Presentation by Doreen Fedrigo, Policy Research and Information Manager at Waste Watch at the 5th International Conference of the International Centre for Research on Environmental Issues (ICREI) on Wastes.

This article is based upon a presentation on the theme of NGO views on the use of market mechanisms in waste management, with private property rights as the context.

Waste Watch

Waste Watch is one of the UK's leading environmental organisations promoting sustainable resource use, primarily through messages on the '3Rs' – reduce, reuse, recycle – and 'smart shopping'. We have extensive experience in public communication and awareness-raising, and working with children in schools, usually working closely with public authorities. Through our cross-sectoral, partnership working style we have developed very good links with public authorities, industry, central Government, community waste groups and environmental organisations. We are an unusual NGO in that we provide policy commentary based upon our on-the-ground delivery activities.

The international dimension

Before looking more closely at the UK approach to waste management, it is worth considering the international dimension to set the context within which the points raised in this presentation need to be viewed. The UN World Summit on Sustainable Development held in Johannesburg in 2002 resulted in national governments agreeing to develop 10-year national plans on sustainable consumption and production.

This outcome was based on the renewed recognition that Western consumption patterns were having global impacts, on humans and resources. This reality was recognised at the 1992 Rio Summit, resulting in Local Agenda 21 determining that "the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialised countries, which is a matter of grave concern, aggravating poverty and imbalances."

At EU level, the 1993 5th Environmental Action Programme included a target of stabilising waste at 300kg per person by 2000. The 2001 6th Environmental Action Programme changed this objective to reducing the quantity of waste being disposed of by 20% of 2000 levels by 2010 and by 50% by 2050. Even with these targets, waste generation continues to increase. In 2003, the European Environment Agency identified that the average European produced 415kgs of waste. Even with measures aimed at reducing the amount of waste we produce, these amounts continue to rise along with their local and global environmental impacts. So, in discussing wastes in relation to property rights, economics and the environment, is our aim more sustainable waste management or more sustainable (and equitable) resource use?

Other questions to consider are: How do we ensure corporate and individual behavioural change in particular relating to their responsibility for materials used, products created and wastes produced? How do we drive innovation to help achieve the bigger aims of sustainable resource use? And most importantly, what economic model(s) exist or need to be developed that truly reflect social and environmental issues? Can we continue to use economic models that are over 200 years old, relating back to the first Industrial Revolution, when addressing more modern systems and processes developed partly through globalised markets and major technological advance?

Consumption patterns and trends
Consumption trends continue to add to environmental degradation and worsening of people's lives in parts of the planet. According to the UN, fifteen percent of the world's population accounts for 56 percent of global consumption. If everyone lived like the most affluent 15 percent, we would need an additional 2.6 planets to support us all. Disparity between population size and gross domestic product is starkly evident when looked at in the global context.

On a more individual level, we see that current consumption patterns are unsustainable. For example, each mobile phone has 75kg of 'hidden waste' behind it. This waste is generated in the extraction of raw materials, their production into primary materials, distribution of the materials and product, its packaging, etc. In the UK, 70% of almost 60 million people own a mobile phone. 90 million mobile phones become obsolete each year, and 15 million more go out of use each year. By 2005, one-third of the planet will own a mobile phone. This totals 2 billion mobile phones, with 150 billion tonnes of hidden waste, or the equivalent of 50 times the total amount of rubbish currently produced in Europe and parts of Central Asia.

Computers give another example of unsustainable consumption patterns. 130 million computers are bought globally each year. Production of an average computer uses as least 530lbs of fossil fuels, 50lbs of chemicals, and 3,330lbs of water.

UK waste management
Turning to the UK waste management system. This is one of the most market-based in the world, which is particularly unique within the European Union context. Examples of this market-based approach include the Packaging Recovery Note (PRN) trading system, for industrial packaging. It is well-known that the UK system does not include public authority collection costs, as industrial sources of packaging were deemed sufficient in order to meet the recycling targets set in the original Packaging Directive. With recent increases to material-specific targets, domestic packaging waste will need to be collected in order to meet these targets. Confusion is inevitable in the current system, as the packaging system requires companies to individually register themselves for compliance or to sign up to one of (currently) 23 compliance companies to meet their obligations.

