy-makers learn to imagine a world in which some people consume less, while those who still need to meet basic needs consume in a way that is different from contemporary materialism. Civil society organizations play a key role here to create awareness, and create platforms for association, and to ensure acceptance and continual generation of new solutions.

**Figure 8: Stakeholder attitudes as a pre-condition for sustainable lifestyles**

## 3.2.2

# Facilitators/ Access – institutional arrangements and enablers



Facilitators create or provide access to an enabling environment for sustainable lifestyles. They are a set of mechanisms, such as regulation, legal platforms, administrative process, market facilities, or institutional arrangements that provide incentives or constraints for sustainable options. Institutions like religions, associations, or schools are custodians of our cultures. They validate norms and shape ways of thinking and acting. Thus, should they espouse pro-sustainability principles, policies, and practices, they can inform and encourage sustainable lifestyles. Price is a good facilitator – affordable sustainable options are more attractive to choose. Product standards and consumer information are examples of facilitators that, if properly administered, could help prevent ‘greenwashing’ – which has a reverse effect on consumer trust – and enable citizens to make well-informed and more responsible choices. Similarly, administrative procedures can be a deterrent or facilitator of change – making access easy to more sustainable food options would encourage its consumption by default. For example, instead of requiring organic produce vendors to jump through administrative hoops (for eco-labels) to market their produce as exceptions, the logic could be reversed: the less sustainable options should get a non-eco label and shelf-placement restrictions, while the more sustainable option gets shelving priority and easier access to the market.

Laws and government policy are some of the strongest facilitators. In the same way that subsidising fossil fuels provides a perverse incentive for private car use, removing the subsidy and charging a carbon tax for car use could generate revenue for, and provide incentives for public transportation development and use.

Measures seeking to engender sustainable lifestyles should target the specific patterns that need to be changed. What works for one lifestyle group might not affect another, or might affect another in a counterproductive manner. As an example, raising the prices of utilities to reduce wasteful water consumption might disproportionately hit those who cannot afford to pay and the price difference might not be high enough to dissuade the overconsumption behaviour. Any policy package must therefore address utility prices, design of the provision system and the factors that influence use patterns of different peoples.

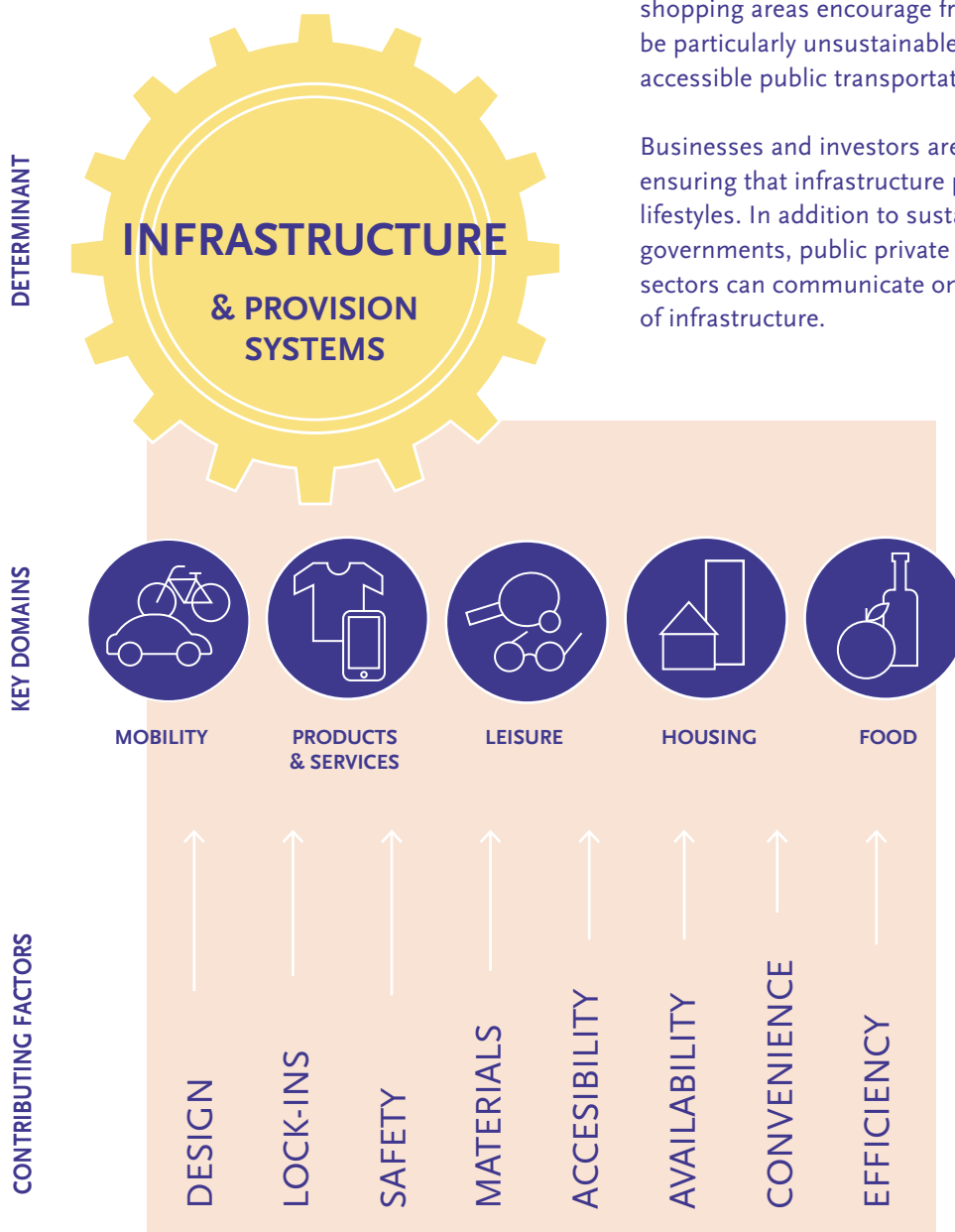
Figure 9: Facilitators of sustainable lifestyles



