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*Workshop on Encouraging Local Initiatives Towards
Sustainable Consumption Patterns*

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CITIZENS' INITIATIVES ON SUSTAINABLE CONSUMPTION

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Citizens Initiatives on Sustainable Consumption

This paper reviews the key experience gained by my organisation, Global Action Plan (GAP), with promoting technical and research projects on sustainable consumption patterns at the local level, and introduces some general observations and points for debate, for instance on the role of various actors such as citizens groups. This is the second part of the paper. The first part deals with the general context within which the work of GAP, and other civil society initiatives, is undertaken. The third part takes the form of a summary of opportunities and constraints, and some questions, and is intended to support policy development for measures in this area.

1. Driving forces behind consumption patterns

There are several dimensions to the context within which local initiatives must function. Finding meaningful and effective approaches to sustainable consumption, which ordinary people can use at the local level, has been the primary goal of GAP since its inception in 1990.

We raise here questions of definition, space, finance, demographics, and time.

The Definition Dimension – what is sustainable consumption?

In our experience, it is sufficient that people can "understand" what sustainable consumption means for them, without having to understand what it means in a semantic sense.

When you look into the meaning of the words, there is a type of nonsense in the term "sustainable consumption". This does not seem to matter – at least in the sense that it does not hinder action. Indeed the ambiguity has its benefits. "Sustainable development/consumption" as a conceptual icon has been able to capture the imagination of diverse constituencies precisely because it can hold within its field of meaning so many polarities and debates, understandings and misunderstandings. It holds the economic definition¹, the thermodynamic definition, the materials/resources definition², the social and ecological definitions^{3 4} and the ethical and equity definitions⁵. It has also become a rallying call for many spiritual positions and humanitarian aspirations⁶.

A "common-or-garden" definition of sustainable consumption

Human beings are remarkable in that we can adopt understandings that are relevant to us, and filter out the rest. We also have places inside us that can hold values alongside facts alongside feelings alongside rational thought. We also have "common sense", a wonderful instinct that if used well can cut through a lot of irrelevance. These human abilities can be invaluable resources in underpinning successful local action.

Sustainable consumption for most people seems to be related to notions such as "better consumption", "thoughtful consumption", "consuming less", "living more simply", "making less pollution" and generally "making less mess of the earth". It is very possible for people to make a bag of such definitions operational at the individual and local level, and with intention, application and common sense achieve a great deal.

A rider needs to be added, however. Even though common understandings of sustainable consumption may be perfectly adequate to guide citizens in transforming their behaviour in daily life, they may lack perspectives that are important for collective action – say as an organisation or a local community.

A working definition of consumption

It is therefore also helpful to have definitions that integrate understandings from wider spheres. My preferred definition works from the premise that a definition of consumption should not foreclose, at this stage, on any significant actors, driving forces, their interrelationships, or the various possible ways to control consumption's impacts. It assumes that unsustainable consumption is consumption with environmentally important, undesirable consequences. This approach is workable in almost any cultural context and at any scale, global to local; it is based on fundamentals; it is explicit about what really matters (like healthy people and ecosystems) rather than surrogates like money⁷; and still it is open-ended and non-normative about what is valuable.

Consumption consists of human transformations of materials and energy. Consumption is environmentally important to the extent that it makes materials or energy less available for future use, moves dynamically stable, biophysical systems toward a different state or, through its effects on those systems, threatens human health, welfare, or other things people value⁸.

Some important points are implicit in this definition:

1. Human consumption is a human-environment transaction⁹. Its causes (driving forces) are economic and social but its effects are biophysical. The study of consumption therefore lies at the interface of the social and natural sciences and seems to require their collaboration.
2. Consumption is defined by biophysical categories such as coal and carbon dioxide, forests and fields, rather than by social categories such as money or status. It follows that the appropriate units for measuring consumption are physical and biological rather than economic or social.
3. Producers and distributors also transform materials and energy. Production and consumption are two faces of the same coin; in this sense, production is consumption.
4. What people do as consumers is not necessarily consumption. Our activities may be more or less consumptive. The pure case is the purchase of information. Some economic activity even reduces net consumption, for example when a firm finds ways to use its own or another firm's wastes as an input to production.
5. Services and investment are consumption if they have major environmental consequences. Non-economic activity (e.g. amateur sports, religious ritual) can also transform materials and energy.
6. All human beings and societies, not just the affluent ones, consume. The drastically different quantities and qualities of consumption around the world are important subjects for empirical investigation.

Such a broad definition of consumption brings sustainable consumption very close to sustainable development¹⁰. It would imply that persons who advocate growth in the rates of consumption of resources are advocating unsustainability. Can it be so simple? This reflection, however, is exactly where we are – at a point where the reliable thermodynamic, biophysical and economic definitions of sustainable consumption fall short and the perplexing ethical, social and ethnological aspects come into play, creating the gap between policy and practice.

The scale dimension

Subsidiarity

The concept of subsidiarity, beloved of the EU, can as well be applied to products as to decision

processes. In both areas, a trend to the opposite of that desired can be discerned.

In its signal report on the environmental aspects of road transport of goods, the Wuppertal Institute noted that since 1950 the volume of goods taken over long distances by road in Europe has doubled while that of goods taken up to 50 km (within the locality) has stayed roughly the same¹¹ "Product miles" are still growing. In the foreseeable future freight transport is expected to increase on European roads by at least 70 percent and 100 percent across EC borders

The real cost of transport is seldom reflected in the price of products. The problem is that fossil fuels, such as petrol and diesel, are remarkably cheap. The price of the fuel itself does not reflect the cost of providing the roads on which the vehicles travel. Nor does it reflect the cost of the environmental damage that burning fossil fuel creates; nor the cost of developing alternatives when the oil wells run dry.

For much of what we consume, there are local suppliers of locally produced products. There is ample potential for individual and local action to ameliorate environmental impact. For example, repairing and reusing imported products effectively reduces their transport burden on the environment. Requiring fewer drugs by keeping healthier, or using preventive health services, has local economic spin-offs.

GAP stresses local consumption as a foundation for sustainable consumption. It provides guidelines for household purchasing; and more importantly, it gets people talking about the matter. Where a product comes from becomes a relevant question from the point of view of sustainable consumption. Awareness-raising (in an empowering way) is probably the most important and the most long-term dimension of our work. Products may change, choices may change, but good habits and attitudes, once learned, rarely do. When faced with different brands and no taste preference, picking the one manufactured close to where you live is not going to be a bad choice.

Urban-rural considerations

Another example of scale factors in sustainable consumption is the difference between city and rural areas.

On the one hand, the consumption of services in cities is generally much more sustainable than in country areas. On that basis, mass urban migration and a clearer definition of urban-rural boundaries might be one strategy to improve the level of sustainable consumption¹².

On the other hand, cycles that work in rural areas - natural cycles - often don't work well in the city. Natural ecocycles assume that the substances we use are degradable and can be regenerated in the natural environment. A characteristic of such substances is that they become dispersed so that they do not occur in unnatural amounts or concentrations.

Technical cycles - those which we create with our own technology -- assume, on the other hand, that the substances that are to be re-used are persistent and that they occur in large volumes or high concentrations. The city makes technical cycles, and "ecological engineering" for sustainable consumption possible¹³.

It is clear that most programmes and projects that promote local development are likely to carry sustainable consumption benefits. The Rocky Mountain Institute has led the way in the USA in the practice of sustainable "Local Economic Renewal"¹⁴, as has Robert Theobald¹⁵ and others in its theory.

In Europe, local redevelopment has not been missing from the agenda, but often lacks the specific sustainable platform as one of its key objectives. On the other hand, Local Agenda 21 planning, which has been taken up enthusiastically in many European countries, generally gives less priority to economic and business agenda^{16 17}. The Netherlands is a notable exception: local/regional thinking is seen at the focus of current social trends; policy interest is already occurring in the areas of "Rejuvenating regional ecology" in the interests of developing more sustainable lifestyles. "People need a regional identity while retaining their personal ego - 'Couleur locale' will be the key"¹⁸.