Now that domestic sources of packaging are needed to meet targets, how will the PRN system be modified so that public authority collection costs are incorporated? The main source of funding for current public authority schemes is the central Government. Funding for public authority waste minimisation and recycling schemes totalled €216m in 2001, and €208m for 2003-5. Will the PRN system absorb some of these costs in future?

Another market-based mechanism has been developed to meet the Landfill Directive target for diversion of biodegradable municipal waste. In 2005, the Landfill Allowance Trading System (LATS) will be introduced. LATS will allow public authorities to trade biodegradable waste permits as a means of reducing the amount of this waste going to landfill. This is the first public authority-focused trading system in the world, and there is concern in the UK about the data used to identify the biodegradable element allocations, and the large costs to be incurred very suddenly. The question is how will public authorities pay for these costs, apart from through substantial increases to local taxes. Is such a trading system appropriate for public bodies?

The final example of the market-based approach is the trading system being put forward by the UK Government to help meet the End-of-Life Vehicles Directive. Industry has said that it does not want a trading system, based upon the negative views of the PRN system.

Having a market-based approach as a default needs closer consideration. It is worth looking at other aspects of the UK waste management approach. This includes a low-level landfill tax - €20/tonne, as compared to Denmark's €50/tonne and Austria's €44/tonne. Although this is potentially a good mechanism for discouraging the creation of waste, its effectiveness is questionable considering the characterisation of waste treatment almost 10 years after the tax was introduced. In 2004, UK waste treatment is as follows: 75% landfilling, 16% recycling, 9% incineration. Although many local communities and environmental organisations are pleased to see that incineration has not increased dramatically since the introduction of the landfill tax, neither has recycling increased dramatically. Indeed, landfilling has decreased by approximately 10% in the intervening eight years.

In addition to defaulting to market-based mechanisms, the UK Government takes a 'compliance at low cost' approach to EU waste policy. Until recently, each EU Directive has been seen in isolation and implemented as such. This low-cost compliance and 'silo' approach was partly to blame for the UK not meeting the Packaging Directive recycling target in 2001. With little 'slack' in tonnages of packaging materials collected, the failure of one company to meet its targets meant that the whole country did not meet its targets. Any activity beyond the targets is considered 'gold plating'.

Non-regulatory mechanisms

Turning to non-regulatory mechanisms, one of the questions that needs to be answered is how best to embed 'responsibility' into design decisions, production processes, purchasing decisions, and disposal behaviour? One measure could be taxation, but this requires political decisions at a national level and therefore is difficult to harmonise across national boundaries such as in the EU. Differential charging – e.g. lower prices for recycled versus virgin materials - is another mechanism which could be utilised but requires national political decisions. Innovation grants and funds, particularly recycling revenue from relevant taxation, deserve attention. Ideally, the grants and funds would help support targeted activities relating to the activity being taxed, e.g. waste prevention grants provided by funds raised through a landfill or waste disposal tax. Research and development support could operate similarly to innovation grants and funds. Waste disposal pricing needs to better reflect the waste hierarchy, via a differentiated waste disposal tax, with funding support provided to repair and reuse activities and market development of recycled materials. The question of how to encourage waste prevention remains. The Worldwatch Institute's 'State of the World 2004' report identifies three activity areas that will support sustainable consumption and production: recalibrating tax and subsidy policies, pro-environmental procurement rules, and product standards and labelling programmes.

In suggesting that non-regulatory mechanisms might better meet waste management targets, the following questions need to be answered: Can non-regulatory mechanisms:

- Help internalise externalities relating to environmental 'costs' in a global market when we process primary materials in countries where environmental regulations are not as stringent as those in the EU?
- Help internalise externalities relating to social 'costs' in a global market when annual income in some countries is €330?
- Internalise externalities relating to loss of resources in treatment of waste via disposal?
- Internalise externalities relating to disamenity, reduced quality of life, impacts of transport, health impacts, etc. of waste treatment facilities?

Is it appropriate to use the market to achieve the above? Is the market a tool to use to achieve societal sustainable development objectives? Without significant intelligence being applied to the development of *qualitative* economic models, we will continue to identify economic progress (through profit) using *quantitative* indicators. Production costs are reducing in a global economy aided by technological advance. If profits can be made more cheaply, this will result in more resource use and therefore more environmental damage.

