

Compass Bearings for a **Course Change**

Summary of the study “Sustainable Germany
in a Globalised World” by the Wuppertal
Institute for Climate, Environment and Energy

Compass Bearings for a Course Change

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Editors' preface

In mid-October 2008 the study “Sustainable Germany in a Globalised World” was published just as the full extent of the crisis in global financial markets became apparent. Swiftly, the crisis in the financial markets mutated into an economic crisis, the repercussions of which are affecting more or less every country in the world, some worse than others. Completely unprepared, governments responded in disarray, calling for regulation of the financial markets (which remains to be put into action), and meanwhile passing crisis measures: bailouts for the banks, rescue packages for cash-strapped firms, and programmes running into billions to prop up national economies. The immediate imperative is stabilisation, then back to “business as usual” and on course for growth. When the storm subsides, a return to positive growth is forecast. This routine response is not just outdated but fatal. All too briefly, the shock of the banking crash shattered the delusion of an infinite line of credit. Now, yet again, massive borrowing is the strategy of choice for steering the same old course in search of growth. Well-travelled routes may seem to offer an easier passage, but they will not lead to a sustainable Germany.

Alarm bells from the economic crisis on the stock market are drowning out the more subtle alarm signals from nature and from people whose lives are worlds apart from any stock exchange. Yet these are indicators of a deeper crisis: poverty and hunger around the world, and the destruction of the natural resources on which our lives depend.

Since the Earth Summit of 1992, the principle of sustainable development has been accepted as the way to overcome this crisis for humanity. The new “Sustainable Germany” study is a sober assessment of the progress achieved so far, in Germany and worldwide. Despite a great deal of

sustainability rhetoric, despite isolated positive projects and changes, the overall balance sheet shows that both in Germany and globally, we are not on a sustainable path. Rather, the problems are escalating in every area, be it climate change, biodiversity or world hunger. We are a far cry from an economic paradigm and a model of wealth that is globally sustainable and universally applicable. At the same time, the window of opportunity for steering against the tide is shrinking by the day. Therefore the study makes a resolute appeal for a change of course. It identifies possible ways out of the crisis – from the national to the international level, from companies to local authorities, and through individual lifestyle choices. It calls for policy to reassert its primacy over economic growth, for public welfare to take precedence over profit interests, and for an overhaul of industrial society to create the basis for an ecological and sustainable economy. It advocates a technological transformation and a parallel transformation of our civilisation.

To bring about such a radical course change, society first needs to engage in a wide-ranging debate. The publishers' intention in releasing the study is to spark such a debate. The study's positive reception in Germany shows that society today – in a period of uncertainty, disorientation and growing disquiet with political platitudes – is both attentive and sympathetic to the debate about growth and values, capitalism and justice, globalisation and regionalisation.

In addition to its many readers, the book attracted a large audience of listeners, as a “Sustainable Germany” was debated at a host of events organised – often jointly – by volunteers and staff from the organisations behind the publication. To invite even more people to join in the debate, teaching materials and an exhibition are

currently being put together, and this summary has been produced. It can be read as a stand-alone text setting out the main contents of the study, and it has also been translated from German into English, French, Portuguese, Russian and Spanish with a view to bringing the full-length study to wider international attention.

Although the “Sustainable Germany” study relates specifically to the situation in Germany, many of the problems and solutions are equally relevant to the situation in other developed countries. It is a study that revolves around the core issue of globalisation and its consequences, and the need for reconfiguration on all levels. It is a study with a clear allegiance to the goal of international justice. It therefore follows that we as publishers want to take this debate from

Germany to the global stage, particularly with our international partner organisations. The publishers would like to express their gratitude and appreciation to Uwe Hoering, the author of this summary, for condensing a study of over 600 pages into a 40-page summary is no mean feat.

We hope that, like the study, this summary will play its part in encouraging alternative ways of thinking and new courses of action. United in our belief that it is possible to face up to the current crises in a spirit of hope, we have chosen to end the study with a line written by Antonio Gramsci in prison: “I am a pessimist of the intellect but an optimist of the will.” Christians may wish to add: “In the way of righteousness is life.” (Proverbs 12:28)



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Introduction

Make Germany sustainable! In Germany, this exhortation would appear to be riding a groundswell of public approval: talk of a greener, more sustainable future is already doing the rounds. German companies, almost without exception, publish sustainability reports and have environmental management systems in place. The German government has mapped out a National Sustainability Strategy and appointed the German Council for Sustainable Development to advise on its implementation. And the United Nations has given the mission strong tailwind by declaring the years 2005 to 2014 the Decade of Education for Sustainable Development.

But it takes more than a buzzword to create this kind of furore – and sure enough, it betokens a sea-change in public attitudes: Al Gore's film 'An Inconvenient Truth' won an Oscar and shared the 2007 Nobel Peace Prize with the United Nations' Intergovernmental Panel on

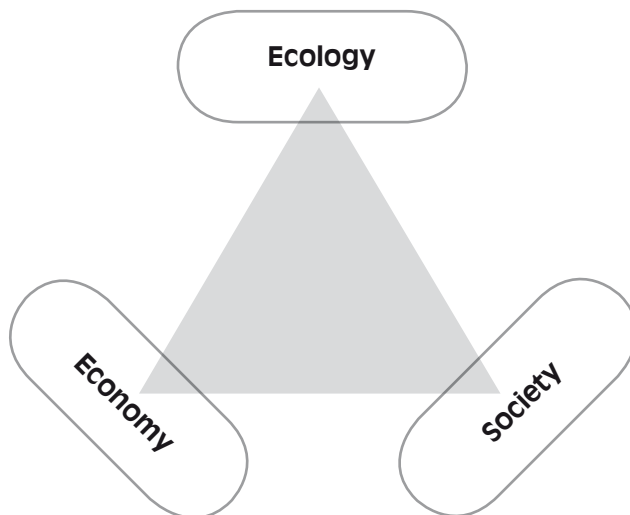
Climate Change. German consumers are spending more on fair trade and organic products, and the country's renewable share of electricity production has risen to 17%. When celebrities are pictured driving hybrid cars and the tabloid press is printing climate change stories, there is no escaping it: sustainability is an idea whose time has come.

So can the heady age of neoliberalism and rampant globalisation be consigned to the history books? The initial reactions from Western leaders certainly implied as much, as the mounting crisis hit the financial markets in the latter part of 2008. But the crisis in the global climate is rousing a much darker presentiment in all societies, across the political and economic spectrum: nature is striking back. And worse: climate change is on the point of destabilising the global economy. First the energy crisis, then the food crisis and now the financial crisis have taken their toll on the real economy, and threaten to rock the foundations of global capitalism as catastrophically as the 1930s depression. A new sense of urgency is taking hold: action is needed. The rise of the emerging economies, especially China and India, coupled with exponential growth in resource consumption and greenhouse gas emissions, takes the pressure up another notch. It is increasingly obvious that our common future is on the line. The realisation is dawning: it is time to change course.

Nevertheless, just because everybody is advocating sustainability does not necessarily mean that everybody is talking about the same thing. The term is often used as a catch-all label, or reduced to a single aspect, or mouthed as a meaningless slogan. Despite the official rhetoric of concern about climate change and the consequences of globalisation, life in the political, economic and social mainstream carries on

The triangle of sustainability has led to a dead end in the discussion.

Outdated paradigm: The triangle of sustainability



as normal. Rich countries keep adding to the global environmental threat by exporting their model of fossil-fuelled industrialisation, peddling the virtues of global liberalisation to secure themselves access to all markets and countries. Meanwhile, for the poor, the promise of trickle-down development remains a hollow platitude. It has long become clear that justice does not follow in the wake of economic liberalisation and globalisation. Worsening impoverishment and destitution are the corollaries of shameless enrichment.

The vision of ‘sustainability’ or ‘sustainable development’ sets out to address these inequalities and show how things can be changed. It aims for nothing less than a fundamental change of course in every sector, on every level. The goal is to conserve the natural resources that support life, and establish social justice and a model of balanced, stable, self-determined economic and social development for all countries.

However, there is a giant gulf between the sea-change that is really needed and our existing strategies for sustainability, which are a drop in the ocean at best. The rhetoric and the reality are worlds apart. None of the approaches tried so far have succeeded in protecting the environment, stabilising the economy or reducing the numbers of people in poverty. Now as ever, the dominant interests are economic ones – the imperatives of growth, competing location incentives, and shareholder value.

One upshot is that the much-quoted triangle of sustainability is sometimes interpreted in a way that stretches its true spirit to breaking point. To mitigate the conflicts between ecological, social and economic development, the standard definition of sustainability has always emphasised that all three aspects have equal status. But some have argued against such a rigid interpretation of ‘parity’, preferring to handle the requirement more flexibly and dynamically. That way, they could carry on with business as usual, under the halo of ‘sustainability’ but otherwise undisturbed by it. In other words, economic

interests have priority *de facto*, while social and ecological aspects are wheeled out at opportune moments. By this logic, a new motorway is often seen as socially desirable *per se* because it creates jobs. If a patch of frog habitat can be created nearby, so much the better: that makes it a ‘sustainable’ motorway, securing the future of profits and jobs as well as frog life.

It is vital to go beyond these simplistic thought processes and approaches. Human rights and ecological guard rails must define the framework for economic objectives – and, where necessary, rein them in. A central tenet is to set the compass for market regulation and stimulation on the basis of public welfare – on a global scale, for human society worldwide.

But in a globalised world, how can we make Germany sustainable? Firstly, we need to clarify how Germany is contributing to the current crisis. Where are we now? What progress has been made? What are the critical coordinates of a situation where the reality so stubbornly contradicts the rhetoric and the practical imperatives? And finally, what are the compass bearings for the fundamental change of course that is needed?

By the end of this stock-taking exercise, a new guiding vision for a complete about-turn should emerge – a different definition of growth and prosperity, for instance. Hopefully this will set new bearings for change, political action and social behaviour, and give very specific pointers to the many areas of work in progress on which efforts must be focused to realise the vision of a sustainable society. The prototypes, models, and possible solutions have long been known – it is now a matter of putting them into practice, even in the face of resistance from vested interests and entrenched habits and power structures.

Our situation today

In 1992, the heads of state and government from 176 countries met in Rio de Janeiro. The United Nations had convened the Conference for Environment and Development (UNCED), which would be instrumental in putting the concept of 'sustainable development' on the local, national and international agenda. Four years later the sustainability debate in Germany was energised by the publication of a study called 'Sustainable Germany', conducted – like the new study – by the Wuppertal Institute for Climate, Environment and Energy and published by Friends of the Earth Germany (BUND) and Misereor – the German Catholic Bishops' Organisation for Development Cooperation.¹ The question is, what has been achieved so far? What notable progress has been made? Has Germany become more sustainable?

Unsatisfactory homework

Twelve years after the publication of the first 'Sustainable Germany' study, the environmental balance sheet is a sobering read. The short-term goals formulated in that study have not been accomplished, for the most part. And judging from the trend lines, the long-term sustainability goals look equally unlikely to be achieved. Nothing has fundamentally changed. Now and again, minor course adjustments have been made, but nothing resembling a radical about-turn.

So Germany has not become much greener than it was before. To be fair, German policymakers have reacted with initiatives like the National Sustainability Strategy and a climate protection package. But the measures are inadequate and the implementation does not go far enough. Some activities, like the efforts to combat acid rain, have achieved remarkable success within certain confines. Germany has become a

technological and political pioneer in renewable energies and the sparing use of resources.

Nevertheless, Germany's demand for commodities has risen, and consumption of resources like metals, petroleum and coal has spiralled. Demand for plant and animal products has also been consistently high. Primary energy consumption has more or less plateaued at a high level for the last 15 years. The environmentally harmful use of fertilisers and pesticides is not diminishing. Too little is being done about waste avoidance and recycling. More and more land is being sealed over for buildings and roads. Land take for residential and transport purposes has been constantly high for many years. The distinct reduction in emissions of the greenhouse gas CO₂ since the beginning of the 1990s strikes a positive chord, but it came about not through deliberate efforts but thanks to the restructuring of East German energy production and industry in the aftermath of German reunification. Air quality is better – but the reduction targets for most pollutants have still not been achieved.

Like other industrialised nations, Germany is a growth-driven society. Even beyond the business world, everything revolves around growth. Growth is seen by many as the precondition for solving global problems – eliminating unemployment and safeguarding employment, financing social systems and reducing public debt, or effectively protecting the environment. But the focus on growth is dramatically at odds with sustainability, because of the ever-increasing demands and burdens it places on the environment.