The financial dimension

Globalisation of trade and investments

About 40% of world trade is undertaken by global corporations; their inter-company trade alone accounts for one-third of the world's manufactured trade volume¹⁹. The Multilateral Agreement on Investment (MAI), being negotiated by the countries of the OECD in the first instance, is designed to establish the "national treatment" principle. In granting foreign investors the same rights as local investors, countries will also be deprived of an important instrument of policy - regulating foreign investment - notably controls over entry into certain sectors, levels of local participation, and the repatriation of funds.

Examples from around the world show it is unrealistic to assume that foreign companies will be stretching their environmental performance beyond national requirements or applying eco-efficiency principles in excess of relatively short-term business dictates.

Globalisation of investment also affects consumption issues. According to UNCTAD, global corporations control about one-third of the world's productive assets in the private sector, and their overseas investment is "a bigger force in the world economy than world trade". Most estimates are that less than 10% of the trading volume – some \$640 billion a day according to the Bank of International Settlements – any link to the purchase of foreign goods and services. In other words, trade in money is now quite tenuously linked to the world's productive activities²⁰.

The ever-expanding scale of the global economy obscures the consequences of our actions. In effect, our arms have been so lengthened that we no longer see what our hands are doing²¹. Anxiety and uncertainty over global scale situations can cast a pall over modest local initiatives. GAP takes it as one of its key roles to work with the psychological fallout of despair, denial and a sense of futility. It is essential for the success of local initiatives that the community sees their actions as making a difference, valuable in their own right. One way that GAP does this is by ensuring that results are reported in a way that they can be aggregated and shown to be part of a much larger and globally significant effort²².

Distant financing of projects can often have undesirable consequences. A strong local level coherence is otherwise lacking in many "local" initiatives with external funding. The auditors of EC-funded projects are currently concerned at the number of initiatives that "die" once the funding cycle is completed.

Role of charities and non-profits

The largest part of the financial support for local and community initiatives relevant to sustainable consumption comes from the philanthropic and non-profit sector. For example, the Soros Foundation spent \$US 4 million in 1994/95 to provide e-mail and full Internet access to individuals and organisations in Central & Eastern Europe as well as the non-Slavic republics of the NIS. Their object was to build the capability of communities to take local initiatives for sustainable development²³.

Foundations are a growth industry in the USA. In 1990 there were some 32,000 private foundations. Among them, they controlled \$137 billion in assets and distributed nearly \$8 billion in grants annually. This reflects – and outstrips – a general rise in private giving for human services during a decade characterised by tight containment in public outlays²⁴. For some foundations, nonetheless, there can also be a considerable lead-time in their adjustment to emerging needs and opportunities.

There is a growing need for individuals and organisations that can not only be the communicators between the different worlds of charities, governments, NGOs, and local initiatives, but also provide the consulting expertise to transmit capacity and train needed skills.

The demographic dimension

Population

Size and growth of the human population has been little taken up so far in the discussions on sustainable consumption^{25 26}. This is partly because most are now aware of the irony that every new person born in the "developed" countries will be responsible for the consumption of between 10 and 40 times that of a person born in a disadvantaged country; the compound effect over several generations is even more startling²⁷. There is also a discouraging feeling that savings made by large efforts towards resource efficiency can be easily and completely wiped out by the added resource needs of modest increases in population (Bartlett's ninth law)²⁸.

In addition, in ECE countries, it is the rate of household formation, not population growth, which is tied to consumption. In Europe, the number of households has been steadily growing for two decades, as the size of the average household has diminished²⁹. A very powerful role of local initiatives would be supporting the reintroduction into the modern household milieu of the resource-sharing benefits of larger families and close neighbours. This is an example of the type of participative research, which could very usefully be supported, and which carries many other potential benefits to the community.

Quantitative measures

Over the last few years, a number of concepts have been developed that enable sustainable consumption to be calculated more precisely. These concepts can be used by local initiatives both to set their targets for action and as benchmarks against which to measure their achievements. They also are useful for comparative purposes between regions.

Environmental space relates to the sum total of what the Earth can provide for us -- our resource base for consumption and that for future generations³⁰. Adding the dimension of time, it becomes the sustainable rate of exploitation of any resource: replenishable, like fresh water; renewable, like land and nature's capacity to assimilate pollution and other forms of environmental stress; and non-renewable, like fossil fuels and biodiversity. Environmental space is often supplemented by the equity principle which states that every person on the planet is entitled to an equal share of the Earth's resources^{31 32}.

The *ecological footprint* of any specified population is the total area of productive land and water required on a continuous basis to produce all the resources consumed, and to assimilate all the wastes produced, by that population, wherever on Earth that land is located³³. Ecological footprints take account of bioregional considerations. They can be calculated at any scale from global down to the individual. According to ecological footprint analysis, if all earth's inhabitants were to consume resources at the rate of the USA, we would require three planet Earths to support us. Ecological footprints tend to be smaller in Europe, but Europeans have larger ecological deficits, referring to the land they use for domestic production in other countries.

Two additional Earths would be needed to achieve the Brundtland Commission's objective of raising the developing world to the first world's present material standards³⁴. Except for a small proportion of the world's population, our ecological footprints are too large for the earth's carrying capacity³⁵. This means we are appropriating resources at a faster rate than natural replenishment rates and depriving future generations.

Environmental space and ecological footprint are spatial concepts. The term *ecological rucksack* was developed to hold the notion of the 'total material inputs' – the physical masses of raw materials moved around the Earth by economic activity, be it mineral mining, earthworks for agriculture and dams, or building materials. The concept points to the environmental burden entailed by materials import: extracting the raw materials, their shipping and processing, manufacturing, consumption, recycling and, ultimately, their disposal as waste.

The "ecological rucksack" caused by German consumption patterns is 50 tonnes per person per year. According to the Wuppertal Institute, the precautionary principle requires that such material flows should, within the next few decades, be reduced by roughly half world-wide, and in the industrialised parts of the world by a factor of ten, i.e. by 90%, for each of the five categories: biotic (living) and abiotic (non living) raw materials, soil, water and air³⁶.

*Sustainable Europe Campaign*³⁷

Using the tools described above, Friends of the Earth and their collaborators are working on "Sustainable [my Country]" campaigns in countries throughout Europe.^{38 39 40 41} These are sustainable future plans which develop "sufficiency scenarios" based on analysis of what the nation currently consumes, what its environmental footprint should be and the steps for transition, sector by sector.

The time dimension

Time and time scales are important for a number of reasons.

In the context of rapid change, we may find ourselves short of time. The transition economies of the CEE have shown how quickly forms of unsustainable consumption can accelerate. The purchasing power parity of China, India, Brazil and Russia rates them amongst the top 10 in the world. These four nations cover over a fifth of the world's land surface and are home to more than one-third of its population; yet their per capita income levels are still relatively modest compared to those of leading economies.

Time can be just as difficult for the opposite reason: the length of time that it takes to achieve a desired result. Different cultures can have quite differing attitudes to time, as can different generations. Many regard the lack of synchronisation with natural cycles and loss of sensitivity to nature's rhythms as the chief dysfunction of modern societies contributing to unsustainable behaviour⁴².

Nature's economy

Two economic systems exist alongside the market economic system: nature's economy of life-support processes and a people's economy by which societal values are exchanged and non-material needs are met⁴³. Economic analysis is based on the circular flow of exchange value (money flows) through the economy. Prevailing economic models of growth and sustainability thus lack any representation of the physical flows, transformations of materials, energy sources, and time-dependent processes basic to ecological economics⁴⁴. Formal market models treat human behaviour as if it were rational only; nor can they hold the values such as quality, sharing and caring⁴⁵. When it comes to explaining why consumption patterns have changed over time, economic theory has little to offer⁴⁶.