## Sustainability infrastructure – the hardware and systems of provision

Infrastructure includes the products and services being consumed, the social environment and physical infrastructure that foster sustainable behaviours. Even if all citizens sought to live sustainability, this would not be realized without more sustainable product options that are comparably safe, of similar quality, healthy, accessible and reasonably priced. Given its influence on behaviour, and how long it tends to last, the design of infrastructure for domains such as food systems, housing, mobility and leisure, is critical to sustainability. The design of utility systems, for example, has implications for resource consumption at home. Toilet tanks, for example, generally flush more water than needed for each use, and buildings with automated motion-detecting switches consume comparatively less energy. In addition to characteristics of individual units, the configuration of infrastructure systems influence sustainability of its use. Zoning laws that promote the development of residential areas far from work places and shopping areas encourage frequent travel, which can be particularly unsustainable if there is little or no accessible public transportation.

Businesses and investors are instrumental in ensuring that infrastructure promotes sustainable lifestyles. In addition to sustainability standards by governments, public private partnerships for priority sectors can communicate on and ensure availability of infrastructure.



**Figure 10: Sustainable infrastructure as a pre-condition for sustainable lifestyles**

The AFI is an assessment and planning framework for policymakers. Table 2 provides examples in a worksheet to help align policy objectives and actions. AFI can also be used to develop actions

corresponding to key domains where consumption has high environmental impacts. Table 3 is an example of a table outline that can be used.