The market does not pay heed to things of little or no value, including environmental and social factors, until these are valued appropriately. Despite this debate going on for decades, progress on qualitative thinking has not developed sufficiently to ensure environmental protection or social justice. The concept of private property rights does not adequately, if at all, incorporate damage elsewhere. Given that economists have not engaged with these issues to the extent that environmental degradation and social inequality require them to, society is right to continue to push for regulatory mechanisms as the main driver for action to prevent such damage and inequality. This is not an indefinite plan of action, rather it is honest recognition of the imbalance between economic, environmental and social considerations in decision-making processes. Lacking political and industrial will, monetary decisions, because they are the most easily quantified, will remain the primary consideration when deciding whether an activity is cost-effective. Until Government leaders, industry and economists find ways of identifying qualitative progress, external measures such as legislation will remain as the best way of achieving such progress.

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Traitement des dechets –
propositions des ONG internationales

Doreen Fedrigo
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Waste Watch

- The UK's leading environmental organisation promoting more sustainable resource use
- Extensive experience in public communication and awareness-raising
- Cross-sectoral, partnership working style
- Approximately 400 members - local authorities, SMEs, large corporates, public bodies, individuals,
- A unique NGO providing policy commentary based upon on-the-ground experience

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The international dimension

- 2002 World Summit on Sustainable Development – sustainable consumption and production
- is our goal more sustainable waste management or more sustainable (and equitable) resource use?
- how do we ensure (corporate and individual) behavioural change in particular relating to responsibility for materials used, products created and wastes produced?
- how do we drive innovation?
- What economic model(s) truly reflect social and environmental issues?