Time is a significant factor for both environmental space and sustainable consumption. Environmental space increases at the rate of consumption of resources decreases, making environmental shares larger. Sustainable consumption per capita will increase, relative to environmental shares, if:

- more efficient production technologies become available,
- consumer preferences become less resource-intensive,
- net investments decrease, or
- people are willing to spend more of their time working (and the labour market functions so that these desires are fulfilled)⁴⁷.

2. Strategic Approaches

We here outline strategic aspects of the GAP approach to developing more sustainable consumption patterns.

Working with attitudes and conscious behaviour change

The EcoTeam programme is concerned with sustainable consumption *patterns*, and starts at the *individual* and *household* level. By "patterns" we mean repeated sets of characteristics, behaviours, habits, lifestyles, ways of thinking about, and so on. We support the development of attitudes that are capable of modifying patterns of consumption, which might initially be summarised as follows:

There are problems.

The problems are bigger than me.

But I can contribute to a solution.

I can contribute as an individual, by my own actions.

And I can contribute as a citizen, e.g. by joining pressure groups, voicing my opinions, and voting.

I care about the earth, and I will do whatever I can

and I believe that participating in this project/programme is a good way for me to contribute.

Critical programme development questions

Questions that are focussed in the design of GAP programmes are, for example:

- Are people in the affluent countries really prepared to adopt a more sustainable lifestyle?
- What does "sustainable consumption" mean for the man and woman in the street - big sacrifices or modest cut-backs, or perhaps even an improvement in the quality of life?
- How big are the potential savings (for the environment and the pocket book) of behavioural change?
- What is needed to help one person change behaviour?
- What is needed for a behaviour change to become established habit?
- How can the process become self-extending (become independent of constant reminders), to be maintained and progressively deepened?
- How can large numbers of people be reached within a reasonable period of time with the least possible input of work and other resources?

The questions are primarily behavioural rather than what is normally thought of as "environmental". GAP has therefore sought out disciplines which are relatively untapped by environmental movements. In particular we have found it necessary to adopt a cross-disciplinary and cross-sectoral perspective.

In the course of our work we have found that, while the environmental content of our programmes needs to be heavily adapted to each participating culture, the answers to the behavioural questions are much more universal.

In the following, we describe opinion surveys indicating answers to some of the above questions, outline the principles of empowerment and of social diffusion, and discuss the merits and demerits of information and behaviour-change campaigns.

Opinions and surveys

Many surveys show that the majority of people in the affluent countries would like to adopt a more sustainable lifestyle but:

- doubt that others feel the same
- experience themselves as powerless in relation to both environmental problems and to societal development in general
- don't know where to begin.

A survey made by a foundation in Washington⁴⁸ showed for example that close to *two thirds* of the population value family, community and health ahead of possessions, salary and status; but less than *one third* believe others feel the same. A Norwegian survey⁴⁹ gives similar results.

A foundation funded a survey of the US "market" for GAP's EcoTeam programme. They found that 43% of respondents were prepared to attend an information meeting about the programme. Statistics show that around 80% of those who attend such meetings actually join the programme. The independent consultants who conducted the survey conclude that the goals of GAP USA regarding recruitment to teams - that is, to recruit 10-15% of the population in selected neighbourhoods to an ambitious behaviour-change programme - is fully realistic.

Empowerment

The principles of empowerment are at the heart of GAP programmes⁵⁰. Empowerment can be viewed both as a condition and as a process⁵¹.

The *condition* of empowerment implies a feeling of being reasonably in charge of a situation. The condition can be general (I feel in charge of my life) or specific (when my children are threatened, I become a tiger).

The increasing interest in this phenomenon over the past two decades may be connected with the spread all over the world of a growing feeling of powerlessness. Many people today experience a lack of choice in their lives at any level. This experience seems to be at least, if not more, widespread in the affluent countries as in the poorer and is thus an expression less of "fact" than of perception.

An empowerment *process* is either inner (I learn to progressively experience more control over my own life), which can be compared to a general maturation process; or the result of external support, for example through an empowerment programme.

A coach usually leads an empowerment programme. The task of the coach is to support participants so that they progressively learn to take (and experience that they are taking) more power over their own situation, in general or specifically in relation to a given area, for example in relation to environmental questions.

Empowerment is sometimes compared with or even confused with quite different phenomena, for example motivation, delegation or "cheering on". A significant difference is that the

empowerment process is rooted in the individual's own maturation process and is therefore comparatively little dependent on external inputs. For a coach it is a question of bringing forth rather than pushing forward.

The principles of empowerment are integrated into GAP programmes, including the EcoTeam workbook, the coach training, and the design of the actual EcoTeam process.

Social diffusion

The processes governing diffusion of behavioural change have been the subjects of much research. The results are used primarily by marketers and advertisers in order to prevail upon as many people as possible to change their purchasing behaviour as fast as possible.

We have developed our community programme based on the same research findings, and believe our programmes should be more effective and more sustainable than an equivalent public relations campaign because:

- we offer support for a *conscious* decision to change behaviour
- we help create understanding of the *reasons* why the new behaviour is preferable to the old
- participants are supported to establish the new behaviour *as a habit*.

Some of the basic rules for effective behaviour change programmes that can be derived from social diffusion theory⁵² are:

- concentrate efforts on groups with natural contact with each other, for example neighbourhoods
- address first efforts to the "early adopters", or potential pioneers
- see that the early adopters' changes are publicised
- see that the new behaviour appears in some way successful to others - better, cheaper, trendier, and more fun
- not to waste time on those who drag their heels.

To campaign or not to campaign

Many studies document the strengths and weaknesses of information campaigns as a tool for behaviour change. One major work⁵³ concludes that "education can make a difference in people's behaviour, but there are serious limits to what it can accomplish". Information does not in itself lead to behavioural change.

There is a considerable difference between a traditional information campaign (and an awareness raising campaign), and an empowerment programme.

Behaviour changes triggered by an information campaign

Traditional methods build on an information/media campaign directed at households or individuals, which is limited in time and often intensive (and expensive). The anticipated effect is postulated from a linear model without feedback:

Information ⇒ knowledge ⇒ attitude ⇒ values ⇒ behaviours

However, we people seldom function according to this model. Instead, in the best case we experiment with new behaviours. When our imagination is tickled, we search out new sources of knowledge. When behaviour and knowledge "feel right", we can afford to change our attitudes and values.

- *high degree of self-organisation*
 - each member of a team is expected to take responsibility for running a meeting, as "topic leader"
 - topic leaders are offered special support to make sure they succeed
 - the team has great flexibility in planning its programme, within a supportive framework
- *carefully designed support*
 - each team has a coach
 - the coaches are trained to support rather than lead the team
- *teams are concentrated in community programmes*
 - the early approach of starting teams "wherever" has been replaced by a strategy of working in selected neighbourhoods within selected communities, in collaboration with local government and, where appropriate, utilities or business
 - each community (or group of smaller communities) has a project manager who is specially trained and coached
 - recruiting to teams is concentrated in time and space
 - community programmes are planned for 3-5 years
- *win-win solutions* are crafted by focussing initially on actions which save not only natural resources but also money.

Such programmes are now operating in Flanders, Finland, Ireland, the Netherlands, Sweden, Switzerland, the USA, and in a different version in the UK. The basic EcoTeam programme is in operation or development in Denmark, Iceland, Japan, Korea, Norway, Poland, Russia, Slovenia, Spain and Turkey. In addition, the EcoTeam programme is available in Turkish in the Netherlands.

In all these countries and cultures we so far find a common response to the elements of personal action opportunities, multi-level feedback, neighbourhood activities, and membership of a broad, grass-roots movement with positive links with local government and business.

Policy instruments

A new type of policy instrument?

When traditional instruments of social governance and the new ecological tools of industry reach their limits, what is there next to use – rhetoric and the persuasive arts, belief systems, emotional appeals?^{55 56} Considering the stick and carrot metaphor of social change (alternating pressure and encouragement), in this case we know the sticks, but what are the carrots?

