COMPETITION POLICIES AND GREEN GROWTH

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ABSTRACT

Green Growth is a concept that involves rethinking economic growth and is mainly concerned with how economies can grow in a more sustainable way. It evolved out of a strong and increasing policy emphasis on the development of a new economic and social framework designed to enable economic growth and development while preventing environmental degradation and enhancing quality of life. Thus, it has been argued that together with innovation, going green can be a long-term driver of economic growth.

Environmental and competition policy shares the same objective of safeguarding and promoting social welfare and both correct for market failures. However, each of these policies addresses a different aspect of welfare. While environmental policy promotes social welfare by correcting for environmental externalities, competition policy contributes to economic efficiency, thereby increasing the welfare of consumers and society. Green Growth strategy can only be achieved through cost efficient and coherent policies and it is up to the Competition Commission of India to ensure that this relationship receives due attention.
INTRODUCTION

Friedrich Nietzsche had once remarked, “The world is beautiful, but has a disease called man”.

A characteristic of the Indian civilisation has been its sensitivity to the natural ecosystems. Crucial renewable natural resources were efficiently managed and optimally utilised according to the well defined social norms which respected the known ecological processes. But major changes in the utilisation of natural resources came with the East India Company who extensively used the resources of India to fulfil the demands of Western Europe.

Gandhi attempted to seek an alternate path of development for India when he wrote:

“God forbid that India should ever take to industrialism after the manner of the west. The economic imperialism of a single tiny island kingdom (England) is today keeping the world in chains. If an entire nation of 300 million took to similar economic exploitation, it would strip the world bare like locusts.”

While Gandhi’s critique was an advance warning against the present problems of resource intensive development, there is still no clear and comprehensive work-plan to realise the dreams of alternate development that would optimally utilize the natural resources and would satisfy the needs of present generation without compromising the needs of future generations. Policy makers around the world are now facing a triple challenge of record unemployment, unsustainable fiscal deficits and low growth rates. Tackling these challenges will require a “policy hat trick” to generate the proper conditions for a sustainable growth path for which we need to rely on new sources of growth. There is no easy answer, but there are two clear opportunities that we can harness: innovation and Green Growth.

1 Gandhi M.K. (1928), young India, December 20, pg 422
One major characteristic of poor households in low-income countries like India is the lack of access to affordable energy, including both power and transport related energy. The received wisdom is that the poor, rural peasants are the agents behind the rapid degradation of the environmental resources. And though, a number of studies have shown that poor households are deliberately improving their environmental resources through investments in natural capital, there is also evidence that rural households use environmental resources quite extensively. The poor indirectly exert pressure on natural resources by consuming considerable variety of natural resources like wild foods; non-food items such as wild medicines and other wild goods; wood for timber, energy, construction materials, furniture, household utensils, agricultural implements and other uses; grasses, canes, reeds etc. for thatch, mats, baskets and leaf litter; and a variety of other resources such as pottery, termitaria, livestock fodder and browse and water. In pursuit of economic development and poverty alleviation, there is great potential for green consumption, production, innovation, and entrepreneurial activity.

For developing Asian countries like India, in the need to industrialize and lift populations out of poverty, it is difficult to make the right choices when it comes to the allocation of scarce resources. Countries that rely on net oil imports have mounted serious negative pressures on energy access and have put an extra burden on fiscal budgets. Governments are increasingly making efforts to effectively design pro-poor fiscal policies that include environmental aspects and specifically address the needs of lower-income people. Particularly proactive actions are being taken by the governments of Australia, the People’s Republic of China (PRC), India, Japan, Republic of Korea, Nepal, and Sri Lanka.

The opportunities from Green Growth are vast, and so are the obstacles. Green Growth can have a negative impact on competition and hence there is a need for the competition authority, the Competition Commission of India to vouch against anti-competitive practices in this field.

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2 Empirical Regularities in the Poverty-Environment Relationship of Rural Households: Evidence from Zimbabwe, WILLIAM CAVENDISH, Imperial College, London, UK

3 Climate Change and Green Asia, Flexible Financial Incentives for Inclusive and Green Growth, V. Anbumozhi and A. Bauer
The aim of this paper is to assess the impact of Green Growth on competition and to find out if any Anti-Competitive practices are being followed.

GREEN GROWTH

Green Growth is a concept that involves rethinking economic growth and is mainly concerned with how economies can grow in a more sustainable way. It evolved out of a strong and increasing policy emphasis on the development of a new economic and social framework designed to enable economic growth and development while preventing environmental degradation and enhancing quality of life. Thus, it has been argued that together with innovation, going green can be a long-term driver of economic growth.  