**Table 2: Examples of use of AFI to address key sustainable lifestyle objectives**

Policy objective	Facilitator	Infrastructure
<b>Reducing extremes of poverty and wealth</b>	<ul style="list-style-type: none"> <li>Progressive taxation (tax on property, tax on income and luxury goods)</li> <li>Progressive billing for utilities (for water, energy) to reduce over-consumption</li> </ul>	<ul style="list-style-type: none"> <li>Public services e.g. for education, health (free or subsidized public goods and services for low-income families)</li> <li>Public green spaces and recreational centres</li> </ul>
<b>Increasing access to sustainability infrastructure</b>	<ul style="list-style-type: none"> <li>Competitive pricing for sustainable options</li> <li>Develop efficiency building and home renovation standards</li> <li>Toll and congestion charges</li> </ul>	<ul style="list-style-type: none"> <li>Prioritisation of railway systems and mass transit over private car infrastructure</li> <li>Zoning and urban planning laws to allow better coordination of residential, mobility, leisure and work services and infrastructure</li> <li>Provide spaces for peri-urban and community agriculture</li> </ul>
<b>Building sustainable local communities</b>	<ul style="list-style-type: none"> <li>Create local currencies and local time banks</li> </ul>	<ul style="list-style-type: none"> <li>Create local or farmers markets (in prime locations);</li> <li>provide function centres and shared services (e.g. laundromats)</li> <li>create equipment libraries (e.g. gardening tools, home repair and DIY kits)</li> </ul>
<b>Reducing materialism</b>	<ul style="list-style-type: none"> <li>Trade by barter</li> <li>Choice editing: set minimum sustainability standards for products</li> <li>tighten credit card and abusive consumer loans schemes</li> <li>long product warranties and ensure reparability</li> <li>“non-eco” labels (red stickers!)</li> <li>feedback mechanisms (e.g. smart meters)</li> </ul>	<ul style="list-style-type: none"> <li>Repair and used-goods centres</li> <li>Training centres for life skills (e.g. sewing, gardening, home repairs)</li> </ul>

**Table 3: Sample AFI worksheet to assess sustainability action for key domains of consumption**

Lifestyle domain	Facilitator	Infrastructure
Food		
Housing		
Mobility		
Consumer goods		
Leisure		

## Box 5

## Examples of urban level facilitators for sustainable lifestyles

The Attitudes-Facilitator-Infrastructure framework helps government work helps government understand and plan how best to support more sustainable lifestyles. To empower REDuse (citizen actions to Refuse, Effuse and Diffuse), user platforms for innovation and to create socio-ecological interfaces that promote concerted societal engagement for sustainable lifestyles are needed. City governments can set up the following facilitating efforts or 'facilitators' to create more enabling environments:

- **Citizen panels on innovation for sustainable lifestyles.**

A broad-based platform of citizens, consumer and lifestyles organisations, public institutions, schools, etc. Such panels would co-create a shared vision of lifestyles in the city, be engaged in problem diagnosis, deliberative policy formation, proposing solutions, and facilitation of buy-in from citizens and stakeholders;

- **City Index for sustainable urban living.**

An alternative, or at least a complement, to the economic growth indicators. Cities could develop a new indicator that consolidates environmental, social and economic elements into a common frame work, which inspires and reports on how urban planning, infrastructure development, policies and programs support healthy, safe, accessible and sustainable lifestyles.

- **Ombudsman for sustainable lifestyles.**

A body that would support sustainability considerations in public decisions and infrastructure, support development and use of the city index for sustainable living and promote initiatives by the citizen panel. Such an institution could work with banks and local organisations and communities to intervene against predatory financial or lending schemes likely to cause personal, social and ecological distress.

- **Business hub for sustainable lifestyles.**

A hub that could promote new models such as servicing, social enterprises, co-ops, repair and second-hand shops, etc.; address advertising and marketing in the city, such as limiting ads targeted at children and schools; commercial or ad-free zones/cities; using fact- and science-based claims; reduction of emotional language, etc.



# 4

## Concluding notes

## Concluding notes

This report synthesizes recent science-based narratives on what determines lifestyles and how they could be better shaped to respond to sustainability challenges. Lifestyles influence and are influenced by social norms and the physical environment, acting as either constraints or enablers to the many decisions citizens make every day. The so-called knowledge-action or intention-behaviour gap suggests that awareness cannot easily be acted upon if there is a lack of sustainable options and access to them, or a lock-in to unsustainable options. Raising awareness is only a part of what needs to be done. In designing actions to promote lifestyles, it is important to differentiate the factors that can be addressed at the individual or the household level, and those that are beyond individual control.

Solutions need to target individuals and households as well as the stakeholder groups (communities, businesses, institutions, and governments) that shape the context of consumption and lifestyles. The Attitudes-Facilitators-Infrastructure framework offers a top-down policy-guiding approach to create an enabling environment within which sustainable lifestyles can flourish. To complement this, the Refuse Effuse Diffuse framework supports bottom-up engagement by individuals, households and communities to seek personally meaningful solutions and engage in grassroots experiments and social innovations.