Environmental policy officials of the Netherlands Government and the OECD, with whom we have worked, say that GAP's programmes represent a fourth environmental policy instrument: the first three are carrot, stick, and education; GAP adds empowerment. Over the years, the policy development process has been rather similar to the "social learning" model⁵⁷, except rather than taking place in the one institution, it has happened within a loosely-knit network of partners from different organisations and institutions who share a common policy development challenge.

Global taxation

As noted above, increasing transport distances is perhaps one of the most significant forms of environmental impact of the past two to three decades and the trend will continue for some time yet as the global marketplace evolves. This is not just as a result of trade expansion and liberalisation. It includes personalised travel for business and trade, global governance, tourism⁵⁸.

The impact of increased travel of people and goods has been so marked that it has been suggested that in the interests of sustainable consumption, there should be a system of global taxation on servicing the needs of the global economy: coordinating the flight lanes and sea lanes.

The roles of main actors

Here I refer to experience with GAP. The main actors -- partners -- in GAP's work include ministries of the environment, central and regional planning authorities, sectoral ministries particularly energy and transport ministries, local and regional governments, business and industry, utility companies, universities, consumer organisations and environmental NGOs.

The configurations of working partners vary considerably from country to country. In the Netherlands, the national government has been a principal funder because it recognises GAP's objectives to reduce household consumption align directly with those of its own Green Plan. Through another department, it has supported the development of Turkish materials. GAP Netherlands has also forged good links with energy authorities and other NGOs. The Danish government contributes to GAP Denmark. In the USA and UK, service partnerships have formed mainly at the municipal, city and county levels. Foundations have been significant funders in the USA and in Poland.

GAP Sweden has forged diverse partnerships, notably with food retail cooperatives, tenants and housing associations and adult education groups. A good deal of its income, and those of GAP in Finland, have derived from consultancies and training courses for the local government sector pursuing local Agenda 21 plans. Business and industry connections have been strongest in the UK and Switzerland. The European Commission has been a co-financing partner for GAP Belgium and Ireland. Finally GAP has research partners in several universities.

The single common success factor in these successful partnerships has been a shared agenda for the achievement of results.

Removal of obstacles

One most welcome form of support is from social actors who offer their name and standing to an initiative and smooth its path. Indeed, it is not so much financial support (always welcome) or the provision of facilities or supplies that may be lacked by local initiatives, but rather a facilitating environment in which to work. Governments could encourage local initiatives by simply removing hindrances and obstacles to citizen action, notably concerning certain legal, fiscal and social security requirements. For example, volunteers could be assisted in ways that do not result in social security penalties.

Research

A broad definition of consumption such as that proposed in the first section of this paper has significant advantages for guiding research and policy development. A research agenda that also addressed the more household-focused questions about the environmental implications of income growth, consumerist ideology, personal values and preferences, and the like, could provide the kinds of knowledge needed to understand and reduce the environmental impacts of consumption in the ECE region.

We would argue that both action research and participative research⁵⁹ at the local level could become powerful components of such an agenda. We strongly recommend that a series of programmes be specifically developed for support by the European Union and other relevant

governmental institutions in partnership with citizens' groups to experiment with real-life community potentials and solutions. This could include seeking out, evaluating and supporting existing experiments and projects.

Socio-cultural information availability

The importance of geographic and regional factors, particularly their social and cultural aspects, is clearly essential in encouraging local initiatives. Sustainable consumption in one place may have quite a different flavour from another. Initiatives need to take account of their bioregional and socio-cultural characteristics. Communicated examples of pilot projects and success stories ideally should contain this type of information. A very useful project to support would be a directory (online and printed) of local initiatives, with vital information of this sort included.

3. Moving forward in support of local initiatives

Obstacles and bogies

As with any difficult undertaking, reasons why it might be on the wrong course abound. This is a brief presentation of some of the main objections to strengthening a "non-traditional" approach to reducing consumption, and some responses.

We are making substantial progress: No, everywhere consumption is rising; we are recycling more than ever and consuming more than ever^{60 61}.

We cannot proceed without more research/sustainable consumption must be defined: In our experience, of all the resistances to taking action on sustainable consumption, lack of adequate definition of the issues has never been one. When the need for more knowledge is used as a reason for inaction, there are invariably other reasons.

There are more important priorities: There are certainly other things to do, but there is greater consensus on sustainable development and consumption than any other global strategy⁶².

Leave it to the market: The market was never designed to deal with equity or environmental quality, nor can it deliver socially just outcomes or provide environmental protection. Market efficiency does not mean sustainable consumption.

Industry efficiencies are adequate: 1. Too risky. If consumption of material goods and material intensive services rises, the efficiency gains in production may be eaten up. Any efficiency strategy must be accompanied by a complementary strategy of sufficiency. 2. "Designing for sustainability" has yet to demonstrate a broad appeal⁶³. 3. Ecoefficiency and industrial ecology are based on two of the three pillars of sustainable development (economy and ecology). Society is left out.

Use economic instruments to reverse trends: A useful tool amongst others, but better to start with the removal of economic instruments that distort economic activity in favour of environmental degradation⁶⁴.

There is nothing wrong with consuming in order to meet our needs: "The basic needs of all present people take priority over future numbers, but the existence of more future people takes priority over the trivial wants of the present" (Herman Daly).

Sellers only satisfy buyer's wants: Sellers want buyers to believe they'll be/are better off with the product or service, regardless of wants and needs. They work hard to create and reinforce the belief. The stronger the belief, the more likely the buyer will express satisfaction and come

back.

We can continue to consume more, just more efficiently: 1. "Any scenario for sustainable consumption includes the assumption that citizens of the developed countries will consume less, and in many cases far less, resources per capita." (International Organization of Consumers Unions (IOCU))⁶⁵. 2. Overall growth in consumption of goods and services is simply not possible in any material sense; sustainable consumption, for the most part, must imply a decrease in consumption⁶⁶. 3. If humans fail to stop growth in the rates of consumption of resources, nature will step in. Nature's method of stopping growth is cruel and inhumane (Bartlett's fourteenth law)⁶⁷.

The limits to growth have been discredited: We don't need to know earth's limits as long as we know and follow her rules⁶⁸. Limiting fences are for straying sheep.

A growth in consumption is necessary to secure full employment: If we have a setup which will not permit everyone to take part in work and its fruits except at the price of ever-increasing over-consumption, then there is something wrong with the set-up, not with the level of consumption⁶⁹

*Constraining consumption in the North will not help the South*⁷⁰: Nor necessarily will increasing consumption help. The effects are indirect. If the North wants to help the South it can find more direct means.

National security is more important: As long as we use this as an excuse we breach the type of global civic ethic advocated by the Commission on Global Governance⁷¹, and risk jeopardising global security and bringing even graver consequences.

Opportunities

We would suggest there are a considerable number of opportunities available for active support, many amenable to local initiative. The examples mentioned below indicate the scope and possibilities. We feel strongly, however, that any programmes, publicly funded or otherwise, have the early design input of people who are likely to be stakeholders and potential participants.

The public mood

In 1995, the Merck Family Fund commissioned a singular study concerning citizen perspectives on the issue of consumption⁷². The study provides a statistical portrait of how Americans are thinking about a wide range of issues connected to consumption, the environment, and the values and priorities of their society. To the extent that these findings can be generalised for the entire ECE region, five principles emerge for stimulating public interest and involvement in action:

1. People told us that they share a deep and abiding **concern about the core values** driving our society; they believe that materialism, greed, and excess characterise the way we live and underlie many of our worst social ills. Citizens are not ready to be lectured on consumption, but they are ready to be engaged. They can be engaged by framing the issue in terms of their fundamental concerns.

2. **Children and future generations** are a crucial entry point. Every time children or future generations were mentioned in the focus groups, interest and engagement in the conversation rose; every time they were mentioned in the survey, huge majorities registered strong views. People are trying, unsuccessfully, to envision a better world for their kids. This issue offers an opportunity to help people create such a vision and to act on it.

3. The frenzied, excessive quality of [American] life today has left people yearning for balance

in their lives and in our society. They feel that an essential side of life centred on family, friends and community has been pushed aside by the dominant ethic of "more, more, more," and they are **looking for ways to restore some equilibrium**. A successful public engagement effort will tap this desire for balance.