The vast majority of environmental problems can be traced back to the satisfaction of our needs and habits. Eating and drinking, living and getting around, especially in our own

¹ Zukunftsfähiges Deutschland – Ein Beitrag zu einer global nachhaltigen Entwicklung, published by BUND/Misereor, 1996

cars or by plane. All of these require vast quantities of fuel and cause massive emissions. Take food, for example: impacts on the environment begin with agricultural production and continue through every aspect of food and drink processing, manufacturing and distribution to storage and final preparation. And people in higher social classes, measured in terms of higher incomes, education and occupation, are responsible for a larger proportion of these environmental impacts, even if many of them consciously try to be environmentally responsible, buy organic food, and so on.

The footprint of affluence

Germany is not only a major player in the global economy, but ultimately one of the winners of globalisation. As a 'world champion exporter' Germany profits from the rising volumes of German goods bought by other countries. As a result, it is possible to preserve or create new – usually highly skilled – jobs, increase business profits and drive economic growth. Furthermore, German companies are investing substantial amounts of capital abroad, and again, this trend is rising. And flowing in the other direction, Germany receives considerable quantities of goods and investment from other countries.

At the heart of globalisation as we know it is a non-stop, round-the-world race in pursuit of the maximum returns from capital. One consequence of German foreign trade, especially in motor cars, machinery and chemical products, is to shift environmental impacts to other countries. Practices that are extolled for utilising competitive advantages, such as transferring the energy-intensive phases of steel production abroad, only create the illusion of improving Germany's environmental balance sheet. At the same time, the production of clothing, toys and computers for consumption in Germany contributes to rising carbon emissions in the manufacturing countries. The need to import more and more commodities, like metals and petro-

leum, only magnifies the environmental impacts associated with their extraction and processing in the supplier countries. In other parts of the world, a major proportion of agricultural land is taken up by crops destined for the German market, such as animal feeds or agrofuels. Long-haul holidays, transport services, and transnational product chains that string out the manufacture of a product over several countries, all lead to higher emissions. Aviation places a particularly heavy burden on the climate. All in all, Germany's 'ecological footprint' is significantly larger than our fair share – we are living off other people's resources.

Economically, too, Germany's success in the global economy puts other countries at a disadvantage. For decades, exports of goods 'Made in Germany' broke one record after another. Often this is detrimental to the economy and employment in the importing countries, where local providers are forced out of the market.

Ecological footprints

Economic activities require resources: forest, water and land, coal, oil, gas and uranium – but also sites for waste and biomass to absorb emissions. The 'ecological footprint' calculates this consumption of the environment and demand for resources as a standardised area-based index. In 2003, the footprint in established industrialised countries was six times greater than in poor countries and more than twice as large as in the emerging economies. In comparison to 1975 it grew dramatically in industrialised and emerging economies, but shrank in poor countries during the same period.

	Footprint/person 1975 in global ha	Footprint/person 2003 in global ha	Change 1975–2003 in %
Industrialised countries USA, EU-15, Canada, Japan, Australia	5.54	6.62	23.4
Emerging economies Selection of 16	1.99	2.85	39.6
Poor countries Selection of 12	1.22	1.13	-0.75

Loss of independent economic capacity not only flouts economic justice but jeopardises the world's diversity and sustainability. The economic supremacy of Germany and other industrialised countries affects and suppresses the social, cultural and ecological characteristics of local business in many parts of the world – either they must fall into line or they disappear altogether.

As a typical industrialised country, Germany is thus actively complicit in perpetuating a situation of global crisis and injustice on many levels. Through exports and foreign investments, Germany is helping to build a global economic structure that is unsustainable. A good proportion of Germany's profits in global markets are generated by propagating a socially and ecologically exploitative economy to the emerging economies. Because Germany's patterns of pro-

duction and consumption depend as much as ever on high levels of resource consumption and environmental impacts, it appropriates a disproportionately high share of the finite global biosphere. As a consequence, wealth is redistributed from other countries to Germany.

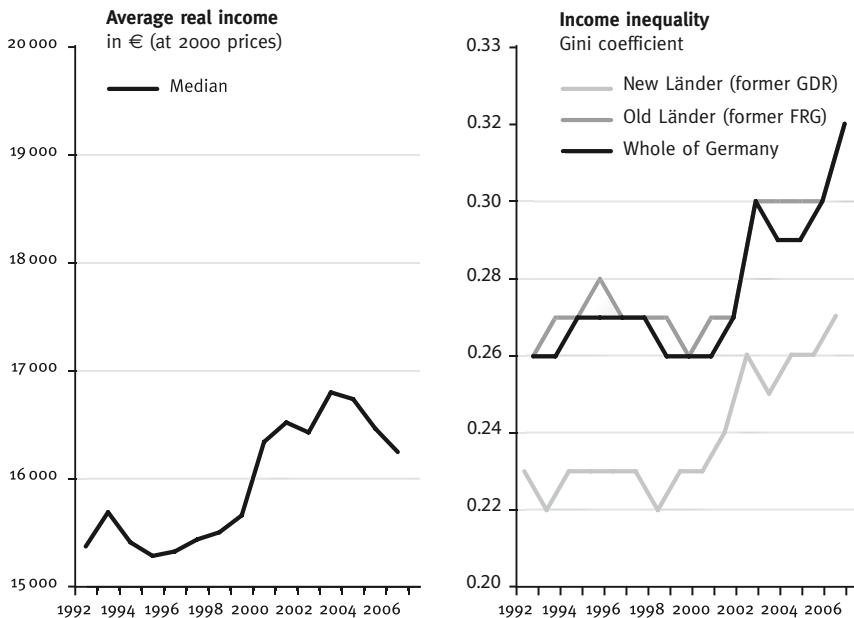
But globalisation has yet more downsides. Within Germany, the strategy of economic liberalisation has not been tempered with appropriate socio-political safety nets. Wages are falling year on year, creating a yawning income gap. Export profits have not been sufficiently redistributed. It is contrary to the spirit of sustainability that Germany is the torchbearer for exports and corporate profitability, but trails behind other industrialised countries in education, social policy and pay policy. And if producers elsewhere are forced out of the market by German exports, it contradicts the policy of "international justice and global neighbourliness" called for in the 'Sustainable Germany' study twelve years ago.

At the same time it is evident that the risks and disadvantages of globalisation will intensify. Even today, the German economy is extremely dependent on exports. Yet constantly rising exports are neither realistic – because consumer markets do not grow at will – nor desirable. Moreover, there are signs that rampant globalisation driven by low energy and fuel costs in an era of fervent market liberalisation and astronomically speculative capital returns is about to hit the buffers. At international level, the WTO negotiations aimed at further liberalisation of trade have hit a dead end. More and more countries are insisting on options to protect their markets from superior foreign competition, often to safeguard their food supply ('food security'). Transport costs will rise drastically when the world passes 'peak oil', and petroleum rapidly becomes scarce and expensive.

Hence Germany's export industry will have to prepare for the demise of fossil-fuelled globalisation – the sooner, the better. There is no way

Real income and income inequality in Germany

Falling real incomes – rising inequality



Source: *Sustainable Germany in a Globalised World*, p. 168

around it: Germany's export industry must develop into a service provider for resource-efficient technologies, intelligent mobility and environmentally friendly utilities and waste management – and many promising and profitable approaches are already available. Instead of helping to pave the way for 'a private car for every Chinese citizen' and thus to fulfil the nightmare vision of a car-owning global society, the export industry should take its pioneering role seriously and implement ideas, for example helping the growing world population to get around on public transport systems that are kind to the climate system.

Globalisation is fighting back

On the international level, too, a certain amount of progress has been achieved since the 1992 Earth Summit; in the form of the Kyoto Protocol on climate change, for instance, or the Cartagena Protocol on cross-border trade in genetically modified organisms. In North-South relations there have also been efforts to combat poverty more effectively (the UN Millennium Development Goals) and to reduce the oppressive debts of the poorest countries. Fortunately, it is becoming more widely recognised that the subsidy and trade policies of industrialised countries have negative impacts on the producers and economies of the Global South; also that the poor are the first to be hit by the impacts of climate change.

No fundamental changes have taken place, however. The diversity of animals and plants continues to diminish – in Germany, Europe and worldwide. The CO₂ content in the atmosphere keeps climbing. The consequences of the greenhouse effect are plain to see – think of hurricane Katrina or the melting ice sheets. Serious studies show that climate change is already threatening the stability of the global economy. Nature, it seems, is fighting back.

Peak Oil

While stocks of fossil fuels are finite, consumption is rising continually – and, since the late 1990s, at a faster pace than anticipated, due to the extent of global economic growth. Most commentators expect global oil production to peak in the next ten to fifteen years. Thereafter, the mismatch between rising demand and rapidly falling production will be a growing problem. Almost half of oil-producing states have already passed their peak production capacity, including the USA, Norway, Great Britain and Mexico.

Responsibility for overuse and pollution is very unevenly distributed: so far the industrialised countries have led the way in overloading global carrying capacity with outsized 'ecological footprints'. But recently the asymmetry of global resource appropriation has shifted. The emerging economies are racing hard to catch up. Now globalisation is fighting back, too.

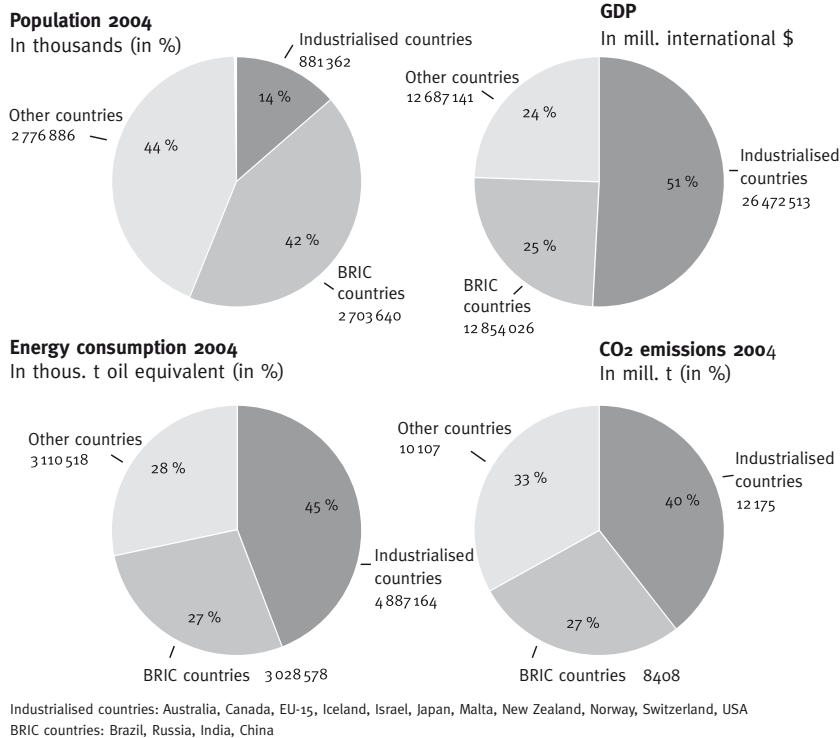
The rise of China, India and other emerging economies in Asia and Latin America is a momentous event in world history. In the eyes of these nations, their ambitions of eventually drawing level with Western economies are duly affirmed. They are supported in this endeavour by corporations in industrialised countries. Their round-the-world pursuit of cheap labour, low production costs and new markets is driven in many cases by shareholders and stock traders, whose most important economic benchmark is 'shareholder value', expected returns on investment. Meanwhile, most industrialised countries are now seeing a declining trend in real incomes – and, what is more, the disparity between high and low incomes is widening, so social inequality is on the increase. Maybe the new winners of globalisation are not in London and Los Angeles, but in Shanghai and Hanoi?

The efforts by emerging economies like

China and India to draw level in developmental terms, following the model of the industrialised countries, causes a dramatic escalation in greenhouse gas emissions and demand for resources – from oil to metals to food. Under the prevailing development model, their emergence from underdevelopment and subservience leads them hotfoot into ruinous exploitation of ecological resources. The ascendancy of Europe, bought at the cost of climate chaos, oil scarcity and the devastation of biodiversity, is based on the fact that the world's nations appropriate highly inequitable shares of the world's natural resources. And because on a global scale the environmental account is already overdrawn, with the emergence of new economic superpowers, the inequitable distribution of resources is assuming threatening characteristics.

Inequality in the biosphere

14 percent of the world population are responsible for 40 percent of global CO₂ emissions



Source: Sustainable Germany in a Globalised World, p. 124

Losers under globalisation

While China, India or Brazil compete with the 'old' industrialised countries for economic dominance, and gradually also for political pre-eminence, other countries are edged closer to the abyss. For instance, Africa's share of global trade has fallen to under two percent. As some countries embark on globalisation, many others are becoming marginalised – especially those whose economies can barely keep pace with the overheated competition of globalisation. For most countries, promises of development have remained a mirage. One cause is the colonial past, with its legacy of a one-sided, dependent economic structure, inadequate state institutions and poor infrastructure. In many countries, 'development' led to overindebtedness and net cash outflow. Structural adjustment programmes involving cuts in social programmes or cheap agricultural imports left the state and the economy running on empty rather than developing sustainability. Even gains from growth, as reported by some African countries in the last few years, are nowhere near enough to make up for the industrialised and emerging economies' head start. International disparities have grown substantially since about 1980. In economic terms, the world is drifting further and further apart.