One crucial step to support sustainable lifestyles requires understanding the patterns of different types of lifestyles – known as lifestyle segmentation. Each lifestyle segment has and manifests distinct values, preferences, and practices in areas such as fashion, use of language, and leisure activities. Earlier approaches to lifestyle segmentation have focused mostly on wealth, income and profession to establish different social classes. However, our ever-changing society and recent environmental challenges (i.e. climate change), underscore how classical approaches alone are not sufficient to address sustainable lifestyles. There is a need for countries, regions and cities to conduct social-ecological segmentation to design targeted interventions solutions and better responses.

Finally, sustainable lifestyles do not always have to involve new ways of doing things, or be related to consumption. Traditional practices, old technologies, and communities living fulfilling lives without being heavily consumptive can be instructive towards formulating large-scale solutions.







# Bibliography

- Akenji, L. (2014). Consumer scapegoatism and limits to green consumerism. *Journal of Cleaner Production*, 63, 13–23. <http://doi.org/10.1016/j.jclepro.2013.05.022>
- Alcott, B. (2008). The sufficiency strategy: Would rich-world frugality lower environmental impact? *Ecological Economics*, 64(4), 770–786. <http://doi.org/10.1016/j.ecolecon.2007.04.015>
- Backhaus, J., Breukers, S., Mont, O., Paukovic, M., & Mourik, R. (n.d.). Sustainable Lifestyles: Today's Facts & Tomorrow's Trends. SPREAD Sustainable lifestyles baseline report.
- Ballard, D. (2005). Using Learning Processes to Promote Change for Sustainable Development. *Action Research*, 3(2), 135 – 156.
- Barth, M., Fischer, D., Michelsen, G., Nemnich, C., & Rode, H. (2012). Tackling the Knowledge: Action Gap in Sustainable Consumption--Insights from a Participatory School Programme. *Journal of Education for Sustainable Development*, 6(2), 301–312.
- Barthel, M., James, K., Guinness, J., Barker, C., Fava, J., Harnanan, C., Smerek, A., Adibi, N., Valdivia, S., & Khan, S. (2014). Hotspots Analysis: mapping of existing methodologies, tools and guidance and initial recommendations for the development of global guidance. UNEP and SETAC. Retrieved from <http://www.lifecycleinitiative.org/wp-content/uploads/2014/12/UNEP-Hotspots-Mapping-Project-Final-Report-Phase-1.pdf>
- Baudrillard, J. (1998). The consumer society: myths and structures. Trans. Chris Turner. London: Sage Publications, 208.
- Becker, G. S. (1998). *Accounting for Tastes*. Harvard University Press.
- Brodhag, C. (2010). A differentiated approach for sustainable consumption and production policies. *Natural Resources Forum*, 34(1), 63–70. <http://doi.org/10.1111/j.1477-8947.2010.01276.x>
- Christensen, T. H., Godsken, M., Gram-Hanssen, K., Quitzau, M. B., & Røpke, I. (2007). Greening the danes? Experience with consumption and environment policies. *Journal of Consumer Policy*, 30(2), 91–116. <http://doi.org/10.1007/s10603-007-9029-2>
- Cooper, T. (2004). Inadequate Life? Evidence of Consumer Attitudes to Product Obsolescence. *Journal of Consumer Policy*, 27(4), 421–449. <http://doi.org/10.1007/s10603-004-2284-6>
- Death, C. (2014). environmental movements, climate change, and social movements in south africa. *Journal of South African Studies*, 40(6), 1215–1234.
- Defra. (2011). *A Framework for Sustainable Lifestyles*. Department for Environment, Food, and Rural Affairs, UK.
- Easterlin, R. A. (2003). Explaining happiness. *Proceedings of the National Academy of Sciences of the United States of America*, 100(19), 11176–83. <http://doi.org/10.1073/pnas.1633144100>
- EEA. (2012). *Consumption and the Environment — 2012 Update: the European Environment State and Outlook 2010*. Copenhagen: European Environment Agency.
- Ernst & Young. (2011). *Innovating for the Next Three Billion*. Ernst & Young.
- Francis. Encyclical Letter. On Care for Our Common Home (Laudato Si'). 24 May 2015. [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_encidica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_encidica-laudato-si.html)
- Gatersleben, & Vlek. (1998). Green Households: Domestic Consumers, the Environment and Sustainability. In K. J. Noorman & T. S. Uiterkamp (Eds.), *Green Households? Domestic Consumers, Environment and Sustainability* (pp. 141–183). Earthscan.
- GEF-STAP. (2010). *Advancing Sustainable Low-Carbon Transport Through the GEF: A STAP Advisory Document*. Washington, DC: Global Environment Facility.
- Girod, B., & De Haan, P. (2010). More or Better? A Model for Changes in Household Greenhouse Gas Emissions due to Higher Income. *Journal of Industrial Ecology*, 14(1), 31–49. <http://doi.org/10.1111/j.1530-9290.2009.00202.x>
- Global Footprint Network. (n.d.). World Footprint. Retrieved September 17, 2015, from [http://www.footprintnetwork.org/en/index.php/GFN/page/world\\_footprint/](http://www.footprintnetwork.org/en/index.php/GFN/page/world_footprint/)