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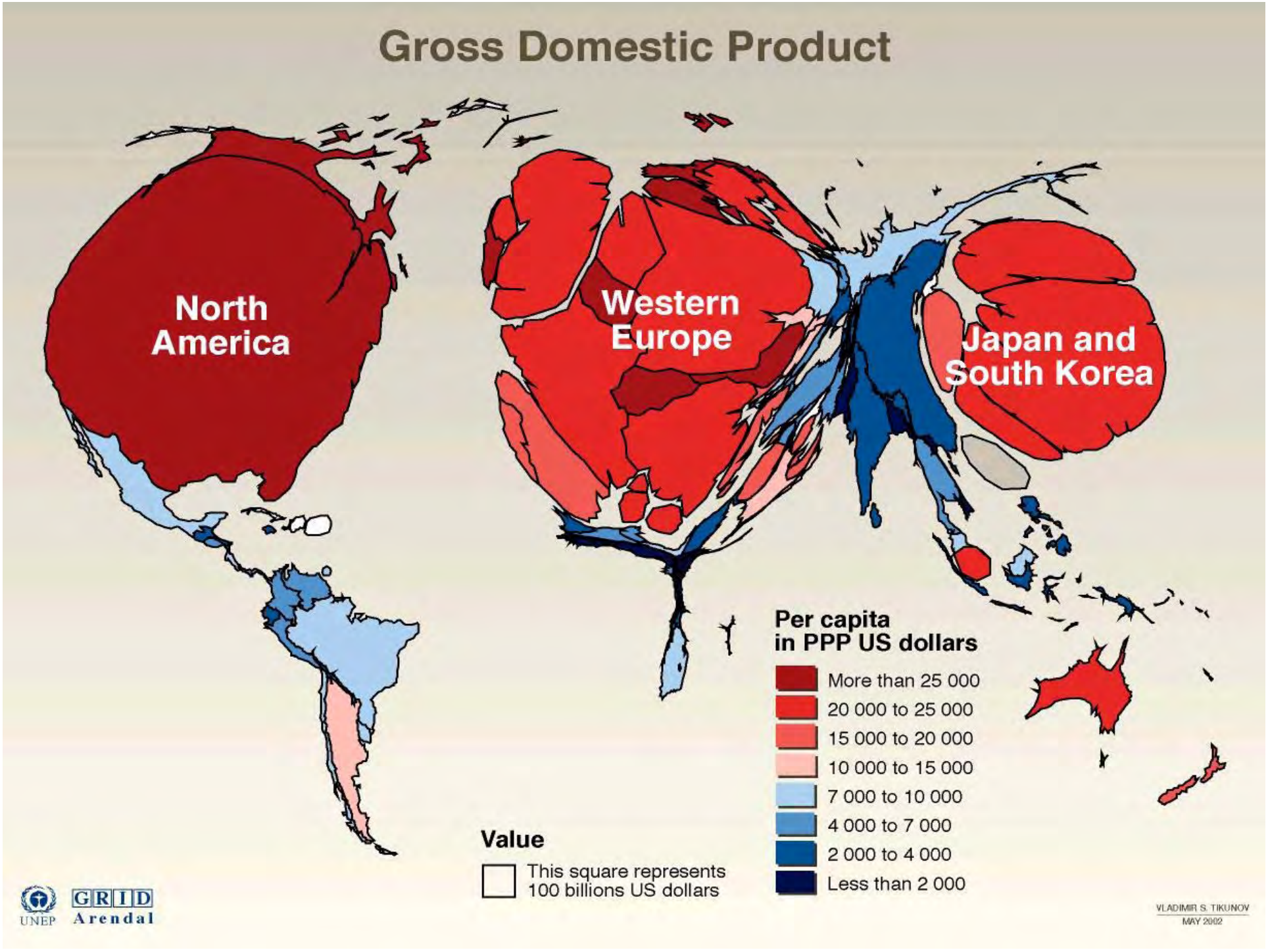
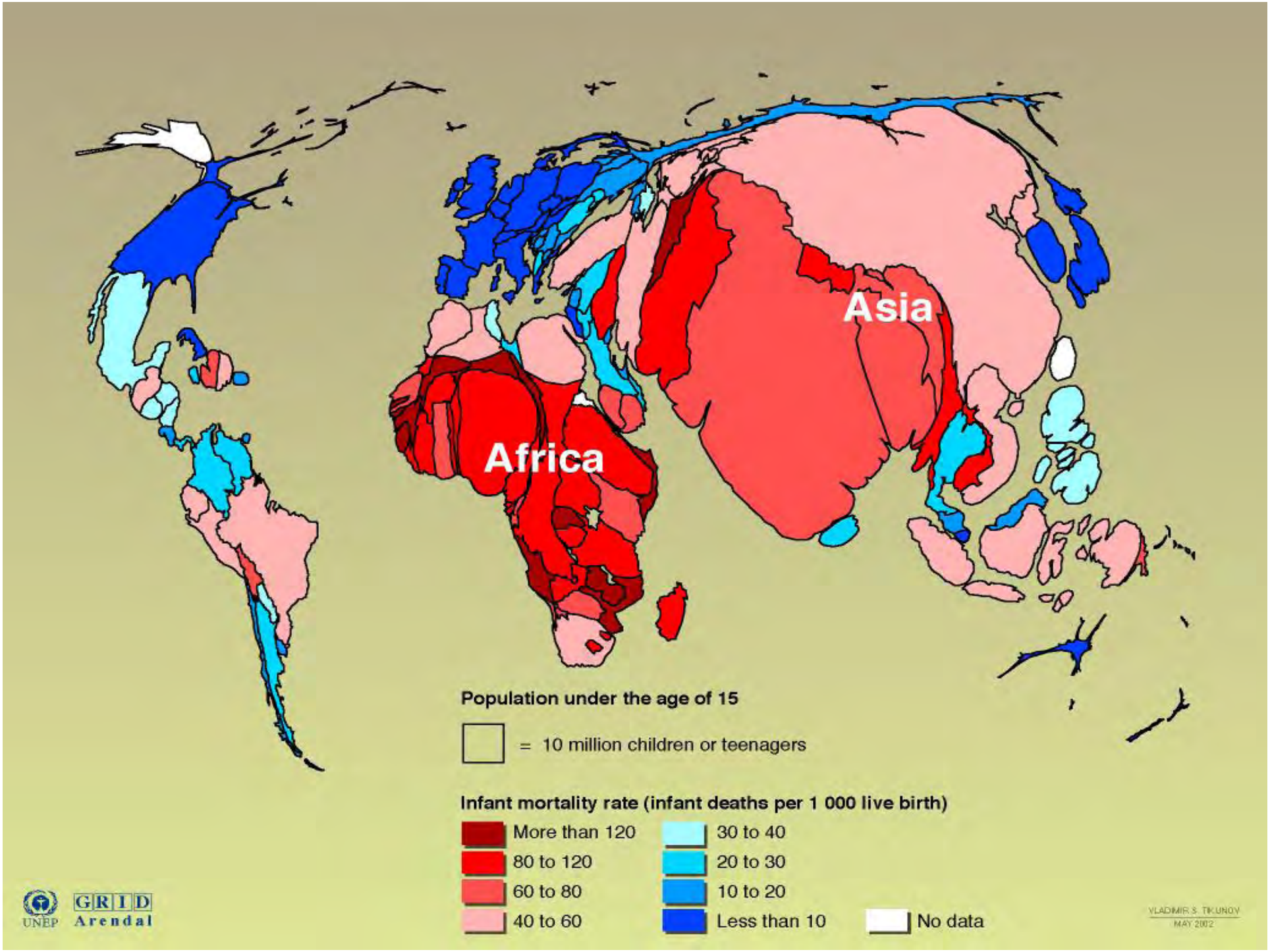
Gross Domestic Product