And disparities within countries are becoming more acute. A higher national income comes at the cost of a deeper chasm between rich and poor – in the Global North and South. On the one hand, globalisation has brought forth an international consumer class following the model of the Western consumer society. Meanwhile, the spread of our consumption patterns adds to the pressures on the biosphere – particularly as a result of rising meat consumption and higher numbers of cars and electrical appliances.

The downside of the prosperity enjoyed by the international consumer class is persistent poverty affecting the lower classes in every unequal society – landless people, slum dwellers, smallholders or street hawkers, single-income

women or migrant workers. They have neither the means nor the power to change their situation in the long term. Often they are victims of a policy of structural adjustment which drives farmers into ruin. They are condemned to exclusion and poverty while mineral resources, land and water are consumed so that the rich can live beyond their means. For the section of the world population that is innocent of the degradation of the global environment, the resource shortage not infrequently becomes a threat to their very livelihood.

Where the industrialised nations have resources in abundance, poorer countries have to contend with scarcity: they consume far fewer resources, from fertilisers and pesticides through petroleum and coal to technology. But if resource inputs, especially energy, fall below a minimum baseline, there is no escaping financial poverty and marginalisation. So these countries have a right to use more resources for their own development, in order to reach at least the ‘dignity line’, the level that allows all citizens a decent livelihood.

But most resources are finite. And petroleum reserves, land and water resources are now undeniably limited. With that, the question of their distribution becomes ever more urgent, and the conflicts more violent. Resource scarcity makes our world less peaceful. On the geopolitical level, conflicts can arise when countries which have neither important resources at their disposal nor the money to buy them – at steadily rising prices – are left empty-handed. But even within countries, conflicts are flaring up more frequently. People are protesting against large power stations, mining and plantations for agrofuels and export products, which deprive them of the fundamental basis of their livelihoods. Industrial trawlers and small fishers compete for declining fish stocks, and slum dwellers struggle for safe, clean drinking water. Yet the all-important use of ecosystems to sustain lives and livelihoods is often at odds with powerful and influential interests in exploiting them as

an economic asset for profit maximisation. Subsistence needs clash with demands for luxuries. And entitlement to private property limits access to common goods which should be used for the benefit of all.

A question of justice

For Germany – and a host of other countries – in recent years, globalisation has undoubtedly been an economic success story. Overall, material prosperity in the world has risen. But at the same time, there has been growing injustice, conflict and unrest as well as environmental degradation and the pillage of vital resources. The mounting scarcity of resources is painfully apparent from rising prices, with wide-ranging impacts on practically all spheres of the economy and life. Any long-term return to full employment is a mirage, in view of jobless growth. The critical issues of world hunger and poverty are exacerbated by economic crises. Economic growth does not bring prosperity for all, but goes hand in hand with more social injustice – in the emerging economies too. Most developing countries are characterised by persistent poverty.

Likewise, the ecological impacts are heavily biased. They affect poorer communities and countries worse than wealthy ones, which can

Fuel and hunger

The contribution of agrofuels – misleadingly called ‘biofuels’ – to climate protection is extremely questionable. Their large-scale production leads to the destruction of important ecosystems and has negative impacts on the food and feedstuff supply. Moreover, since the bulk of these fuels are imported, especially palm oils, most countries including Germany achieve no real reduction in their dependency on imports.

more easily defend themselves and buy their way out of the problem. Economic success is accompanied by a redistribution of wealth from the bottom upward, while environmental impacts are externalised – to the countries of the Global South, the world's poorer communities.

The pursuit of economic growth creates resource conflicts, which are only heightened by globalisation. Increasingly, these conflicts are rising to the top of the political and public agenda because of their potential impacts on national security. In this process, the environmental agenda is increasingly overwhelmed by the security agenda. Yet it should not be forgotten that, above all else, the escalating conflicts over resources, livelihoods and public commons are a question of justice. Who holds rights to land, water, oil, or the air in the atmosphere? The rights to life of many of the world's poor will only be safeguarded if the global class of super-consumers reduce their demand for natural resources. Unless farm enterprises and industrial plants become less thirsty for water, one day there will not be sufficient ground water in the village wells. Unequal appropriation of resources is tantamount to depriving poor countries of the resources they need for survival. Overuse of resources by some exacerbates the underdevelopment of others.

As long as the industrialised countries persist in making excessive use of global natural assets, they are excluding many other nations from utilising their fair share of the biosphere. Unless the rich scale back their demand for resources, the nations of the world can never coexist in a balanced and peaceful way. It is impossible to achieve greater justice in the world at the current levels of Western consumption. The question is whether they can manage to develop forms of prosperity which consume significantly fewer natural resources, or whether the continuing exclusion of the poor is the price to be paid for saving the environment.

More and more individuals in Germany and other countries are beginning to question the policy of globalisation, having lived through it and experienced its adverse impacts. Under the neoliberal paradigm, economic liberalisation, free trade and privatisation are supposed to bring growth and prosperity for all; clearly, it has failed. Now the conditions for global justice must be created without making the earth completely inhospitable. It is high time that modern industrial societies held up their model of prosperity to critical scrutiny, and then reinvented it for the 21st century. Without ecology there can be no justice – nor security – in our time. And by the same token, our responses to ecological challenges will never have the desired effect unless they incorporate social justice.

Badly off course

Why are the results so discouraging? How can we still be so badly off course? Despite our insights, assurances and positive efforts, the world is still prone to crisis, environmental destruction and injustice. What are the compass coordinates that have led us astray? It is crucial to find answers to these questions before we address the imminent challenge: how can we tackle the underlying mechanisms that took us off course, and steer ourselves in the right direction – without settling for short-term measures with mainly cosmetic impacts, and without falling for professed ‘solutions’ that only cement the status quo?

What kind of growth?

One of the compass coordinates that guided us this far was the growth imperative, which dominates the political agenda as much as ever. Promises along the lines of ‘a rising tide lifts all boats’ allow the major players in industry and politics to sidestep questions about the distribution of wealth. Growth is prescribed like a tranquilliser to silence demands for redistribution and to pacify social conflicts, both nationally and internationally. Clearly, greater importance is attached to productivity, corporate profits and share yields than to social justice.

A standard measure for economic growth is gross domestic product (GDP). For a long time, GDP growth rates mirrored growth in consumption of fuels and commodities. The growth of industry, transport and prosperity over the past two centuries was only made possible by seemingly endless reserves of cheap coal, petroleum and gas. At the same time, the unpaid services provided by nature and the costs of environmental degradation were omitted from the calculations of economic development and corporate profit. As a result, value added could be raised as never before.

But a distinction must be made between growth in national income, as expressed by such measures as GDP, and improvement in quality of life. A purely economic scale like GDP is not appropriate for measuring quality of life because it is blind to questions of quality and distribution. It is altogether incapable of reflecting many of the factors that determine quality of life. Among them are social inclusion, quality of work, public assets such as green spaces, or the extent of social inequality. And the economy and quality of life do not automatically grow in parallel: in Germany, for example, the level of subjective satisfaction has remained steady over the past few years despite the rise in gross national product.

And worse: capitalist economic growth devours more than just natural capital. It also fundamentally changes social relations within a society (‘social capital’). Rural farming cultures are suppressed; family and kinship ties are ruptured. A competitive consumer society coins new values and behaviour orientations. Individualism gains ascendancy, solidarity diminishes. This puts an ever-increasing strain on the social fabric, sometimes ripping it apart. So, quite apart from the ecological costs, the social costs – i.e. the depletion of natural resources and the numbers of losers – rise faster than the benefits of growth. In this respect, the ‘uneconomic growth’ seen mainly in industrialised countries seems to have become the accepted normality. But obviously this contradiction is not enough to undermine the social and economic system. And why not? Because sufficient numbers of people are making short-term gains from the fact that benefits are privatised whereas losses are socialised – or simply never quantified.

The purely economic orientation to growth conflicts with global sustainability. The growth imperative has become not only an end in itself but also a public risk and a self-destructive phenomenon. With dramatic clarity, the rise of the emerging economies highlights how unsustainable the conventional development model is for the biosphere. A catch-up concept of development with the industrialised countries' model of growth and prosperity as the ultimate objective leads, in many societies, not to greater justice but to social breakdown. On top of that, climate change is likely to exacerbate poverty, especially in the countries of the southern hemisphere. Only when growth is reappraised as just one option among many can capitalism be expected to generate social and ecological value added.

Dominance of the market

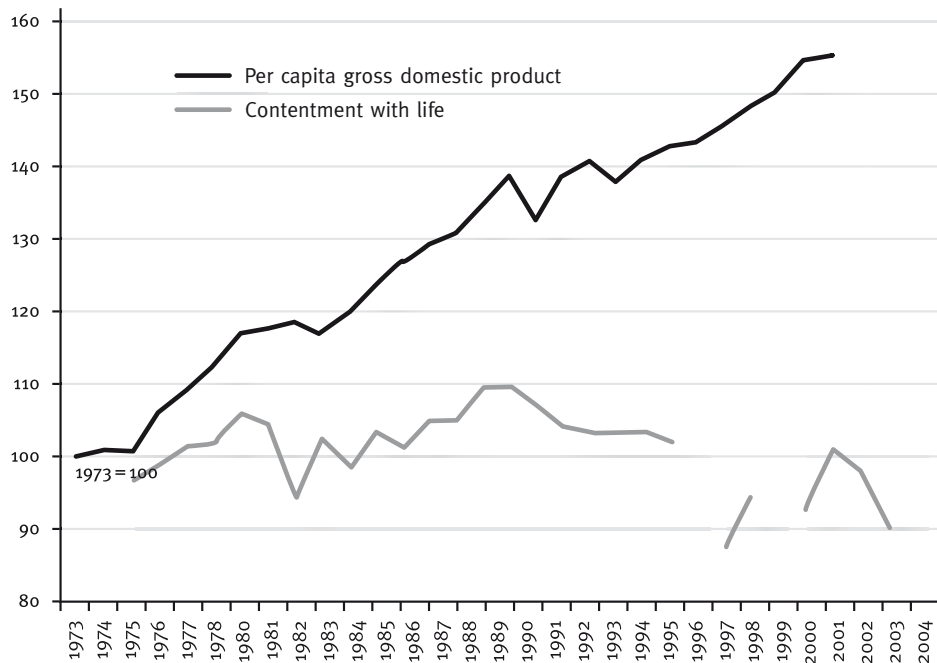
Hence, the claim no longer holds up that economic growth is the decisive driver of social development. In fact, steering a new course in the

direction of sustainability calls on us to turn away from growth and neoliberalism – from the ideology that economic activity must be deregulated; that economic efficiency has precedence over other social goals like ecology or justice, and that markets should always be liberalised and core public services privatised.

In particular, we have to turn away from the idea that the market can solve all problems – and can do so all the better with less interference from regulatory policy. The strength of the market is its function, via competition, of constantly looking out for the best possible use of capital, materials, human capacity and time, and thus ensuring optimum allocation of economic resources. This it does relatively well, as long as competition is functioning effectively. But this is not the case automatically, or everywhere. The economic dominance and political hegemony of the industrialised countries over the countries of the Global South are based on their developmental head start and the market power of their corporations. Time and time

Economic growth and contentment with life in Germany

Rising material wealth does not mean better quality of life



Source: *Sustainable Germany in a Globalised World*, p. 112

again they play on the overindebtedness of many countries to get their own way in multinational and bilateral negotiations on free-trade agreements, subsidies and patents.

But above all, the market is blind to ecology and justice: it is not capable of setting limits on the consumption of nature; nor can it ensure a fair distribution of goods. Hence the market is not the appropriate instrument to effect the necessary change of course. Rather, politics and civil society are called upon to do their utmost to ensure that society's natural and social capital are not squandered with a blinkered fixation on economic efficiency. To give ourselves the best chance of economic survival, we cannot afford to treat collective assets, like the environment and quality of life, as secondary priorities or to put profits ahead of public welfare.

Fossil-fuelled civilisation

Fossil resources have been the vital fuel and lubricant for the development of the modern industrial system to date. They are the primary materials for all manner of products, in the chemical industry for instance. They power energy plants and supply heat and electricity. They alone make it possible to operate an intercontinental system of transportation and logistics that supports the globalisation of goods and investment. For decades they seemed to be in abundant supply, if we disregard shocks like the 1970s oil price crisis, which exposed the vulnerability of industrial society and its dependence on fossil fuels for prosperity.