- Godfray, H. C. J., Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., Nisbett, N., ... Whiteley, R. (2010). The future of the global food system. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 365(1554), 2769–77. <http://doi.org/10.1098/rstb.2010.0180>
- Guagnano, G. a., Stern, P. C., & Dietz, T. (1995). Influences on Attitude-Behavior Relationships: A Natural Experiment with Curbside Recycling. *Environment and Behavior*. <http://doi.org/10.1177/0013916595275005>
- Heiskanen, E., Lovio, R., & Jalas, M. (2011). Path creation for sustainable consumption: promoting alternative heating systems in Finland. *Journal of Cleaner Production*, 19(16), 1892–1900. <http://doi.org/10.1016/j.jclepro.2011.02.005>
- Hertwich, E. G., van der Voet, E., & Tukker, A. (2010). *Assessing the Environmental Impacts of Consumption and Production. Priority Products and Materials. A Report of the Working Group on the Environmental Impacts of Products and Materials to the International Panel for Sustainable Resource Management*.
- Hilton, M. (2007). Social activism in an age of consumption: the organized consumer movement. *Social History*.
- Jackson, T. (2005). Motivating sustainable consumption: A review of evidence on consumer behaviour and behavioural change. *Report to Sustainable Development Research Network*, 170.
- Jackson, T. (2009). *Prosperity Without Growth: Economics for a Finite Planet*. Notes (Vol. 14). Earthscan. <http://doi.org/10.1111/j.1530-9290.2009.00213.x>
- Kharas, H. (2011). The Emerging Middle Class in Developing Countries. *OECD Development Centre Working Paper Series*, (285), 1–52. <http://doi.org/10.1787/5kmpmp8lncrns-en>
- Kivimaa, P., & Mickwitz, P. (2011). Public policy as a part of transforming energy systems: framing bioenergy in Finnish energy policy. *Journal of Cleaner Production*, 19(16), 1812–1821. <http://doi.org/10.1016/j.jclepro.2011.02.004>
- Lettenmeier, M., Liedtke, C., & Rohn, H. (2014). Eight Tons of Material Footprint – Suggestion for a Resource Cap for Household Consumption in Finland. *Resources*, 3, 488–515. <http://doi.org/10.3390/resources3030488>
- Max-Neef, M. A. (1991). *Human scale development: conception, application and further reflections*. New York: Apex Press.
- Michaelis, L., & Lorek, S. (2004). Consumption and the Environment in Europe – Trends and Futures. *Danish Environmental Protection Agency*, (904), 130.
- Mont, O., & Power, K. (2013). Understanding factors that shape consumption. ETC-SCP and EEA, Copenhagen,. Retrieved from [http://scp.eionet.europa.eu/publications/wp2013\\_1/wp/wp2013\\_1](http://scp.eionet.europa.eu/publications/wp2013_1/wp/wp2013_1)
- OECD. (2002). *Towards Sustainable Household consumption? Trends and Policies in OECD Countries*. Paris: OECD. Retrieved from <http://doi.org/10.1787/9789264175068-en>
- Oxfam. (2015). Extreme Carbon Inequality: Why the Paris climate deal must put the poorest, lowest emitting and most vulnerable people first. Oxfam International. [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/mb-extreme-carbon-inequality-021215-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/mb-extreme-carbon-inequality-021215-en.pdf)
- Sahakian, M. D., & Steinberger, J. K. (2011). Energy Reduction Through a Deeper Understanding of Household Consumption: Staying Cool in Metro Manila. *Journal of Industrial Ecology*, 15(1), 31–48. <http://doi.org/10.1111/j.1530-9290.2010.00305.x>
- Shove, E. (2004). Efficiency and consumption: Technology and practice. *Energy & Environment*, 15(6), 1053–1065. <http://doi.org/10.1260/0958305043026555>