UNEP GRID Arendal

VLADIMIR S. TIKUNOV
MAY 2002


Asia
Africa
Population under the age of 15
= 10 million children or teenagers
Infant mortality rate (infant deaths per 1 000 live birth)
More than 120
80 to 120
60 to 80
40 to 60
30 to 40
20 to 30
10 to 20
Less than 10
No data
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THE SUM OF ITS PARTS

Acrylonitrile Butadiene, Styrene/Polycarbonate 30%, Ceramics 17%, Copper and compounds 16%, Silicon plastics 11%, Epoxy resin 10%, Other plastics 9% , Iron 3%, Silver, Nickel, Zinc 3%, Flame retardents 1%, Aluminium <1%, Tin <1%, Palladium <1%, Manganese <1%, etc

+

Hidden Waste

approx 75kg (or the weight of an average man) per mobile phone

(extraction, transforming into components, distribution, packaging etc)

=

X

The number of phones you have owned

X

70% of people in the UK who own a mobile phone

=

90 million obsolete mobile phones in the UK, with 15 million more going out of use every year

X

1/3 of the planet's people will own a mobile by 2005

=

Unsustainable Consumption

130 million computers are bought around the world each year
(A report by the United National University found that manufacturing an average desktop computer and 17-inch monitor uses at least 530lb of fossil fuels, 50lb of chemicals and 3,330lb of water)

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UK system – market-based

- UK has the most market-based approach in Europe
- Packaging Directive: Packaging Recovery Note trading system relating to industry
- Local authority collection costs are not included – Government funding (subsidy?): €216m in 2001, €208m for 2003-5; more to be announced for 2006
- Landfill Allowance Trading System: from 2005, local authorities will have allocations of biodegradable waste according to Government figures on composition of waste, and will be able to 'trade' certificates based upon their performance against reduction targets
- Local authorities have concern about the data used to identify the biodegradable element allocations, and the large costs to be incurred very suddenly – how will public bodies pay for this?
- End-of-Life Vehicles Directive: Government is suggesting a trading system if industry does not have other ideas – industry does not want a trading system (PRN experience)

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UK system continued

- Low landfill tax: UK - € 20/t; Denmark - €50/t; Austria - €44/t
- PRN system managed to miss recycling/recovery target in 2001 (compliance at low cost)
- Waste treatment: 80% landfilling, 14% recycling; 6% incineration
- Household waste levels are at approximately 520kg/person

Non-regulatory mechanisms

- How do we embed 'responsibility' into design decisions, production processes, purchasing decisions, and disposal behaviour?
- Taxation – national political decisions, difficult to harmonise across national boundaries
- Differential charging – e.g. lower prices for recycled versus virgin materials
- Innovation grants/funds – tax 'revenue recycling' to targeted activities (e.g. phasing out hazardous materials)
- Capital expenditure funds
- Research and development support
- Waste hierarchy reflected in pricing – differentiated waste disposal taxes; 'subsidy'/support to repair, reuse; market development support to recycled materials
- How do we encourage prevention?

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Can non-regulatory mechanisms …

- … help internalise externalities relating to environmental 'costs' in a global market when we process primary materials in countries where environmental regulations are not as stringent as ours?
- … help internalise externalities relating to social 'costs' in a global market when annual income in some countries is €330
- … internalise externalities relating to loss of resources in treatment of waste via disposal
- … internalise externalities relating to disamenity, reduced quality of life, impacts of transport, health impacts, of waste treatment facilities

- Is this appropriate? Is the market a tool to use to achieve societal sustainable development objectives?

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