Our developmental path based on non-renewable resources calls for high volumes of capital and presupposes industrial-scale structures and constant expansion of the energy supply. Thus arose a mighty system of industrial technology, with centralised processes, mass production, globe-encompassing trade and product chains and firmly established structures of power, profit and vested interests. The 'fossil centred path' of development polarises the world into

EPAs – Unequal partners

For as long as four decades, cooperation between the European Union and the ACP countries (77 mostly poor countries in Africa, the Caribbean and the Pacific) was dedicated to the cause of 'development'. What they gained was easier access to the European market. Now, since the introduction of 'Economic Partnership Agreements' (EPAs), trade has become the principal focus. Granted, the objectives are still worded in terms of poverty reduction or women's advancement. But above all else, the EU is striving to remove existing trade barriers with the ACP countries. If it succeeded in its demands for lower duties, however, state revenues would be reduced and governments would be constrained in their scope for socio-political intervention. It would further exacerbate the antagonism between European agribusiness and small farmers in the ACP countries, and heighten competition between EU corporations and African craft enterprises and service providers. The EU is pressing on behalf of European firms for better access to markets, protection of intellectual property rights and investment regulations – all demands that primarily serve the Europeans' own interests.

resource-rich producer countries like the Gulf States and the strong economies of the world's consumers, on the one hand, and on the other hand, resource-poor, weak economies for which any rise in the oil price is a matter of life and death. Moreover, it encourages militarisation in order to safeguard the supply of vital resources.

But this developmental path leads to a dead end. The three tightly interconnected crises – global warming, depletion of finite resources and nature degradation – point to the structural symptoms of an industrial society, namely its dependence on commodities which are in limited supply and which can only be extracted and used at the expense of the environment. As major financiers attempt to save the patient with nuclear power and agrofuels, these are just obvious moves to diversify their investments so that the necessary process of adapting to climate chaos and peak oil poses no risk to their profit projections.

In view of the power of structures, established interests and the prevailing economic system, deeply rooted in the public psyche, alternatives are not easy to find. But ‘business as usual’ is no longer an option. Climate change calls for a cultural revolution, the transition to a post-fossil civilisation. Instead of pursuing a form of development that depends on fossil fuels, the route to a low-energy society means embracing solar energies. The necessary transition to renewable energies and fuels, to an array of small, networked utility systems and significantly reduced energy demand is, however, at odds with the existing supply structures controlled by a few energy giants, and the corresponding power and profit interests.

Business as usual

Of course, major course changes are bound to meet with all manner of resistance and obstructions, some stemming from indifference, some from self-interest, some from helplessness and ignorance of the alternatives.

One phenomenon that carries considerable weight is the lobbying that takes place on behalf of industry associations. The German electricity industry broadcasts fear of the unthinkable – a bottleneck in the electricity supply – in its bid to build more coal-fired power stations and overturn Germany’s political decision to withdraw from nuclear power. The German automobile industry continues undaunted, pitching gas-guzzling cars at the luxury and high-performance segment of the market. The chemical industry and agribusiness refuse to turn away from fertilisers and pesticides, unwilling to consider it as anything but a route to economic ruin.

It is not so easy to spot attempts to avert the change of course by announcing the ecological modernisation of industrial society as an alternative. Under this analysis, environmental problems can be solved through innovation and technical advances. Not only will our export industry benefit, we are promised, but the

countries of the Global South will also stand to gain. Both poverty and environmental problems are solved at once. But approaches like this only put off the inevitable: what is needed is a fundamental overhaul.

Moreover, lobbyists, modernisers and politicians unite in their attempt to build up the position of German industry against the national economies of the southern hemisphere. At the European Union in Brussels or at the World Trade Organization in Geneva, they use their influence to grind down the remaining barriers to unrestricted trade, technology exports and foreign investments. Their cheerleading for the status quo only delays the charting of a new course that is now an urgent necessity.

Even then, other countercurrents are inherent to the capitalist economic system – like cut-throat competition between profit-maximising firms. Stock-market listed companies have shareholders on their backs, who are often international ‘investors’: whenever the returns in Shanghai, Mumbai or Tokyo seem higher than in Frankfurt or on Wall Street, they can move their wealth in fractions of a second, causing company share prices to plummet. And then there are numerous ‘practical constraints’: structures that have grown up over years, which can effectively halt the momentum of change. The motorway network and the motorists’ lobby constantly demand new investment. The demise of the extended family, individualisation and the desire for independence drive demand for living space to new heights. Cities are expanding relentlessly and urban sprawl is progressively intruding on the countryside.

And finally, even our fondest habits, our needs and expectations, our aspirations and everyday pleasures can stand in the way of change: our aspirational mobility needs, leisure pursuits and home luxuries are as much to blame for our fossil fuel consumption as our love of retail therapy – especially where no public transport is available. Many of us simply have no idea what the alternatives might be, and much as we agree

that a transformation is necessary, we first need to see how it will work.

Against this backdrop, it is no wonder that the energy revolution, the transport revolution and the agricultural revolution are not making vast strides – not in Germany nor in the rest of Europe, not in the emerging economies nor around the world.

How much is enough?

Of course, the present industrial model already offers a whole series of approaches and attempts to solve these problems within the existing framework. One example is **decoupling**, which means increasing economic growth while lowering the consumption of resources. What are the possibilities for using resources more productively and efficiently, and what are the constraints? In the sustainability debate, this question is at the very top of the agenda. The current trend towards relative decoupling – where resource consumption grows more slowly than the economy – is a start, but only partially relieves the environmental burden. Decoupling through structural change is also advancing progressively. Services generally consume fewer commodities than industries. Technical innovations can replace substances that contribute to air and water pollution. But even that is not enough. For the industrialised countries need to reduce their consumption of fossil-based materials and fuels by a factor of ten, within 50 years – that is to say, by 80 to 90 percent. Only then will it be possible to achieve the targeted 60 percent global reduction in CO₂ emissions. That will never be achieved merely by means of decoupling and by raising resource productivity. Quite often, efficiency improvements do not actually reduce overall consumption – if more fuel-efficient cars are driven for longer distances, for instance. This is known as a ‘rebound effect’.

A similar principle applies to the concept of **consistency**, meaning the strategy of making production and consumption more environmentally

sound. Organic farming is a prime example; another is the use of environmentally friendly raw materials in detergents and plastics rather than substances that persist for decades as environmental contaminants. The concern here is purely the compatibility of nature and technology, however, rather than an emphasis on lower consumption of materials and energy. These solutions offer scope for minor course corrections, at the most. Nevertheless, they are favoured because they avoid any questioning of capital interests or consumer habits.

It is beyond doubt that the immediate challenges cannot be overcome simply by improving efficiency and consistency. The transition towards a sustainable economy can only be achieved by following a twin-track approach: firstly with technical means, and secondly with intelligent restrictions on economic output. For a true change of course, efficiency and consistency must be complemented with a policy of **sufficiency** or self-restraint. Otherwise the dynamics of expansion will drown out the success of greater efficiency and consistency. Apart from purely technological approaches and a greater role for state institutions in regulating resource consumption, a real shift in the direction of sustainability requires a fundamental change in consumer behaviour. This means actively facing up to the question of “How much is enough?”

That is unlikely to happen unless growth slows down, or even declines – a spectre of doom for a growth society. Nevertheless, a society that wants to become sustainable must be prepared to rethink the prevailing growth imperative. It is the only way to bring about structural change that focuses on the clear objective of sustainable patterns of production and consumption – a genuine ecological modernisation. And it is the only way of instilling social and ecological quality into economic life.

It need not mean an end to growth. Everything can and should be allowed to grow, provided that it contributes to both sustainability

and quality of life: examples are energy and material efficiency, renewable energies, organic agriculture and fair trade. In contrast, anything that favours overexploitation of resources, environmental overload and risk-shifting or harms social cohesion – nuclear and fossil energy sources, air and private car transport, speculative financial products or indebtedness of poor countries – should be left to wither on the vine. Sustainability requires that, as a precaution, we must chart a new course towards a model of economic endeavour that offers all citizens a prosperous life without having to rely on constant growth.

Time for change – now!

The signs can no longer be ignored – the evidence is irrefutable: the prevailing model of development is unsustainable, ecologically and socially. Even economically, it is unviable in the long term. Society, politics and the economy are at a turning point. A radical change of course is needed. It will mean critically re-examining central pillars and doctrines of the prevailing model of development – continual economic growth, the primacy of the market, and fossil fuels. For the approaches drawn from within this framework have proven ineffectual at stemming the various crises. Our world has limited resources. Almost a billion people have an enormous amount of catching up to do in order to beat hunger and poverty. Inequality, injustice and conflicts are on the increase. We need to develop and put into action a new, low-resource model of prosperity. This is the way to bring about justice and peace, and to safeguard the natural resource base on which future generations depend.

To make the necessary transition to a post-fossil civilisation, firstly the ‘hardware’ of Western societies needs a complete overhaul: from buildings to power stations to textiles, all products must be manufactured and used without despoiling the natural environment, and the consumption of resources must be significantly

reduced. Secondly, regulatory structures, institutions and bodies must be designed so as to guarantee respect for human rights and to keep industry’s pursuit of growth and development within the limits of the biosphere’s regenerative capacity. Thirdly, this transition demands new guiding principles: from personal lifestyle to professional ethos to community priorities, a new plan of action is required for daily life and the realms of business and politics.

Guiding visions

There are four dimensions to the guiding vision that inspires our commitment to a sustainable world: a *cosmopolitical vision* looking towards the realisation of global citizenship rights; an *ecological vision* that defines the contours of a new and different kind of wealth; a *sociopolitical vision* of all members of society as involved participants; and finally an *economic vision* that focuses on the pillars underpinning a holistic economic model.

Equal rights for all sojourners

‘Better, different, less’ is the mantra for charting a course towards a sustainable economy. In future, we have to create wealth differently, which means consuming less resources and doing less harm to nature. And we have to learn that a better life means more than a steady rise in material wealth.

The situations in which many people live are inescapably influenced by the needs of the richer countries. For instance, when European trawlers beat Senegalese fishers to their traditional catch, the latter – having lost their livelihoods – may make their way to Europe by boat as refugees. Rich countries commonly view poverty as a risk factor, to be coped with by means of growth strategies and development policy. From the viewpoint of the marginalised, however, the rich themselves are the risk factor. The demands of the rich for higher living standards threaten and restrict the fundamental rights of the poor.

Critical factors in poverty are social and economic structures that systematically direct the advantages towards one group, leaving another group to bear all the disadvantages. Poverty has its roots in deprivation of power, security and influence. Poor people are disempowered agents,

citizens who have to carve out a life without the benefit of rights, possessions, land tenure or political influence. For the poor, economic growth is only part of the answer, because it would not change their situation in any meaningful way. First and foremost, poverty reduction calls for more rights and self-determination. Poverty cannot be fought in the long term by experts, donors or companies called in from outside. Only the poor themselves can do it. The essential step is an empowerment programme that gives them greater scope for constructive participation and strives to shift the balance of power in their favour.

An important political instrument for this purpose is the Universal Declaration of Human Rights passed by the United Nations in December 1948. It lays the legal foundation for a global society. People everywhere are thereby considered as citizens of a transnational legal space. The canon of human rights sets forth a constitution for global society. But global society remains stateless, which is why the rhetoric and the reality of human rights are still worlds apart. In order to realise the rights of the powerless, states therefore have a responsibility for the enforcement of human rights even beyond their own territories. For example, this can mean an obligation to ensure that production processes, foreign investment, protectionist measures, liberalisation and privatisation or financial transactions are prevented from causing social and ecological harm. It is imperative to ensure that worldwide, livelihoods are put before profits and human dignity takes precedence over the accretion of power.

The principle that honouring human rights and human dignity takes precedence also extends to companies, considering that their sphere of action and hence their sphere of responsibility

Human rights: a universal obligation

Freedom of association and assembly, freedom of religious beliefs, prohibition of torture, slavery and discrimination are some of the basic human rights codified in the United Nations International Covenant on Civil and Political Rights (the 'Civil Covenant') of 1966.

Signed in the same year and less well known but equally binding in international law is the International Covenant on Economic, Social and Cultural Rights (the 'Social Covenant'). In Art. 2(1) every state party "undertakes to take steps [...] to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures." Among the rights recognised in the Social Covenant are the right to food, the right to education and the right to health. These rights are intended to be realised "individually and through international assistance and co-operation."

The Civil and Social Covenants go together. The preambles of both covenants explain that they were concluded "recognizing that, in accordance with the Universal Declaration of Human Rights, the ideal of free human beings enjoying freedom from fear and want can only be achieved if conditions are created whereby everyone may enjoy his economic, social and cultural rights, as well as his civil and political rights."

is increasingly transnational. The rights of citizens take priority over the rights of companies. Corporate rights have been expanded and strengthened in the epoch of globalisation, but this also entails certain obligations, such as reviewing the impacts of their own operations on economic, social and cultural human rights.