- Shove, E. (2006). Efficiency and Consumption: Technology and Practice. In T. Jackson (Ed.), *The Earthscan Reader in Sustainable Consumption* (pp. 293–304). London: Earthscan.
- Spaargaren, G. (2004). Sustainable Consumption : A Theoretical and Environmental Policy Perspective. *Sustainable Consumption: A Theoretical and Environmental Policy Perspective*, (October 2002), 15–31. <http://doi.org/10.1080/08941920390217429>
- Tukker, A., Cohen, M. J., Hubacek, K., & Mont, O. (2010). The Impacts of Household Consumption and Options for Change. *Journal of Industrial Ecology*, 14(1), 13–30. <http://doi.org/10.1111/j.1530-9290.2009.00208.x>
- Tukker, A., Huppes, G., Guinée, J., Reinout, H., de Konig, A., van Oers, L., Suh, S., Geerken, T., Can Holderberke, M., Jansen, B., Nielsen, P., Eder, P., & Delgado, L. (2006). Environmental Impact of Products (EIPRO) – Analysis of the life cycle environmental impacts related to the final consumption of the EU-25. European Science and Technology Observatory, Institute for Prospective Technological Studies. Retrieved from [http://ec.europa.eu/environment/ipp/pdf/eipro\\_report.pdf](http://ec.europa.eu/environment/ipp/pdf/eipro_report.pdf)
- UNDESA. (2010). Sustainable Lifestyles and Education for Sustainable Consumption. UNDESA/UNEP.
- UNEP. (2009). *Buildings and Climate Change: Summary for Decision-Makers*. Paris: United Nations Environment Programme.
- UNEP. (2010). *ABC of SCP: Clarifying Concepts on Sustainable Consumption and Production*. Paris: United Nations Environment Programme.
- UNEP. (2010b). Assessing the Environmental Impacts of Consumption and Production – Priority Products and Materials. Paris: United Nations Environment Programme.
- UNEP. (2011). *Visions for Change: Recommendations for Effective Policies on Sustainable Lifestyles*. Paris: United Nations Environment Programme.
- UNEP. (2012). *Sustainable, Resource Efficient Cities – Making it Happen!* United Nations Environment Programme.
- Vergragt, P., Akenji, L., & Dewick, P. (2014). Sustainable production, consumption, and livelihoods: global and regional research perspectives. *Journal of Cleaner Production*, 63, 1–12. <http://doi.org/10.1016/j.jclepro.2013.09.028>



A report of the

**United Nations Environment Programme**  
Economy Division  
Sustainable Lifestyles, Cities and Industry Branch  
Cities and Lifestyles Unit

**Email: [cities.lifestyles@gmail.com](mailto:cities.lifestyles@gmail.com)**

People make hundreds of thousands of decisions during the course of their lives. For the lucky among us, those decisions will vary widely. No matter how we choose, the lifestyles we end up living – or, in some cases, are forced to live – have a profound impact on our planet, affecting everything from how our economies run to the health of our environment.

How we choose to live as a society and as individuals – what houses we choose and build, what food we eat and grow, how we spend our spare time, and what type of transport we use – will have an enormous impact on the trajectory of human history.

This publication will help policymakers, individuals and other stakeholders understand what a holistic approach to lifestyle means and how different contexts require different lifestyle solutions. This publication does not set out to define what “the” sustainable lifestyle looks like. Instead, it can help guide a range of initiatives that enable lifestyle choices that contribute to sustainability.



**United Nations Environment Programme**  
P.O.Box 30552 - 00100 Nairobi, Kenya  
Tel.: +254 20 762 1234  
E-mail: [publications@unep.org](mailto:publications@unep.org)  
[www.unep.org](http://www.unep.org)