Green Growth and sustainable development goes hand in hand which can help achieve concrete, measurable progress at the interface between the economy and the environment. It focuses on promoting innovation, investment and competition that can give rise to new sources of economic growth which would be consistent with resilient ecosystems. Green Growth builds on existing sustainable development initiatives and aims at identifying cleaner sources of growth, including seizing the opportunities to develop new green industries, jobs and technologies, while also managing the structural changes associated with the transition to a greener economy. It will require adopting new technologies, developing new products and supporting new patterns of demand from households, companies as well as governments.

Sustaining economic growth in the long term requires sustainable management and use of natural assets. For growth to be green, we need to regularly assess the quality and condition of our natural resource base to determine the impact of any decline in the natural resource base on the quantity available for its use for the future generation.

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5 Tools for Delivering on Green Growth
Green Growth strategies need to connect the creative power of markets and the insights from economic policy to integrate the natural resource base into the same dynamics and decisions that drive growth. A central element to this will be to develop ways of creating economic payoffs which will fully reflect the value of the natural resource base of the economy.  

And though Green Growth in short term will entail higher costs, it will generate substantial benefits in the long run in the form of employment, pollution reduction, new markets etc. A cost-benefit analysis would be required to measure the exact value of these benefits. For a country like India which already has a large fiscal deficit to take care of, policy makers needs to be careful in avoiding green growth as it can have serious adverse effects on the country's long term sustainable growth. Green Growth policies should be embedded in a rationally integrated strategy covering demand and supply aspects. This will ensure that Green Growth is not just a short-term strategy but a transforming dynamic for both production processes and consumer behaviour. While Green Growth is relevant to all countries, the policies and approaches that would be used would depend on national circumstances. For most emerging and developing countries, poverty eradication, provision of basic education, food security and delivering essential services such as water supply and sanitation still remains a priority. These economies are heavily dependent on natural resources and often vulnerable to the impacts of climate change, especially in terms of security of food supply and access to water resources. The economic development of such countries will depend on adaptation and management of the natural resources. While Green Growth strategies will be expressed at the national level, the international dimension should also be considered while formulating any policy approaches. International co-operation and co-ordination will be crucial for ensuring overall effectiveness as it is essential to remove policy barriers that hamper the transition to Green Growth like, the removal of environmentally harmful subsidies, the removal of barriers to trade in environmental goods and services, and rationalising conflicting policy instruments.

Green Growth Strategy Synthesis Report
WHY A GREEN GROWTH STRATEGY?

Two main factors that underpin the demand and rationales for Green Growth are:

- Growing concerns about the environmental un-sustainability of past and current economic growth patterns and increased awareness about the potential future climate crisis which has made it clear that the environment and the economy can no longer be considered in isolation. These concerns point to the need for substantial transformation of consumption behaviour, industry structures and technologies. Without a global shift to a low-carbon, resource-efficient economy, the world is on track for increasing greenhouse gas (GHG) emissions by 70% by 2050, and temperature increases of 4-6°C by the end of the century, far from the target countries recently agreed in Copenhagen of staying within a 2°C increase.8

- The financial and economic crisis has created an incentive for policy makers to encouraging recovery and renewed growth on more environmentally and socially sustainable grounds. A strategic vision is necessary to ensure that the implemented policies are the most appropriate from an economic efficiency, environmental integrity and social equity point of view, as well as coherent from both a national and an international perspective.

Green Growth has the potential to address economic and environmental challenges and open up new sources of growth through the following channels:

- **Efficiency**: Choosing the right instruments can increase economic efficiency by ensuring natural assets are correctly valued in economic decisions. In the process opportunities can be created for businesses through the development of new markets as relative prices change.

• **Enhancing productivity**: Incentives for greater efficiency in the use of resources and natural assets, enhancing productivity, reducing waste and energy consumption and making resources available to highest value use.

• **Stability**: More balanced macroeconomic conditions, reduced resource price volatility and supporting fiscal consolidation through reviewing the composition and efficiency of public spending and increasing revenues through the pricing of pollution.

• **Resilience**: Managing risks to future growth from the depletion of natural assets by taking into account the critical limits and thresholds of natural resource base.

• **Innovation**: Opportunities for innovation, spurred by policies and framework conditions that allow for new ways of addressing environmental problems.

• **New markets**: Creation of new markets by stimulating demand for green technologies, goods, and services; creating potential for new job opportunities.

• **Confidence**: Boosting investor confidence through greater predictability and stability around how governments are going to deal with major environmental issues.

It can also reduce risks of negative shocks to growth from:

• **Resource bottlenecks** which make investment more costly, such as the need for capital-intensive infrastructure when water supplies become scarce or
their quality decreases. In such scenario, the loss of natural capital exceeds the gains generated by economic activity, undermining the ability to sustain future growth.

- **Imbalances** in natural systems which raise the risk of more insightful, abrupt, highly damaging, and potentially irreversible impact of climate change. Attempts to identify potential thresholds suggest that in some cases these limits have already been exceeded.