Equally, state policy in the 21st century must look beyond the promotion of narrow national interests, and don the mantle of domestic policy for the whole planet. Rights to existence have primacy over economic liberalisation. For example, this might imply refraining from exports in cases where the food supply or employment in the importing countries would otherwise be

jeopardised. Governments in industrialised countries, as the creditors of overindebted states, must structure repayment obligations in a way that leaves debtors sufficient resources to guarantee the human rights of the Social Covenant. And if policy making is human-rights-based, all programmes will take account of the basic rights of the people affected, gain their consent and establish official complaint and review bodies.

One group's demands for a higher living standard must be put on hold if the other group's basic rights to a dignified life cannot be assured. Around one-third of all humankind, including, most critically, the world's indigenous peoples, are in peril unless the wealthier economies are reined in. A cosmopolitical policy will reduce resource consumption in the industrialised countries, so that luxury needs are prevented from encroaching upon the subsistence needs of other citizens of the global society. A particular threat to economic, social and cultural human rights is climate change, which exacerbates poverty worldwide. This makes climate protection a priority human rights issue. Bringing an ecological dimension into politics is the only option that will safeguard the earth's hospitality towards its growing numbers of sojourners, generation after generation.

Ecological wealth

'Better, different, less' is the mantra for charting a course towards a sustainable economy. In future, we have to create wealth differently, which means consuming less resources and doing less harm to nature. And we have to learn that a better life means more than a steady rise in material wealth.

For two whole centuries, scientific and technical progress consisted primarily of raising the productivity of capital and labour. The manufacturing and use of a growing abundance of goods devours more and more resources. Waste products and emissions add to the degradation of nature

in the form of climate change or the contamination of soil, water and air.

What are needed are technologies, organisational connections and habits which consume far less of nature than has been the case to date (*dematerialisation*). The consumption of resources must be reduced substantially, among other things by using them more productively. Instead of constantly expanding the supply, for example, it is necessary to improve the management of demand. The material goods of ecological wealth will be products manufactured using minimal resources – especially where those resources are non-renewable – and will be resource-efficient, durable and easy to recycle. Temporary use will take the place of personal ownership of all manner of devices, which go unused most of the time: appliances for hire and motor cars for shared use will become the norm. This, too, opens up all kinds possibilities for sparing, rational management of resources.

An ecological economic model is based on a re-evaluation of the resource base. Fossil fuels in particular will be replaced as far as possible with sustainable materials and solar-generated energy. These are largely renewable and emission-free. The first steps on the way to a solar energy system are wind turbines and photovoltaic cells. In the post-fossil era, metals, ores and synthetic chemical products will be replaced with biological materials and techniques that mimic natural processes. A good example of this *compatibility with nature* is organic farming: while conventional agriculture consumes excessive resources and contaminates the environment with agro toxins and fertilisers, organic agriculture aims to work within closed natural cycles and make more productive and imaginative use of the available resources.

Moreover, solar systems, small-scale hydro-power plants and wind power favour decentralised economic structures that require less capital. Long, increasingly global supply chains for the production and marketing of goods or energy will be consigned to history. Regional

economic synergies will take the place of global economic synergies in many cases. The dynamic trend towards economic concentration, unleashed in the past by the gigantic multinationals, will be replaced with an economic structure in which numerous small producers in many locations ensure the supply of goods, energy and services.

These measures can contribute significantly to reducing the ecological footprint of an economy – but on their own, they will not be capable of reining in consumption of the environment and resources to the necessary extent. Therefore, *self-restraint* in respect of economic and technological output needs to be part of the vision for a sustainable economy. The question ‘How much is enough?’ will have to be confronted sooner or later. By scaling back disproportionate and excessive material consumption, it is possible to create the space for a different and better life. Satisfaction can be ‘bought’ even without a lot of money, through flexible neighbourhood relations, volunteer networks, citizens’ advice bureaux, community workshops, bartering circles, shopping co-operatives and micro enterprises, through social cohesion and political participation. Economic prosperity then goes hand in hand with a new social prosperity.

Consumers can play a part in defusing the tension in global affairs through their purchasing decisions and consumer behaviour. They can resist energy-hungry devices and choose environmentally friendly products. By saying ‘no’ to the temptations of a society based on excess and waste, they can begin to live up to the standard of sufficiency.

For capitalism, on the other hand, the prospect of sufficiency itself is much more difficult. Diminishing quantities of goods are hard to reconcile with the idea of constant growth in value added. But capitalism will have to pull off this manoeuvre if it is to stand a chance of future viability.

A participatory society

The transition towards a more ecological perspective and international fairness is threatened by growing income disparities, higher risks of poverty and a widespread perception that social solidarity is diminishing. For if citizens feel unjustly treated and excluded, they are hardly going to be willing to shoulder their share of the necessary changes. Therefore a policy of sustainability will not succeed without a policy of equitable social participation which enables all members of society to pursue opportunities for self-realisation.

Participation in economic, social and cultural development and in political decisions is a human right. But for a growing number of people, this right is curtailed or even denied. Whilst those with growing wealth have ever greater opportunities to develop their abilities, realise their potential and participate in influencing public affairs, others are held back by unemployment, gender-based division of labour, or racism. The consequences are social exclusion, day-to-day insecurity and social polarisation.

The central integration factor in Western society, paid work, has long ceased to be a ticket to participation and a secure livelihood. In particular, the status of full-time employment has come under mounting pressure in recent years. Hard-won standards of protection and quality are being eroded, and the same is true of wage levels. Important sectors, like private and generally unpaid caring work, are undervalued. The vast majority of this is done by women, who are largely left to cope with the problems of combining work and home responsibilities without assistance. Often there is a biased view of migrants as a problem group, rather than appreciating their diverse abilities. This immediately excludes them from participation.

Similarly, moves to dismantle the welfare state have interfered with opportunities to develop abilities and get involved in society or politics. Precarious employment conditions are

on the increase. Cuts in social benefits leave individuals exposed to elementary risks. Public services such as health, education, public transport or the water, electricity and gas supply, are being handed over to private-sector companies. Prices often rise as a result, leading to further exclusion, pressures and constraints on private households. Women tend to bear the brunt.

To break through the various exclusions and restrictions, the underlying political, social and economic structure of Western society needs to change. For example, family care-giving should no longer be marginalised, with individuals bearing the hidden costs. Instead, public-sector care provision should be expanded so as to encourage equal opportunities and new ways of life. Furthermore, work needs to be allocated more fairly – perhaps following the dictum of ‘one-third paid work, one-third care work and one-third community service’. Other important elements are an adequate subsistence guarantee, new asylum and migration policies, and better opportunities for political participation, perhaps by extending direct democracy. As a foundation, a sustainable society needs a new social contract guaranteeing that everyone can realise the right to participation.

A holistic economy

Wealth is not created by the monetary economy alone, but also by the natural and the lifeworld economy. An ecological-social market economy will regulate capitalism in such a way that it keeps a watchful eye on the well-being of this wider economy. This type of auditing will require the state to take on a new role and the status of civil society to be upgraded.

‘The economy’ means more than the monetary economy. The largely non-monetary economy of the lifeworld contributes decisively to wealth. It takes many forms: domestic chores and the work of nurturing and caring, but also civil commitment and volunteering in the community. The lifeworld economy underpins the

monetary economy. Though hidden, it is as much a pillar of the national economy as the market economy.

The third pillar of the economy and wealth is nature. Nature provides a host of – unrecognised – services, like regulation of the water cycle and the climate or the fertility of soils, which are appropriated by the commercial economy, unseen and without payment. The services of natural ecosystems are largely hidden, because in most cases they are impossible to quantify in monetary terms, which makes them similar to the services provided by the lifeworld.

Until now, the capitalist ‘operating system’ has laid down the rules of the game. It allocates property rights and organises the distribution of benefits and disadvantages. The social market economy, familiar in Germany, added a socially civilising element to capitalism: the state became a social state and the labour movement became a collective bargaining partner. Now it is time to examine the relationship with the third pillar, nature. For an ecological-social market economy, the economic operating system of capitalism will need another major upgrade (‘Capitalism 3.0’).

The biosphere or the biologically productive environment is – like the lifeworld economy – a public common, a resource belonging to the whole human race, and every person has a basic right to a minimum level of natural resources. This places ethical limits on private ownership of and trade in natural resources. So the extraction of raw materials must be stabilised at a renewable level; the discharge of emissions needs to be lowered to a harmless level. But there are consequences to imposing limits: questions of future allocation rear their heads more frequently, and conflicts escalate. The crux of the matter is whether this allocation will be decided by legal rights, purchasing power, on the basis of needs or by sheer power.

We need an economy that lives up to the goal of sustainability in all its dimensions. The market economy must be reformed accordingly: the

economy of the lifeworld, and hence the role of civil society, must be revalued, and nature more effectively protected against the demands of monetary capital. This calls for state regulation that prevents market players from overexploiting the natural and social commons for private economic advantage. It involves a review of competition law to the effect that companies are no longer permitted to gain competitive advantages by foisting ecological or social costs onto the public at large. It also involves a review of corporate governance to the effect that corporations not only enjoy privileges but also comply with ecological and social obligations. Thus the ecological-social market economy emphasises the primacy of policy making over the logic of the market. The relevant principle was articulated in the German Basic Law, passed in 1949: “Property entails obligations. Its use shall also serve the common good.”

Work in progress

We cannot postpone our change of course in the hope that some sustainability czar will come to our rescue. Nor is there time to draw up a grand masterplan. The political sphere, the economy and civil society are called upon in equal measure to coordinate the transition towards a sustainable model of civilisation – at all levels and in all sectors. Political priorities must be redefined; the economy must get by with fewer resources and lower impacts on the environment; market activity needs regulatory control and new inclusive approaches are needed in social policy. At local level, citizens can use all the available options to create the kind of living environment that they would like to pass on to their grandchildren. And under a new architecture for international cooperation, European states and companies must broaden their outlook and take responsibility for protecting the biosphere, human rights and civil rights in a global context.

To accomplish this, the numerous existing approaches, models, ideas and solutions need to be championed, publicised and integrated – and put into practice, despite countercurrents and the seemingly intransigent power of existing structures. Many areas of work in progress look like promising approaches for turning the vision of a sustainable society into a reality.

Switching to a solar economy

The centrepiece of any transition to a greener economy is switching to a new resource base. To replace fossil fuels and commodities, there are already numerous technologies for converting and extracting energy from solar, water, wind, biomass and geothermal sources.

- **Solar thermal collectors** are primarily used today for water heating and space heating. Solar energy can also be used passively in buildings; in conservatories, for instance, or through unshaded windows that face the noon-day sun.
- Alongside existing hydropower plants, **wind energy** has become Germany's most important option for generating renewable electricity. This area offers the greatest potential for further expansion of renewable energies for electricity production, particularly on off-shore wind farms.
- The potential applications of **regenerating raw materials** are wide-ranging, and their use is growing in the chemical, petrochemical and pharmaceutical industries as well as the construction sector, as building and insulation materials, for instance.

Going right to the heart of both conflicts and efforts to find solutions, the sticking point is the dilemma between making more use of renewable energies versus building new coal-fired power stations and prolonging the working lives of existing nuclear reactors. Essentially, there is no longer any dispute as to whether renewable energies are the best way forward, because their advantages are undeniable: they are largely climate-neutral, they diversify the energy supply and reduce the dependency on imported energy. In other words, they play a major part in securing energy supply and averting conflicts and crises. Moreover, block-unit power stations, roof-mounted solar panels and thermal pumps permit a largely decentralised form of energy production. Bringing the generation of power back into the neighbourhoods where it is used would be a way of 'resocialising' today's highly monopolised energy industry. Since the investment

and infrastructure overheads are often significantly lower, new players have the chance to gain a foothold in the electricity market, which would chip away at entrenched power and revitalise competition.