4. People feel strongly ambivalent about our society's preoccupation with material goods. Yet while condemning greed and excess, they admit to a little greed of their own. The third point in this **triangle of ambivalence** is a strong belief in freedom of choice and an aversion to tell or be told how to live. If people are forced to take sides before they are ready, this ambivalence will lead inevitably to polarised debate and then paralysis. Instead, any public effort must offer people room to explore what they think and what they are willing to do.

5. People associate the public discourse today with acrimony, divisiveness, and gridlock. This issue offers an opportunity to move out of that paradigm by uncovering people's latent sense that a better way is possible. When they hear each other describe common concerns about misplaced values, children, and the environment, and have a chance to explain their longing for a more balanced life, a spark appears -- people begin to imagine **the possibility of change**. Blowing that spark into a significant flame will require demonstrating a sense of movement.

Empowering the context

The public is probably more willing for action to be taken than is thought. One of the most powerful ways to tap public responsiveness on this issue is to bring sustainable consumption unreservedly into the forefront of civic concern. What is important is that potential future consequences of current decisions are more explicitly brought into the public domain, and that consideration of the world we are bringing into being becomes a focus of political debate⁷³.

But the discourse should not be just a serious and problem-focused. It should also be engaging, fun, inspirational and inclusive. It should be a stimulus for envisioning. The delivery is as important as the message, and the prime role of the message is helping everyone to identify with the situation and discover a role for him or herself in its improvement.

The promotion of more sustainable consumption patterns has to move beyond the alternative media in order to be successful. Ways must be found to turn the skills that are used to shape consumer choices towards environmentally satisfactory options. Fresh collaborations and partners must be sought. The media and "advertising" industries have a large role to play here. Targeting just a few percent of the \$450 billion spent annually on advertising world-wide could make a considerable impact, as could contributions of role models.

Public service providers and manufacturers have a significant role in making available appropriate technological and consumer alternatives, removing current limitations where necessary. So have the employment and welfare sectors that may be contributing to people feeling trapped and having no real options to move, i.e., paradoxically experiencing little or no choice in a society where choices apparently abound.

In all sectors, consumption needs to be "reimagined"⁷⁴. The desired outcome should be a feeling of relief ("Whew! That's over." "Glad I don't have to play that one any longer") and possibility ("Now I/we can ..." "What if ..."). Governments and all social leaders have a significant role to play in the public "conferral of rights" to participate and a reciprocal "conferral of responsibility" -- that this is important and matters to everyone.

A social project

There is a science fiction novel called "The Gameplayers of Zan". Knowing that its future

survival rests in mass-migration to another planet, a population has devoted itself over tens of generations to the construction of a spaceship capable of the journey. The project is so complex that the entire fabric of the society, its social structure and governance, its customs and myths, has evolved to serve this goal. The transit vessel is largely complete in a huge underground cavern. The main challenge now lies in the fact that the ship is already moving at exit speed. It is the sole task of two of the clans to maintain the ship in a stationary position during the last stages of fitting, which may yet take some decades. They do this by playing a highly strategic “game“ against each other, selected individuals from each clan taking turns around the clock, day and night. These are the "gameplayers". One wrong play and the movement of the ship would cause a catastrophe. The other clans contribute to the upkeep of the gameplayers, each with their own trade or craft, as well as ensuring the society functions in all the usual ways.

This story conveys the power of a collective project fundamental to the survival of a society -- a project so large that no one person can comprehend it all, that requires the cooperation of everyone, some in specialised skills and roles, a long-sighted vision, and an ever present sense of risk tempered by the shared awareness of a common goal. What if it was agreed that the challenge of developing sustainability is the greatest challenge ever faced by humankind? The vision of such a project could capture the collective imagination – as going to the moon did in the 1950 and 60s. It is a paradox that the very elements that make up human nature and the forces that make economic development possible, can also act as a force that leads to an unsustainable society. What if, instead of defining ourselves as isolated players seeking to maximise our individual gain, we were to develop a richer central project -- one that was deeply satisfying, soulful, and sustainable.

Meadowcroft comments that “[t]here is no doubt that sustainable development is a complex and ambitious social objective...[S]ustainable development is best thought of as both a long-term social 'meta-objective'...It is both the result that ensues when genuine development stays within the frontiers of environmental prudence, and a demanding normative standard which requires the balancing of environment, economic activity and social equity in current decision-making. Thus sustainable development is 'open ended'...[E]ach generation must take up the challenge anew, determining in what directions lie their development objectives; what constitutes the boundaries of the environmentally possible and the environmentally desirable; and what is their understanding of the requirements of social justice.”⁷⁵

A possible agenda for research

Aside from the visioning and awareness raising aspects, there is no shortage of areas containing promising strategies to pursue within this framework of a social project. The following list suggests some of the environmentally important social phenomena that tend to be overlooked under the narrow, popular definition of consumption and hold potential for local initiative. Research questions and points for debate are added⁷⁶.

Changes in the structure of production and work. Consumption can decrease without change in households' preferences, incomes, or wellbeing if products are manufactured in less environmentally destructive ways; also if working conditions put less stress on the environment (e.g., telecommuting). What trends move the economy in these directions, particularly local economies? Which structural changes are beneficial for local level implementation? What policies promote or hinder these changes?

Substitution of services for products. Many consumer purchases are motivated by desire for a service or function. People buy natural gas for heating but could get this as well from passive solar housing design; they buy automobiles to travel, but might prefer a well-designed mass transit system. What drives such trends? What local factors are influential? People also

substitute restaurant food for home cooking; what are the environment implications?

Changes in household composition and patterns of life. Recent socio-demographic trends, such as the ageing of the population and increasing labour force participation among women of childbearing ages, have significant environmental implications. They affect demand for travel, space conditioning, and various other consumer services independently of any change in basic values or attitudes about the environment. How do changing lifestyle and working patterns affect consumption? What is the role of local factors in lifestyle choices?

Changing purchasing power. Most indications are that people have an enormous compulsion to find a need for available resources. For every extra unit of purchasing power, the level of consumption tilts towards luxury goods and services, most notably air and car travel. As long as there is an increase in purchasing power it is difficult to make people abstain from what they want, particularly if comparable income groups already have it⁷⁷. What factors can influence voluntary abstinence from consumption? What causes people to stabilise or reduce their purchasing power? How important are local factors? How useful is the levelling of wage differences? How would people spend their money if they become more affluent?

Exploring sufficiency: When is enough enough, and why does this vary between people and situations? What does sufficiency feel like? Where/what is the experience? Are there more direct satisfiers? What happens in the transition from material to psychological comfort/well being? What external cycles embody sustainability and how do people internalise such cycles? What is the role of family, neighbours, friends and local community?

Determinants of consumer behaviour: Most of the research capturing the consumption-environment interrelation is within disciplines (psychology, sociology, biology, economics, consumer research and marketing, anthropology)⁷⁸. Little cross-disciplinary work has been done. Much remains in understanding why consumers behave the ways they do. For example, what is the pattern of imitative behaviour? To what degree are purchases social signals? Does education influence consumer behaviour? Social status, family size, gender, age?