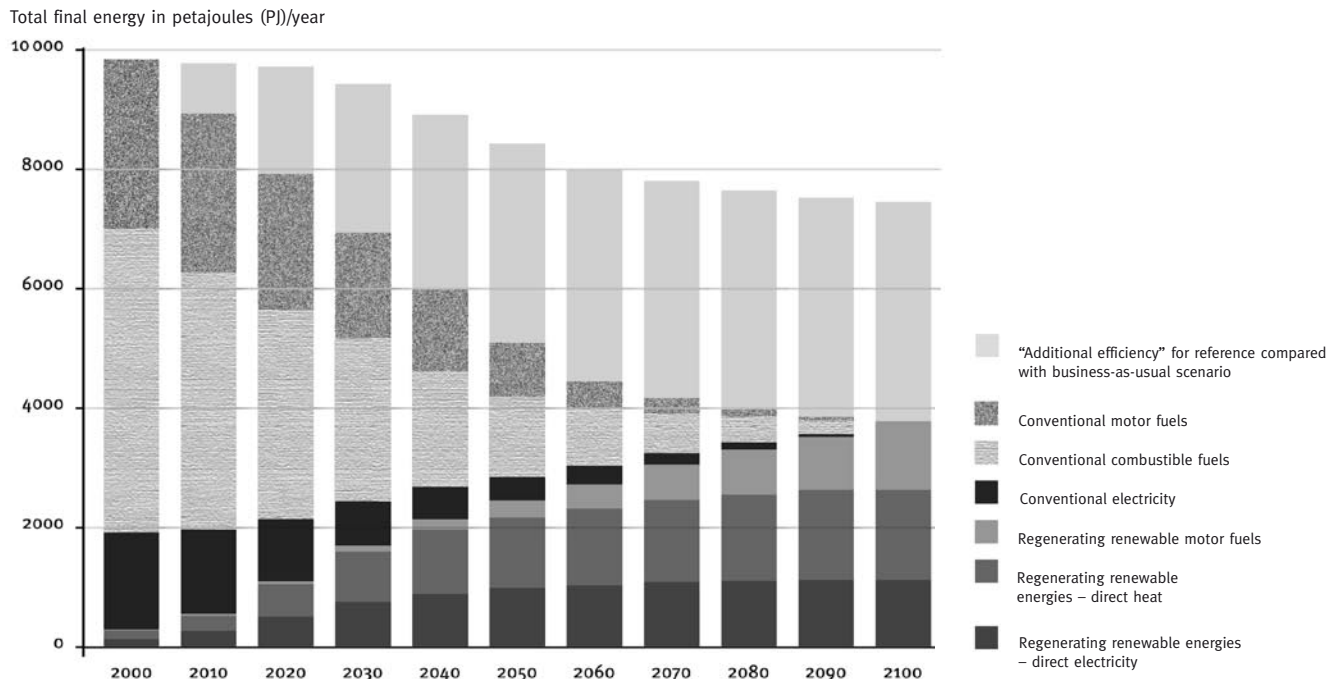
The real controversy today revolves around the best route to follow and the time horizon for conversion. Establishing new structures takes time. Therefore fossil-fuelled power stations may still be necessary for a limited period, particularly in the form of modern gas power plants. Because renewable energies are still more expensive than conventional energy sources, financial support is essential to bring them into wider use. At the same time, many issues remain unresolved. Conflicts could still arise between the expansion of wind energy, nature and landscape conservation interests and residents near wind farms.

Furthermore, the longstanding players in the electricity industry are poised to claim their own share of the renewables market. The gateways are capital-intensive offshore wind farms and imports of electricity, such as solar electricity from North Africa, without which it might become impossible to meet European demand, particularly if consumption continues to rise. For the future, the ensuing risk is that a few companies continue to control the energy supply, and develop structures on the same centralised model they operate today in the fossil-based sector.

Policymakers are faced with a challenge. They must specify clear objectives which strengthen solar-integrated, decentralised energy supply and thus define the framework for economic action. Mechanisms should be created for companies to take advantage of the economic opportunities of

Climate-friendly development of the energy system

The transition to a solar-integrated age calls for a switch to renewable energies



Source: Sustainable Germany in a Globalised World, p. 332

restructuring. But consumers, too, can contribute to restructuring the resource base through their choice of electricity supplier or by adopting a more energy-conscious lifestyle.

Capitalising on resource efficiency

Conversion to solar energies and fuels will only be feasible and financeable if the overall demand for resources is significantly reduced at the same time. Some efforts are already under way. Given the rising costs of raw materials and energy, companies are under pressure to improve competitiveness and growth by boosting efficiency. When it comes to making better and more efficient use of resources, a whole host of good practices can be found, especially in the fields of energy, transport, construction and the water sector, agriculture and food production. Already, Germany is registering a certain decoupling of economic growth and resource consumption. As well as helping to relieve the burden on

the environment and reduce dependency on expensive imports, more efficient use of resources like water and energy could halt, if not reverse, the rising cost of living for private households.

However, there is still considerable unexploited potential for efficiency savings in homes and factories, motors and materials. But systematic implementation across all sectors is difficult. Often, potential efficiencies are overlooked or perceived as too expensive. Rather than constantly trying to make work processes more efficient, technical progress should be geared towards improving resource efficiency – along the entire product and value chain, from suppliers to end-consumers.

Yet maximising efficiency potential also means swimming against a strong economic tide. Companies tend to base their calculations on short-term profit, and baulk at investing in improvements with a longer-term payoff. Furthermore, effective gains in resource efficiency cannot be achieved by technical solutions alone. Resource consumption is influenced to an enormous extent by patterns of production. North Sea shrimps are an object case: sent from the German shrimp fishery for shelling by Moroccan workers, they have travelled thousands of miles across Europe by the time they reach the supermarkets. This is where consumers also have a say in whether low-resource products and services take off – through their lifestyles, consumer habits and everyday actions. The public sector, in its role as a large-scale consumer, could set a valuable example here.

As can be seen from the example of cogeneration (combined heat and power, CHP) which makes more effective use of fuels, political action is also vital. The underlying conditions can be made more favourable to allay the reluctance of established suppliers and create positive incentives. For instance, efficiency standards and product labels for buildings, devices, facilities and processes could cover water and material consumption as well as energy

Cogeneration lags behind

In contrast to conventional power stations with efficiency levels of 35 to 45 percent, CHP (combined heat and power) plants also capture and reuse waste heat, thus utilising 80 to 90 percent of the fuel's energy potential. At the start of the current millennium, CHP accounted for just an eleven percent share of Germany's electricity generation, compared with 50 percent in Denmark and 40 percent in the Netherlands and Finland. The German federal government plans to double the CHP share to 25 percent by 2020, although experts consider this an unrealistic target, arguing that insufficient funding has been allocated.

Giving policy primacy

Germany's Renewable Energy Sources Act (EEG) has created a massive surge in the uptake of wind power, solar technology and bioenergy. It is an example of how the state can support key low-resource and eco-conscious innovations in a way that stimulates the emergence of profitable future markets.

Political intervention can even incentivise investment in public commons, such as the contribution of agriculture to landscape maintenance, environmental conservation and climate protection (the principle of 'multifunctionality'). Funding streams that have previously favoured the industrial farming and livestock sector, irrespective of its high resource consumption and environmental impacts, can now be diverted in order to promote rural development and foster more sustainable forms of agriculture.

The state has many means at its disposal to influence production, markets and competition to shift their emphasis towards serving the public interest, helping to protect ecosystems and supporting social justice. In addition to laws and – mainly financial – support and incentives, more technical instruments are also essential: product standards for energy efficiency, for example, or quantitative limits in order to make emissions certificates a scarce, and consequently more expensive, commodity. Pricing interventions can prevent the externalisation of ecological and social costs, to the detriment of weaker nations or the public at large, and ensure that prices tell the 'whole truth'. Tax reforms can not only help to suppress undesirable consumption of the environment but also reduce social inequality and hence bring about greater justice: thus the revenue from resource taxes, which would add to the cost of living, could at least partly be returned to citizens as an eco-bonus, or used to fund a universal subsistence-level welfare scheme.

As the financial crisis shows, the financial markets need greater regulation so that the economy is better protected from crises and their social fall-out. Authorisation could be made mandatory for riskier financial products, and a stock-market turnover tax applied to short-term transactions. All in all, the financial markets, which currently serve the overriding interests of rapid and high returns, need to be steered back to their true function – that of mediating between financial investors and real production.

Clearly these kinds of measures and instruments will provoke a strong backlash because a string of companies and sectors, especially the energy, automotive and agricultural industries, have quite a lot to lose. Associations and lobbyists regularly lean on parliaments and governments to water down environmental policy programmes. For that reason, an eco-social market economy can only be put into practice if the political sphere reasserts its primacy over market economics.

Renaissance of the regions

When fuel is expensive and resources scarce, then shorter delivery distances, traffic reduction and more compact supply chains will become the order of the day. This creates opportunities to reinvigorate regional economic activity, which has been massively eroded by the emphasis on global markets and privatisation and concentration of the economy. The solar economy offers new strategies for regional development, since it creates opportunities for local and regional generation of energy and raw materials.

Implementation of regional development strategies should primarily build on local untapped potential, which can differ hugely from one region to another. Regional sources of raw materials are one possibility to explore. These may be plant-based raw materials such as agro-fuels which, if produced locally, would reduce imports from tropical countries (which are unjustifiable by any standards today).

Similarly, recycling of demolished buildings ('urban mining'), for instance, and production processes in which waste is long reclaimed and reused, can help to meet needs for resources.

For urban areas, it stands to reason that shorter distances help to reduce traffic volumes and cut environmental pollution, fuel demand and road maintenance costs. If construction and housing policy supports ecological construction and housing, it also opens up a host of options for drastically reducing demand for raw materials, energy consumption and land consumption, which often takes its toll on agricultural land in the form of urban sprawl.

The strengths of regional economic activity are especially clear in agriculture. By keeping things local, product chains are shorter and products can be marketed directly, minimising food-miles and life-cycle impacts, engendering cooperation and making it easier to communicate about products and farming practices. This is especially true of organic farming and food production, which can contribute greatly to regional value added and the development of parallel ecological value chains.

Numerous benefits arise from strengthening local economic networks. Short distances between producers and consumers, between raw material production and processing, boost a region's economic self-sufficiency and improve the reliability of supplies. As well as promoting transparency and confidence in product quality, they have positive effects on income and employment and also help to prevent traffic congestion. They can give citizens more direct influence, improve social relations and promote closer cooperation between industry, politics and civil society actors in searching for sustainable solutions to regional problems ('Agenda 21'). On the cultural side, they boost self-confidence and regional identity. From an ecological point of view, they support the recycling of resources. It is substantially easier to strike a balance between ecological, economic and social sustainability at regional level than on a global scale. And there is often greater political scope to do so at regional level than in wider contexts.

Regional policy support instruments should therefore disengage from the traditional growth paradigm and its global market orientation. Instead, the instruments of economic and agricultural support should be used to support small and medium-sized enterprises effectively. The establishment of regional value chains and the marketing of regional products and services are the priorities for support. Levies and taxes can be used to steer ecological development.

Local currencies

The introduction of a regional currency can boost cooperation between suppliers and customers. The 'Chiemgauer' and the 'Roland' are the names of two such currencies – or vouchers, to be precise – which circulate within specific German regions. Generally they are purchased one-for-one with euros and can then be used to pay local companies, suppliers and employees. A fee of five to ten per cent is payable on conversion back into euros so that the local currency stays in circulation. Stimulating regional economic cycles in this way works to the particular advantage of small and medium-sized enterprises. In the region around Rosenheim in Bavaria, turnover of the 'Chiemgauer' was over 2 million euros in 2007.

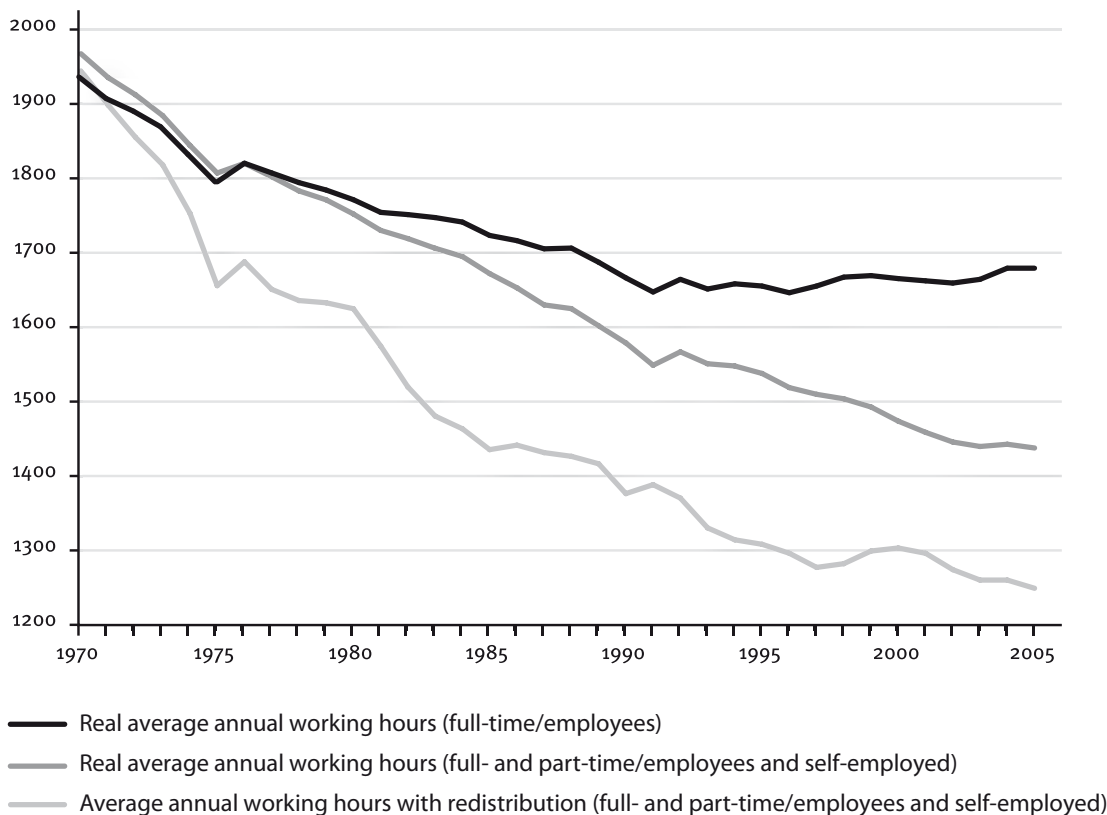
Sharing work fairly

Social justice is an indispensable component of a sustainable society. A key aspect of it is the allocation and redistribution of the available work – including paid work, care work and service to the community. Since a return to full employment in the traditional sense has long since been exposed as wishful thinking, it is time to develop new and realistic forms of employment. Rather than finding work for some and consigning the others to joblessness, one alternative could be shorter and more flexible working hours for all. In a parallel development, the other ‘share’ of work – the work of caring – must be more highly valued, both socially and financially, not least for the sake of gender justice.

A whole variety of benefits would ensue: better health thanks to lower levels of physical and emotional stress, and more free time. Men and women would have equal opportunities to engage in paid work in accordance with their needs. The role division between the genders would also change, creating scope for reallocation of family duties. Shorter working hours might also change consumer behaviour, minimise resource consumption and help to reduce energy consumption and environmental degradation. From a sociopolitical viewpoint, a fairer distribution of paid work would defuse the unemployment problem and broaden the basis for financing the social insurance system.

Thought experiment: Working time with the volume of work distributed equally across the potential working population 1970 – 2005

Sustainability in retrospect - shorter working hours for all



Source: *Sustainable Germany in a Globalised World*, p. 433

The challenge for the policy sphere is twofold. First, it must underwrite the fair allocation and remuneration of paid work and a stable social security system. Second, it has to create the social and financial prerequisites for an upturn in care and community work. Required elements would include a proactive education and training strategy, the introduction of a universal minimum wage and income tax credits. In the longer term, it should also incorporate a subsistence-level welfare safety-net, perhaps in the form of a basic income guarantee. Social security would then cease to be dependent on paid work. This new social policy must make reference to all forms of work. It fulfils not only social protection but also public service functions, to enable social activities and the development of human abilities. At its core is a comprehensive expansion of public goods and services which are placed at everyone's disposal, free of charge, as part of the subsistence guarantee.

Towards a whole-earth policy

All fields of policy must put a greater emphasis on sustainability and protection of the climate. Years of environmental crises have demonstrated the inescapable interdependency of all the world's countries. Consequently, they need a whole-earth 'home affairs' policy, in which foreign policy, environmental and development policy go hand in hand. If there are doubts about the world's governability, then such a cooperative environmental policy – alongside security policy and global trade policy – must be the acid test.

One condition of its success is justice. So far, the international negotiations on climate protection, conservation and equitable use of biodiversity and halting the destruction of virgin forest have reached an impasse, as industrialised countries and developing countries blame each other for the damage done and pass the buck on how it should be tackled. To move things on, mechanisms must be found for striking a balance between the different expectations, desires and

needs of the rich and the poor respectively.

Currently the standstill in climate policy can only be overcome if the industrialised countries significantly reduce their own emissions and switch to a solar energy basis. For that alone will create sufficient leeway for the South to develop. Furthermore, the developing countries need access to financial and technical support in order to make the leap into the Solar Age. The poorest countries, in particular, need help with adaptation to unavoidable climate change.

Secondly, institutional reforms are required. International institutions entrusted with protecting the environment, such as the United Nations Environment Program (UNEP) and the international human rights organisations must be reformed and strengthened so that they can hold their own against strong multilateral trade organisations like the WTO and international financial institutions like the World Bank and the International Monetary Fund. In place of their past emphasis on promoting 'catch-up development' with its ecological, economic and social repercussions, the IMF and the World Bank should support the transition to a solar society. Other essentials are equal representation and participation of the Global South in their decision-making bodies, as well as greater transparency and accountability. A global trust organisation could put the earth's atmosphere beyond the reach of economic or political power and endow it to the global community as a common resource. Pollution rights would be fairly allocated, alleviating the peril of atmospheric overload.

It will only be possible to avoid or resolve conflicts successfully when political forces realise that they are engaged in politics for the planet, where the principle frame of reference is no longer just the national interest but global public welfare. As a cornerstone of a sustainable global architecture, international environmental and human rights conventions must take general precedence over trade agreements.

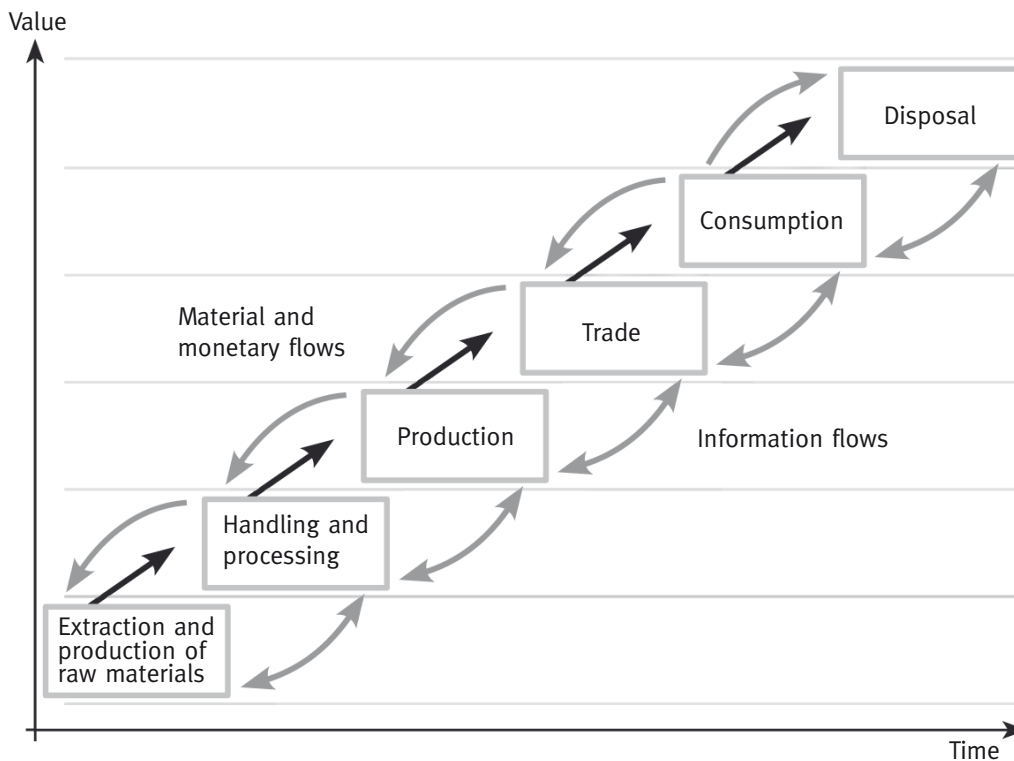
Responsibility in global product chains

In a globalised economy, production and consumption loop around the world, from the extraction and processing of raw materials to the retailing and disposal of end products. Company, consumer and political responsibility does not stop at national borders. Global production and value chains are rife with problems like resource consumption, environmental impacts and inhumane working conditions, often affecting women. They are problems that need to be resolved collectively. Central tenets are adequate wages and fair prices which reflect both the ecological costs of production and permit equitable sharing of the value added.

Companies need to address these demands head on. When they outsource production to less industrialised countries, they find themselves in a position where they can get away with offloading the social and ecological costs more easily. National labour standards and basic human rights like the internationally recognised core labour standards of the International Labour Organization (ILO) are frequently breached. Often people are prohibited from forming trade unions and minimum wages are kept deliberately low. And usually, the poorer countries only hold on to a small portion of the value added. The result is that profits and social and ecological costs are distributed very unequally between investors, countries and populations.

One approach for more active fulfilment of corporate obligations consists of voluntary

Flow diagram of the global value chain



Source: Sustainable Germany in a Globalised World, p. 485

commitments and corporate activities focusing on the social and ecological implications of their operations. More and more firms are waking up to their 'corporate social responsibility', not least because they fear the market power of consumers, who as a result of civil society campaigns have grown more critical of companies that harm the environment or breach social standards. In certain sectors such as clothing, coffee production or forestry, environmental organisations and trade unions are working with companies

and, in some cases, state organisations (multi-stakeholder initiatives) to define corporate social or ecological standards. One example is the Forest Stewardship Council (FSC) which issues a label for sustainably sourced timber.

Through their purchasing decisions, consumers can also play a part in ensuring that products become more sustainable throughout their life-cycle, from design to disposal. For the relevant guidance, they can look out for fair trade and eco labels. Equally, institutional consumers like the state, public authorities and churches are called upon to include social and ecological standards in their procurement policies. Their choices not only carry weight, but set a valuable example.

Yet voluntary agreements and consumer power are not enough to make global value chains comprehensively fairer and more ecologically sustainable. They must be flanked with an overarching framework for action which specifies rules for all actors and guarantees transparency. State regulatory policy must make use of appropriate laws and incentive structures and, where needed, sanctions to complement the voluntary with the obligatory.

Countercurrents emanating from certain developing countries indicate their perception of social and ecological standards as new barriers to trade, curtailing their competitive advantages and putting hurdles in the path of their exports to industrialised countries. Hence, when standards are being developed and formulated, the interests of all parties must be borne in mind, particularly those of producers and workers in developing countries. Moreover, the main thrust of foreign investment should be long-term partnership for the purpose of development rather than exploiting regional advantages in pursuit of short-term profit, for which the countries and people affected pay a high ecological and social price.

Trade can be fair

The idea of fair trade relations between consumers in the Global North and producers in the South first emerged in the 1970s as a critique of the existing world trade system.

Originally the aim was to circumvent large corporations, end the exploitation of the South and establish trade structures based on fairness rather than profit maximisation. Standards on working conditions and wages were agreed with the producers.

The prices they are paid for coffee, sugar, tea and a growing range of other products guarantee their livelihoods and, in addition to the production costs, include a fair-trade premium which goes to support projects in their communities. The prices paid for fairly traded products are usually somewhat higher than the world market price. Long-term trading partnerships are also agreed, and support is given to help develop producer organisations, e.g. smallholder cooperatives or trade unions. Buyers not only get products with 'social value added' but also political information, especially when they shop in 'one world' shops.

More recently, fair trade has made the leap from its 'one world shop' niche into the supermarkets. In some quarters this is welcomed because it means growing turnover and a stable income for over a million producer families. Others are critical at this departure from the original idea of fair trade, which was to oppose the established structures of trade.

New rules in world trade

As a world champion exporter, Germany has a special responsibility to forge trade relations with the rest of the world based on environmental compatibility and social and international justice. Until now, the promotion of exports and foreign investment by German companies, e.g. by the government export credit guarantor Hermes, has taken precedence over protection of the environment and human rights, and had a hand in increasing the indebtedness of countries in the Global South. Instead, German companies could be supported in helping to strengthen the countries of the South economically, by exporting products and manufacturing processes that make sparing use of resources.

Internationally the rules for the major aspects of world trade are negotiated and enforced through the World Trade Organization (WTO) which came into being in 1995. Alongside these multilateral agreements, bilateral trade and investment treaties are increasingly important, especially since the apparent breakdown of the latest round of WTO negotiations, the Doha Round, on further steps in liberalisation. All negotiations and treaties are essentially aimed at removing barriers to trade and investment and opening up new markets to global capital.

Of course, international trade and foreign investment are essential. But they should be regulated in a way that integrates more ecological and equitable principles into the global economy – at all levels.

Part of this is that governments must retain sufficient scope and flexibility to protect local producers as a means of lowering unemployment and poverty. Trade in goods produced in line with standards of social justice and ecological sustainability can be incentivised. For example, if women's rights were infringed in the production of textiles, higher tariffs could be applied ('qualified market access'). To prevent national overindebtedness and financial crises

of the kind seen in Asia in the late 1990s, equalisation of the balance of trade must be supported. International investment rules can be used to implement extraterritorial state obligations, and to oblige companies abroad to comply with the UN covenants on human rights, the ILO core labour norms, internationally accepted environmental standards and anti-corruption agreements.