A preliminary list of local actions

Broad priorities for local action on sustainable consumption:

- Reducing level (quantity, rate) of consumption first, or in combination with
- Changing pattern of consumption second⁷⁹
- Reorienting consumption
- Providing substitute goods
- Improving efficiency of resource use
- Identifying and tightening cycles, making cycles

*Specific projects and initiatives*⁸⁰

- Creating commercially viable local sustainable projects: community car pools, bulk foodshops, appliance repair, ...
- Designing and manufacturing redesigned substitute products and services⁸¹
- Facilitate creation of local stakeholder groups for land use and transport planning.
- Build collaboration with local businesses (particularly foreign companies). Purpose: to build business-community relationships based on trust and co-dependence. First step: for a business is development and adoption of social and environmental audits of operations.
- Working with retailers⁸² and producers (local farmers, foresters, etc)
- Demonstration /education projects of concepts of environmental space, ecological rucksacks,
- Develop other ways show what sustainable consumption might mean – really good games,

media programmes, visitor centres, etc

- Reframing/reimaging local projects: e.g. Creating attractive 'no-growth' communities/businesses -- what does this mean? ; or a housing development able to amortise its resource costs over 20 years at the equivalent rates of environmental space; or a business which grew its profits by growing its workforce and decreasing resource use
- Harnessing/mobilising consumer power^{83 84}, e.g. to change local shopping choices
- Creating local/regional service bureau for advice and resources⁸⁵
- Clubs and support groups for less-resource intensive gardening, eating ...
- Campaigning/informing on advertising^{86 87}
- Developing local cooperatives, savings and ethical investment schemes
- Developing future sustainability scenarios
- Facilitating the above as consultant, financier, sponsor...
- Monitoring and reporting the above.

¹ A simple and common definition of consumption is that it consists of goods and services consumed by people (private consumption) or government (public consumption). The *level* of consumption is measured in monetary terms and is determined by a number of factors: 1) Income (money) available for consumption; 2) Price of the goods and services; 3) Technologies used to produce the goods and services consumed; and 4) Tastes and preferences of the consumers (from Stern, *ibid.*)

² Sustainable production and consumption means using, transforming, and disposing of resources in a way that minimises environmental degradation while maintaining or improving our quality of life. <http://iisd.ca/susprod/>

³ Consumption involves the use of goods and services to meet current wants. David Pearce, 1994, Sustainable Consumption through Economic Instruments. Paper prepared for the Government of Norway, *Symposium on Sustainable Consumption* (19-20 January 1994, Oslo). Centre for Social and Economic Research on the Global Environment, University College London, UK. <http://www.iisd.ca/linkages/consume/pearce.html>

⁴ "Sustainable consumption [can] be defined as a level of consumption that meets the present and future needs and aspirations of people the world over, from all sectors of society, without compromising the sustainability of the environment and its life-support system". Martin Abraham, ASEAN Environment Programme., cited in Øivind Fjeldstad, *op. cit.*

⁵ Sustainable development [read consumption] is seen as consisting of three major interrelated elements: 1. the carrying capacity of natural-resource bases within delimitable ecological "niches": local, national, regional and global; 2. a fair share of sustainable surpluses and sustainable productive activity, on both the national and global levels, for all members of living generations; 3. similar fair shares for the members of future generations. The concept thus implies a normative interdependence between a dimension of ecological balance and a dimension of spatial and temporal justice. William M. Lafferty, 1994, *Research and Information for Alternative Patterns of Production and Consumption*. Project for an Alternative Future/Prosjekt Alternativ Framtid, Oslo, Norway.

⁶ Lifestyles "within the bounds of the ecologically possible and to which all can reasonably aspire." (Brundtland Report)

⁷ In a survey of the US Merck Family Fund, people were asked to rate what would make them more satisfied with their lives. The responses were striking: non-material aspirations consistently outranked material ones by huge margins (The Harwood Group, 1995, *op. cit.*)

⁸ Paul C. Stern, 1995. *Towards a Working Definition of Consumption for Environmental Research and Policy - DRAFT*. National Research Council of Canada. <http://www.pandora.ca/linkages/consume/stern.html>

⁹ It should not be forgotten that trees are producers and consumers also. They have the advantage over humans of having an unlimited energy source. However, in the biological sense, we are animals, processors and consumers only.

¹⁰ ..and some may chide "the universe and everything". I write this without the advantage of reviewing the report of the OECD Rosendal Workshop, which had as one of its key objectives "to clarify the boundaries between 'sustainable development' and 'sustainable consumption'. The Rosendal Workshop *Sustainable Consumption and Production: Clarifying the Concepts*, (2-4 July 1995, Rosendal, Norway).

¹¹ To produce a glass jar of strawberry yoghurt for sale in Stuttgart, strawberries were transported from Poland to west Germany and then processed into jam to be sent to southern Germany. Yoghurt cultures came from north Germany, corn and wheat flour from the Netherlands, sugar beet from east Germany, and the labels and aluminium covers for the jars were made over 300 km away. Only the glass jar and the milk were produced locally. Stefanie Boge, 1993, *Road Transport of Goods and the Effects on the Spatial Environment*. Wuppertal Institute for Climate, Environment and Energy, Wuppertal, Germany.

¹² Arne Jernalöv and Simon Jernalöv, undated, *Sustainable Development and Sustainable Consumption*. Linkages Virtual Policy Dialogue, Sustainable Consumption & Production, <http://www.pandora.ca/linkages/consume/instsd.html>

¹³ Waste paper, for example, can be recycled in two main ways - one recognising its "natural" properties as a part of natural ecosystems, where degradability and dilution represent a benefit, and one which takes advantage of its persistence and concentration. 1. If paper is recycled as much as the fibre quality allows – perhaps 80 per cent – the source of raw materials for paper mills will primarily coincide with the market, i.e. the urban regions. 2. In rural areas, there is a fit between the opportunity to use natural cycles and much smaller amounts of dispersed paper waste. In this environment, paper is probably best treated as compostable material for soil enrichment. These two solutions require different social organisations, control systems and technologies. (from Jernalöv and Jernalöv, 1996, *op. cit.*)

¹⁴ Rocky Mountain Institute, 1977, *Economic Renewal: Fostering sustainability at the community level*. Rocky Mountain Institute, Snowmass, CO, USA.

¹⁵ Robert Theobald Home Page, Transformational Learning Community.

<http://www.transform.org/transform/tlc/rtpage.html>

¹⁶ William M. Lafferty and Katarina Eckerberg (eds.), 1997, *From Earth Summit to Local Forum: Studies of Local Agenda 21 in Europe*. ProSus, Norway.

¹⁷ Jan Juffermans, 1997, *Presentation On Campaigns To Promote Local Agenda 21*. De Kleine Aarde / ANPED. <http://www.antenna.nl/angepd/chall97.htm#1a21>

¹⁸ Lidewij Edelkoort, 1996, *Rapport Trendanalyse Consumptie en Milieu*. A study performed by order of the Ministry of Housing, Spatial Planning and Environment (VROM), Netherlands. See also IVAM Environmental Research, 1996, *Milieubeleid van onderaf bezien, een handleiding voor beleidmakers*, VROM, for cultural insights into success factors initiating behavioural change in lifestyles.

¹⁹ Louise Sylvan, 1997, *Sustainable Development And The Consumer Movement*. Paper presented at the International Conference on Consumer Protection, *Consumers in the Global Age*. (22 - 24 January 1997, New Delhi). Australian Consumers Association. <http://www.sofcom.com.au/ACA/Speeches/Louise.html>

²⁰ I am left wondering whether the objective of decoupling production from resource consumption has not already been preceded by a decoupling of production from “capital consumption”, and its implications for consumption generally.

²¹ Vandana Shiva, 1996, *Values Beyond Price*. Our Planet 8.2, August 1996, UNEP. <http://www.ourplanet.com/imgversn/82/shiva.html>

²² Our motto is “you don’t have to be just a drop in the ocean; you can be a drop in the bucket”. Alternatively “If you think you are too small to count, you have never shared your bed with a mosquito”.

²³ <http://www.friends-partners.org/oldfriends/funding/soros.funding.info.html>.

²⁴ Steven A. Schroeder, 1992, *Future Perspectives For Foundation Philanthropy*. The Robert Wood Johnson Foundation, Princeton, NJ, USA. <http://www.rwjf.org/library/reflect6.htm>

²⁵ “[A]t the same time as the issue of consumption patterns in the West was dropped from the UNCED agenda, another major issue was also removed: population growth in the rest of the world. These two issues may also mirror each other in some respects, since one may – perhaps optimistically – postulate a necessary “environmental transition” [in the West] analogous to the demographic transition which is expected to bring about an ultimate levelling off in global population levels.” From Desmond McNeill, 1994, *The Need for Holistic Theory in research for Sustainable Consumption*. Centre for Development and the Environment, Senter for utvikling og miljø (SUM), University of Oslo, Norway.