The weak countries of the Global South must systematically receive special and preferential treatment, to give them some chance at least in the unequal competition with industrialised and emerging economies. Conversely the market power of transnational corporate groups must be curtailed, by preventing monopolies and cartels, for example, and effectively prohibiting unfair competition. The main aim is to enable greater fairness between the market actors.

Finally, trade policy is characterised by blatant deficits in democracy. Public discussions are rare, and parliaments and civil society have limited means of exerting an influence. On the other hand, stakeholder groups – especially from industry – wield a strong influence over trade policy negotiations and decisions. To change this, the European Parliament and the German Bundestag must be given more of a say. Decision-making processes at all levels must be more transparent for civil society, with active opportunities for the people affected to have their say. And trade policy must be coordinated with the objectives of environmental and development policy, rather than contradicting them as it often has done in the past.

Citizens making an impact

Working towards sustainable development requires constructive support from the public. New civil society initiatives are needed on a whole variety of levels to create a counterweight to the private sector and public administration, for which sustainability will not always be such a prime concern.

At local level the scope for political participation is especially great. One prerequisite, however, is for members of the public to receive full and timely information on plans and decisions. This is of special relevance in relation to sections of the population like children and young people or migrants, who have more limited means of asserting their interests than other groups. Also, the authorities must not be allowed to misuse public participation as a low-cost substitute for their own services, perhaps to divest themselves of responsibility for operating sports facilities and swimming pools or make other cutbacks in public services.

With political awareness, there is a great deal that people can do: broadening the use of renewable energies, taking energy-efficiency measures, setting up a local transport system that improves urban quality and travel habits, engaging in town-twinning and project partnerships with people in other parts of the world, or getting involved in development in education. Democracy and the rule of law offer a range of options for participating in:

- **public debate** within urban planning processes such as the drafting of a regional land-use plan, an urban development scheme or a climate protection strategy,
- **public opposition** to the privatisation of institutions in public ownership, like public utilities, or to destructive large-scale projects like roads, airports or major new power stations which will cement a policy of unsustainable development for decades to come,
- **public optimisation** whereby citizens complement professional expertise with their own pragmatic expertise and life experience – as users of public transport, for example,
- **public realisation** in which citizen groups operate more or less as co-producers, running municipal services on behalf of the public sector, such as generating their own electricity.

Objections can be lodged under project planning procedures and issues can be brought to court. Citizens' initiatives and referendums are additional options for getting involved by means of 'direct democracy'.

People-power in Schönau

After the catastrophic meltdown at Chernobyl in 1986, the citizens of Schönau, a small town in the Black Forest, made up their minds that from now on, they would only buy nuclear-free electricity. So they bought the local power supply grid and, in 1991, founded their own utility company, 'Elektrizitätswerke Schönau'. The initiative is financially viable thanks to donations and investments by private shareholders, mostly residents of the town. Sources of electricity include solar systems, hydropower and climate-friendly cogeneration. Since the liberalisation of the electricity market, the people of Schönau have begun to sell their green electricity nationwide and now supply over 50,000 customers.

The private is political

Even our own lifestyles are tools for exerting an influence – as citizen consumers, for example, who take into account environmental impacts and solidarity with worse-off communities when making purchasing decisions. Basic needs for food, housing and transport can be satisfied in new ways that are less harmful to producers and the environment. With innovative strategies and solutions, it is possible to modify consumption habits without having to sacrifice prosperity. It goes without saying that the more affluent members of society can more easily afford to rethink their attitudes to consumption and lifestyle than those who have to count every penny.

To start with, it is worth shopping strategically. By choosing regional organic labels and fair trade products or by reducing their meat consumption, consumers can help to decide whether ecological and social outrages are tolerated or stamped out. Housing is the next factor: new builds can be emission free. Even in existing buildings there is often plenty of scope for saving resources with solar water heating and energy-efficient appliances. Investors can put their money into ethical funds or wind farms and avoid buying shares in companies known for breaching environmental standards or workers' rights. Car owners can save fuel by voluntarily limiting their speed – or manage without a car altogether, opting instead for cycling, public transport or car sharing.

Church power in the marketplace

It is estimated that the German Protestant and Catholic churches, including church-based organisations like Caritas, Johanniter and Diakonie, buy some 120,000 vehicles per year. If they made their market power count by purchasing more economical cars, it would not only lend credibility to their entreaty to 'preserve creation' but also signal a radical change in outlook. A start has already been made: since January 2008, the 'Zukunft einkaufen' (Shopping for the future) project has been taking a close look at the churches' shopping practices. Its aim is to align the churches' procurement with ecological and social criteria.

Making best use of resources rather than *using them up* is the basis of a new, sustainable lifestyle. Apart from saving resources, it also brings a measure of personal fulfilment. By shortening working hours, we can become refreshingly time-rich. With more space for social relationships and personal projects, the quality of life is higher. The quickest and most certain path to happiness, following the counsel of the ancients, is to minimise our needs rather than maximise our efforts to gratify them.

Protagonists of change

A sustainable Germany in a globalised world? The question plumbs our model of civilisation to its very depths. A good analogy is an oil tanker, a steel monstrosity powered by fossil fuels, which is difficult to manoeuvre and poses a constant hazard to the environment. The challenge is to turn it into a modern, high-speed sailing yacht, a light and nimble vessel powered by the wind, a prime Solar Age energy source. Though its performance and speed are less impressive, it does not pollute nor pose any threat. Both fulfil the function of transporting people and goods. But one does so in harmony with nature, whereas the other is a nature-devouring leviathan.

If we aspire to meet the challenges of a sustainable Germany in a globalised world on all levels – local, national and global – the following aspects are fundamental:

- We must get by with fewer resources, especially fossil energy sources, and take the plunge into an energy-efficient society. We need to pull off a threefold turnaround: in the energy sector, in transport and in agriculture.
- This in turn contributes to economic sustainability by reducing dependencies and conflicts. To crisis-proof the economy and refocus it on sustainability, markets must also be regulated and the privileged status of capital interests dismantled.
- Social equity and justice call for new policies on work and participation, along with measures to redistribute income and assets.

We have long had access to the technical wherewithal to build ourselves that new yacht. In readiness for the transformation in the energy sector, a toolkit of renewable energies and energy-saving strategies is on hand for refurbishing buildings, modernising industrial

plants and making appliances less power-hungry. Extending public transport systems, tightening up consumption standards or imposing kerosene taxes in aviation could turn the tide in the transport sector. Organic farming is ready to divert the course of agriculture away from energy-intensive management practices.

While most governments looked on passively at the world's plight, fortunately scientists, entrepreneurs, civil society groups and organisations in numerous countries leapt to its aid. Thanks to their techniques and know-how, we may yet see a greener and more equitable economy and society. One of the basic tenets of this international 'movement without a name' is that human rights and the natural web of life are more important than material goods and money.

Approaches and activities are springing up all over, showcasing alternatives on a small scale, from organic farming to fair trade, from zero-energy homes to the solar industry, from urban regeneration initiatives to intercultural gardens, and extending to global research networks. Moves are afoot to establish green fair trade business sectors of the economy, and the use of renewable energies is advancing. At least in Europe, genetically engineered foods have so far been resisted. Firms are experimenting with more eco-efficient product design and with lower-resource manufacturing processes. Local authorities are implementing measures for traffic calming and energy-conscious building refurbishment.

But it will take a good deal more than that to effect the necessary cultural transformation. Its pioneers can boast the better solutions – and, indeed, considerable influence due to the power of their convictions and their networks. But small-scale approaches and initiatives must

somehow be scaled up for the mass market. Such a major overhaul can only be achieved with massive political support. And that is doubly true when it comes to integrating justice into global economic structures.

To enable the state – the legitimate representative of the public interest – to bring this to fruition, the primacy of the policy sphere must be reasserted: it needs a new self-confidence. The undue weight given to capital interests in opinion-forming and decision-making must be quashed, and the state must reclaim its independence from business, i.e. the industry lobby, and put a stop to the prolonged erosion of state authority by neoliberalism. For the bond that is enshrined in the German constitution between private property and serving the public interest can be read as entailing not just social obligations but, equally, a duty of responsibility towards the natural environment.

Thus the political sphere must create institutional guard rails and systemic barriers to regulate both consumer and producer behaviour. Companies will have to accept that products and manufacturing processes must meet social and ecological standards. And as a natural monopoly, electricity, water and gas supply networks belong in public ownership.

Trade policy is another sector in which sustainability needs a helping hand to make a real breakthrough. The environment and human rights must become the normative basis for international trade relations, in order to avert harm and promote good. **Export subsidies** in the Global North can put production in poorer countries at a disadvantage, hold down prices and drive local farmers and firms into destitution; these must be abolished. **Trade agreements** should ensure that trade relations further the causes of human rights and environmental

protection. The right of developing countries to control the volume and quality of imports in order to protect their small-scale farmers and maintain sovereignty over their food supply, must be respected. **Transnational corporations** must be effectively obliged to conform to social and environmental standards.

Rarely does change of this kind pass off without conflicts, from demonstrations against nuclear and coal power plants or human chains at world economic summits to disagreements in parliaments. The overhaul must be effected in the face of powerful vested interests, which proffer old paradigms that pose as solutions but would only stand in the way of the complete rethink that is needed: yet more food exports, genetic engineering and a new ‘green revolution’, coal-fired power stations, nuclear energy or the large-scale production of agrofuels are among these tired ideas.

The policy sector may find allies in some parts of industry, but civil society offers better prospects by far. Without strong commitment from civil society, the transformation to a sustainable Germany will not happen. Much will depend on whether the new international ‘movement without a name’ in favour of a sustainable world gains ground in time to bring about the necessary change of course.

To navigate the sea change, we are called upon now more than ever to look beyond our own limited horizons, share our ideas, link up our actions and develop new forms of cooperation. For German companies, it means accepting moderate profits as a worthwhile reward. German politicians could drop their usual breathless rhetoric in favour of far-sighted, sustainable strategies, and perhaps consider weighing up other priorities apart from Germany’s position as a global economic competitor. For

citizens, a sense of well-being would no longer depend on consuming more and more while spending less money. Trade unions would not limit themselves to representing their members' interests but could also take greater account of the unemployed and the low paid. Investors, companies and consumers in the world's wealthy zones are called upon to relinquish part of their wealth and power for the benefit of nature and to improve the lot of people who are worse off.

Before this can happen, however, the state must put its relationship with the people on a new footing, to gain their acceptance for the overhaul programme. For it will mean hard work and sacrifices, and a higher day-to-day cost of living. The programme must make sense. It must also be handled transparently, and affect all people in proportion with their economic means. Unless environmental policy is simultaneously framed as social policy, it has no chance of success. Because if social inequalities keep growing, sustainability will sink without trace. A new social contract is needed to conciliate the relationship between the state, economy and civil society, between people and nature, and between rich and poor countries.

All things considered, there is truly no cause for unbridled optimism. Yet history is unpredictable. Time and time again, we see how dramatically it can surprise us – from the fall of the Berlin Wall to the victory of the Anti-Apartheid Movement in South Africa. A turn of phrase coined by the Italian journalist, politician and philosopher, Antonio Gramsci, aptly summarises the position: “I am a pessimist of the intellect but an optimist of the will.”

Sustainable Germany in a globalised world – challenges for us all

Live mindfully – the golden rule for every citizen.

As consumers, residents, holidaymakers, commuters, villagers or suburbanites, it is up to us to adapt our personal lifestyles to the necessities of global responsibility: not contributing to overexploitation of the biosphere and natural resources, not gratifying our own needs to the detriment of other people.

Yet it would be naive to imagine that mere insight into all the contexts and dependencies is enough to modify individual behaviour to the necessary extent. That is why industry has to rise to the challenge of taking responsibility for sustainability. Sponsoring cultural and sporting events or charitable activities in the community are not enough; the more important imperative is to stop externalising social and ecological costs, and instead to start offering resource-light products and services which make it easier for consumers to live a sustainable lifestyle.

With the exception of a few niche sectors, industry will not compromise the principle of profit maximisation for the sake of common social and ecological objectives on the basis of insight alone. It is therefore the role of the state to set the right incentives for consumers and companies. The state must make the most of the existing regulatory policy options – and must reclaim other areas where there is scope for intervention. This applies both in the national context and internationally, at institutions such as the United Nations and the World Trade Organization.

But state power also needs to be limited by public checks and balances. Apart from the media, the main players in this respect are non-governmental organisations, whose position must be strengthened. At the same time, non-governmental organisations must also be prepared to answer critical questions on how far their work is contributing to sustainable development.

Last but not least, the churches have an important role to play and can set a valuable example for the imminent change of course. They are called upon to work ever harder to bring about a sustainable society and to reflect sustainable forms of work and economic endeavour in their own structures. In doing so, they can draw on an ecumenically-inspired vision of a future world which strives for peace, justice and the integrity of creation.



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