²⁶ Note Barlett’s Fifth Law of Sustainability: Sustainability requires that the size of the population be less than or equal to the carrying capacity of the ecosystem for the desired standard of living.

a) Sustainability requires equilibrium between human society and stable ecosystems.

b) Destruction of ecosystems tends to reduce the carrying capacity and/or the sustainable standard of living.

c) The rate of destruction of ecosystems increases as the rate of growth of the population increases.

d) Population growth rates less than or equal to zero are necessary, but are not sufficient, conditions for halting the destruction of the environment. <http://dieoff.org/page39.htm>

²⁷ The average rich-nation citizen used 7.4 kilowatts (kW) of energy in 1990 -- a continuous flow of energy equivalent to that powering 74,100-watt lightbulbs. The average citizen of a poor nation, by contrast, used only 1 kW. There were 1.2 billion people in the rich nations, so their total environmental impact, as measured by energy use, was 1.2 billion x 7.4 kW, or 8.9 terawatts (TW) -- 8.9 trillion watts. Some 4.1 billion people lived in poor nations in 1990, hence their total impact (at 1 kW a head) was 4.1 TW. The United States has more than a quarter of a billion people. Each, on average, uses 11 kW of energy, twice as much as the average Japanese, more than three times as much as the average Spaniard, and over 100 times as much as an average Bangladeshi. Clearly, achieving an average family size of 1.5 children in the United States (which would still be larger than the 1.3 child average in Spain) would benefit the world much more than a similar success in Bangladesh. Paul Ehrlich, 1994, *Too Many Rich People: Weighing Relative Burdens on the Planet*. Paper presented at the International Conference On Population And Development (5-13 September 1994, Cairo).

It is not just number, but size. The diet of an average American is now 20 times the energy input of 200 years ago.

²⁸ Albert Bartlett, undated, *Laws, Hypotheses, Observations And Predictions Relating To Sustainability*. <http://dieoff.org/page39.htm>

²⁹ The corollary is that the size of the average household, as measured by the number of persons per household, has

diminished in most ECE countries (by up to 29 percent in the case of Denmark during the 1980s and in 1990 averaged 1.7 persons). 4.4 million single-person households are expected to be created in the UK over the next 20 years (Gummer, 1996, *Valuing the Environment*. In: *Our Planet*, Vol. 8.2, August 1996, UNEP.

<http://www.ourplanet.com/imgversn/82/gummer.html>

³⁰ A purely spatial concept is "Fair Earthshare" - the amount of ecologically productive land "available" per capita on Earth, currently about 1.5 hectares. A "fair seashare" (ecologically productive ocean - coastal shelves upwellings and estuaries - divided by total population) is just over 0.5 ha. (from William E. Rees, 1996, *op. cit.*)

³¹ Manus van Brakel and Maria Buitenkamp, 1993, *Our Fair Share*. Originally published in: *In Context* #36, Fall 1993.

³² Øivind Fjeldstad, undated, A Fair Share: "Environmental Space" As a Tool for Changing Consumption Patterns. The Norwegian Forum for Environment and Development Forum/ Forum for utvikling og miljø (ForUM), Oslo. <http://www.pandora.ca/linkages/consume/fjeld.html>

³³ Wackernagel, Mathis and William Rees, 1996, *Our Ecological Footprint: reducing human impact on the Earth*. New Society Publishers, Philadelphia, PA, USA.

³⁴ "We would need an additional two planet Earths to accommodate the increased ecological load of people alive today. If the population were to stabilise at between 10 and 11 billion sometime in the next century, five additional Earths would be needed, all else being equal -- and this just to maintain the present rate of ecological decline. To achieve the objective of raising all living standards, the Brundtland Commission argued for "more rapid economic growth in both industrial and developing countries" and suggested that "a five to ten fold increase in world industrial output can be anticipated by the time world population stabilises some time in the next century". William E. Rees, 1996, *op. cit.*

³⁵ An environment's carrying capacity is its maximum persistently supportable load. From W. Catton, 1986, *Carrying capacity and the limits to freedom*. Paper prepared for Social Ecology Session 1, XI World Congress of Sociology. New Delhi, India.

³⁶ Wuppertal Institute for Climate, Environment and Energy, 1997, *Annual Report 1996/1997*.

http://www.wupperinst.org/WI/Jahrbuch_e/annual_report.html

³⁷ Joachim H. Spangenberg, 1995, *Towards Sustainable Europe*. Wuppertal Institute for Climate, Environment and Energy, Germany.

³⁸ Friends of the Earth, Scotland. <http://www.foe-scotland.org.uk/campaigns/sustainable-scot/env-space/index.html>

³⁹ Friends of the Earth Netherlands, 1990, *Action Plan for a Sustainable Netherlands*. Vereniging Milieudefense, Amsterdam.

⁴⁰ Wuppertal Institute for Climate, Environment, Energy, 1995, *Sustainable Germany: A Contribution to Sustainable Global Development*. Study prepared on behalf of BUND and Misereor.

⁴¹ John Hille, 1995, *Sustainable Norway*. ProSus, Oslo, Norway. <http://www.af.nfr.no/af/af-pub/sustainable/>

⁴² Vandana Shiva, 1996, *op. cit.*

⁴³ Vandana Shiva, 1996, *ibid.*

⁴⁴ William E. Rees, 1996, *Revisiting Carrying Capacity: Area-Based Indicators of Sustainability*. In: *Population and Environment: A Journal of Interdisciplinary Studies* Vol. 17, No. 3, January 1996.

<http://www.dieoff.org/page110.htm>

⁴⁵ In economic growth terms, it makes no sense to make shoes last ten times as long, unless they require more than ten times as much labour and fetch more than ten times the price per pair. This would be negative economic growth; as would sharing a boat between two families rather than buying one each. (from John Hille, 1995, *op. cit.*). On the other hand, economic accounting may double count in instances where the social welfare benefit is neutral in monetary terms. Consider the following: road accidents will reduce the life of one in 80 EU citizens by an average 40 years and will result in one in three going to hospital; each road death costs 1 million ecu; the total of costs to the European community of road accidents is virtually the same as the total production costs of the European car industry.

⁴⁶ Desmond McNeill, 1994, *op. cit.*

⁴⁷ John Hille, 1995, *op. cit.*

⁴⁸ The Harwood Group, 1995, *Yearning for Balance: views of Americans on consumption, materialism and the environment*. Merck Family Fund, Takoma Park, MD & National Research Council, USA

http://www.newdream.org/yearning/yearn_full.html.

⁴⁹ Dag Hareide, 1996, *Det Gode Norge*. Norwegian Society for Conservation of Nature, Oslo.

⁵⁰ David Gershon and Gail Straub, 1991, *Empowerment: the art of creating your life as you want it*. Delta, USA.

⁵¹ Marilyn Mehlmann, 1995, *Notes from a research meeting*. Stockholm, unpubl.

⁵² Everett M. Rogers, 1983, *Diffusion of Innovations*. Free Press, New York, third ed.

⁵³ Gerald T. Gardner and Paul C. Stern, 1996. *Environmental Problems and Human Behaviour*. Allyn & Gardner Bacon, Boston.

⁵⁴ H.J. Staats and P. Harland, 1995, The EcoTeam Program in the Netherlands. Study 4: A longitudinal study on the effects of the EcoTeam Program on environmental behaviour and its psychological backgrounds. Faculty of Social and Behavioural Sciences, Centre for Energy and Environmental Research, Leiden University, Leiden, Netherlands.

⁵⁵ As John Gummer reminds us, "... governments have little experience in bringing about the degree of change that

is required to attain sustainable development.” (John Gummer, 1996, *op. cit.*)

⁵⁶ “If we are so concerned about our great appetite for materials, it is plausible to decrease waste, to make better use of stocks available and to develop substitutes. But what about the appetite itself? Surely this is the ultimate source of the problem. Yet in the literature of the resource problem this is the forbidden question. Over it hangs a nearly total silence.” (J.K. Galbraith, 1958.)

⁵⁷ “Social learning is about adaptive adjustment among a network of participants, who together learn to define and redefine problems and to co-design and co-implement solutions.” It appears to offer potentials that extend beyond other methods. From James Meadowcroft, 1997, *op. cit.*

⁵⁸ In Norway, transport has shown by far the strongest growth in consumption by sector over the past generation, despite the fact that the relative price of air transport has dropped markedly, so that it has been possible to accommodate a 30-fold increase in air travel without its making up more than a couple of percent of private consumption in 1989/91. In 1994, car sales were back to early 1970’s levels and air travel had literally taken off (up 12% on 1993 in the first three-quarters). The share of rail and bus transport in private consumption, on the other had, has fallen markedly. This reflects a complete stagnation in real consumption (the number of passenger-kilometres per capita was exactly the same in 1990 as in 1960). (from John Hille, 1995, *op. cit.*, Chapter 4.)

⁵⁹ For example, Participatory Action Research (PAR) recognises the need for persons being studied to participate in the design and conduct of all phases (e.g. design, execution, dissemination) of the research that affects them. PAR is an approach or strategy for research not a methodology.

⁶⁰ Nina Rao, 1997, *The Oxymoron of Sustainable Consumption*. The ZPG Reporter, March/April 1997, <http://www.zpg.org/FACTSHET/oxymoron.htm>

⁶¹ Rio+5 International Secretariat, 1997, *Moving Sustainable Development from Agenda to Action*. The Earth Council, San José, Costa Rica. <http://www.ecouncil.ac.cr/rio/preforum.htm>

⁶² 1994, *Unsustainability: A Consensus*. In: *Toward Sustainable Development: Concepts, Methods, And Policy*, The International Society for Ecological Economics and Island Press. <http://dieoff.org/page10.htm>

⁶³ Tom Armstrong, 1997, *op. cit.*

⁶⁴ Such as the Common Agricultural Policy of the European Community, the damaging effects of the European Regional Development Fund, and the presence of massive energy and water subsidies the world over. From David Pearce *op. cit.*

⁶⁵ Cited in Øivind Fjeldstad, *op. cit.*

⁶⁶ Arne Jernalöv and Simon Jernalöv, undated, *op. cit.*

⁶⁷ Albert Bartlett, undated, *op. cit.*

⁶⁸ These are laws of the socio/ecological economy proposed by The Natural Step: 1. Nature cannot sustain a systematic concentration of dispersed matter mined removed from the Earth’s crust; 2. Nature cannot withstand a systematic build-up of persistent compounds made by humans (e.g., PCBs); 3. Natural resources cannot be systematically harvested more than nature’s capacity for renewal; 4. In order to meet the previous three system conditions, we need a just and efficient economy. There are many locations of this information, of which one is <http://www.intercall.com/~remetz/features/arcramp/natstep.htm>

⁶⁹ John Hille, 1995, *op. cit.*

⁷⁰ David Pearce, *op. cit.*

⁷¹ “The changes of the last half-century have brought the global neighbourhood nearer to reality – a world in which citizens are increasingly dependent on one another and need to cooperate. Matters calling for global neighbourhood action keep multiplying. What happens far away matters much more now.

“We believe that a global civic ethic to guide action within the global neighbourhood and leadership infused with that ethic are vital to the quality of global governance. We call for a common commitment to core values that all humanity could uphold: respect for life, liberty, justice and equality, mutual respect, caring and integrity. We further believe that humanity as a whole will be best served by recognition of a set of common rights and responsibilities.

“It should encompass the right of all people to: a secure life; equitable treatment; an opportunity to earn a fair living and provide for their own welfare; the definition and preservation of their differences through peaceful means; participation in governance at all levels; free and fair petition for redress of gross injustices; equal access to information; and equal access to the global commons.

“At the same time, all people share a responsibility to: contribute to the common good; consider the impact of their actions on the security and welfare of others; promote equity; protect the interests of future generations by pursuing sustainable development and safeguarding the global commons; preserve humanity’s cultural and intellectual heritage; be active participants in governance; and work to eliminate corruption. The Commission on Global Governance, 1995, *A Call to Action: Summary of Our Global Neighbourhood*. Commission on Global Governance, Geneva.

⁷² The Harwood Group, 1995, *op. cit.*

⁷³ James Meadowcroft, 1997, *Democratic Planning and the Challenge of Sustainable Development*. ProSus Report 1/97, ProSus, Oslo Norway. <http://www.af.nfr.no/publikasjoner/forskningsrapporter/1997-01/97-01-txt.html#3.4>

⁷⁴ An example: “Industrial Ecology III, the third annual roundtable of the Future 500, will explore how businesses are learning to prosper like nature: by design, not consumption. By the design of a microchip, a fuel cell, a creative

team, not the consumption of a ton of paper, a barrel of oil, an overstretched workforce.”

⁷⁵ James Meadowcroft, 1997, *op. cit.*

⁷⁶ Adapted from Paul Stern, 1995, *op. cit.*

⁷⁷ Tor Traasdahl, 1994, *Homo Consumens - Man as Consumer*. The Future in Our Hands/Framtiden i våre hender (FIVH), <http://www.af.nfr.no/af/af-pub/rapp94-02/kap-03.html>

⁷⁸ Consumers Choice, Sustainable Consumption, Chapter 5 In: Sander de Bruyn, Pier Vellinga and Roebijn Heintz (ed.), 1997, *The International Human Dimensions Programme on Industrial Transformation (IHDP-IT). Industrial Transformation: An Inventory of Research*. RMNO and IVM/SENSE, Amsterdam, Netherlands. http://ohrid.cca.vu.nl/english/o_o/instituten/IVM/projects/research/ihdp-it/hdprep/fb_chap5.htm

⁷⁹ Helene Bank, 1994, *Everyday Environmental Protection Thinking Globally - Acting Locally*. The Norwegian Society for the Conservation of Nature, Friends of the Earth - Norges Naturvernforbund (NNV) <http://www.af.nfr.no/af/af-pub/rapp94-02/kap-02.html>

⁸⁰ William M. Lafferty (comp.), 1994, *Steps Towards Sustainable Consumption - A presentation of selected Norwegian initiatives*. ProSus Norway, <http://www.af.nfr.no/af/af-pub/rapp94-02/innhold.html>

⁸¹ Tom Armstrong, 1997, *Design for Sustainability*. Background paper for Environment Canada's workshop on *Sustainable Consumption and Production* (25-27 May 1997, Ottawa). IndEco Strategic Consulting Inc., Toronto, Canada. http://www.indeco.com/prj_scap.htm

⁸² WBCSD Working Group on Sustainable Production and Consumption, 1977, *20/20: A Vision for the Environment. The Role of the Retailer in Sustainable Production and Consumption*. The World Business Council for Sustainable Development, Geneva. <http://www.wbcd.ch/FocusAreas/spc/retailpaperforLD.html>

⁸³ Andy Roberts, 1997, *Harnessing Consumer Power: What Can Consumers Do to Make a Difference?* and *Consumer Action for People and the Environment*

<http://www.consumersinternational.org/rightsday97/chapter6/appendix.htm>. Consumers International.

⁸⁴ Alternatieve Konsumenten Bond (Alternative Consumer Association) homepage <http://www.pz.nl/akb/engels.htm>

⁸⁵ Dag Endal, 1994, *Citizen Mobilization for Environmental Protection and Sustainable Consumption*. The Environmental Home Guard/Miljøheimet, Oslo, Norway. <http://www.af.nfr.no/af/af-pub/rapp94-02/kap-04.html>

⁸⁶ María Elena Hurtado, 1997, *Creating Artificial Needs: How Advertising Drives Consumption*. Consumers International. <http://www.consumersinternational.org/rightsday97/chapter3/creating.htm>

⁸⁷ AdBusters homepage. <http://www.adbusters.org/adbusters/Pop/index.html>