Studies have indicated that, India is likely to run out of its 60-70 billion tonnes of coal reserves by 2040-41 if the demand continues to grow at the present pace.\(^9\) Also, during the last two decades, India has witnessed annual depletion of forest cover at a rate of 235 km\(^2\).\(^10\) Moreover, India has oil reserves to last only till 2016, if no new discovery is made. Current depletion rate of oil reserves in India is - 4.4% per annum.\(^11\)

These figures highlight the need for a shift to new sources of growth to achieve sustainable development. Within this context, Green Growth is an important way to pursue economic growth and development, while preventing environmental degradation, biodiversity loss and unsustainable natural resource use. Green Growth strategies need to pay specific attention to many of the social issues and equity concerns that can arise as a direct result of greening the economy both at the national and international level. This is essential for successful implementation of Green Growth policies.

Moving towards Green Growth will require government interventions in order to address the problem of externalities and market failures characterising environmental goods and services to accelerate green innovation. This will help to put Green GDP on an even playing field with conventional GDP (Box 2). It will also help in providing stable, long-term support for research, development and use of clean energy and for

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\(^9\) India’s coal reserves may exhaust by 2040, Press Trust Of India, September 2008  
\(^10\) Status, Trends and Demand for Forest Products in India, D.P. Malik and Sunil Dhanda  
\(^11\) RHEA’NAISSANCE
the sustainable use of natural resources while supporting the rise of household and private sector demand for green products and services.

Developing and implementing framework that promotes Green Growth requires a good understanding of the determinants and of related tradeoffs of Green Growth. It also requires appropriate information to support policy analysis and to measure progress through indicators that monitor trends and changes. The indicators capture major aspects of Green Growth and pay particular attention to efficiency and productivity issues, as well as to past and future developments. It is important to measure whether Green Growth actually delivers reduced pressure on the environment and whether environmental quality is improving as a result or not. Relationship of environmental quality with standard of living should also being captured. The challenge will be to go beyond conventional measures at hand and develop indicators that capture the long-term implications of current policies and production and consumption patterns.¹²

To stimulate Green Growth various instruments like subsidies, tax benefits etc may be needed, and distortions in the tax systems needs to be taken care off. Pigou recommended that environmental incentives should internalize the cost of those responsible for external, negative social and environmental impacts. Hence, the internal cost to the polluter could be made equal to the cost of the damage caused, in monetary terms. In addition, Pigou also stated that positive externalities (e.g., promoting energy efficiency) should be encouraged by subsidies instead of being taxed. Pigovian taxes inspired economic theory and are currently being implemented in numerous environmental policy instruments, such as the polluter pays principle.

¹² Green Growth Strategy: Implementing our commitment for a sustainable future, May 2010
Box 1: Pros and Cons of Green Growth

- Gains from more productive use of environmental assets
- Fewer environmental shocks and more resilient economy
- More take-up of resource efficiency measures
- Technology gains reflecting better pricing
- Spillovers to other countries

- Adjustment cost/growth penalty
- Displacement of investment/innovation
- Increased costs for energy-intensive and resource-intensive sectors
- Stranded assets
Traditional measurements of performance, such as gross domestic product (GDP), account for economic development but do not accurately reflect human or environmental well-being. The concept of “Green GDP” arose in the early 1990s in reaction to the deficiencies of the traditional gross domestic product (GDP) to account for the economic costs of depleted natural resources and incurred pollution, which in turn affect human welfare. It involves deducing natural resource depletion cost and environmental cost, so as to assess the quality of economic development in real sense. This approach is often referred to as System of Integrated Economic and Environmental Accounting, or SEEA. GDP does a poor job of reflecting actual human well-being because it neither accounts for social sustainability nor future consequences of present consumptions. In fact, recent studies suggest that, for a number of countries, the positive correlation between human well-being and GDP breaks down after GDP values reach a certain threshold—known as the “threshold hypothesis” (Max-Neef 1995). A rising GDP merely signals an increasing level of market transactions, without regard for whether these activities are beneficial to humans and nature in the long run.

Many approaches have been used to calculate Green GDP. One of them is:

“Green GDP = Final total output of traditional industrial sectors - damage to the resources and environment / total cost (created by the traditional industrial sector, environmental protection organizations and the final using sectors) + total new value created by environmental protection organizations.”

Green GDP is better than Conventional GDP as it takes into account following elements:
i. **Environmental expenditures**- The conventional GDP does not include the expenditure related to protection of environment from harm, such as pollution control equipment purchased by factories or catalytic converters in cars. It also does not include cost of remediying that harm; medical expenses, replacement of property destroyed in landslides caused by deforestation, or drinking water filtration required because intake water is highly sedimented. These expenditures are included in income accounts but cannot be disaggregated.

ii. **Non-marketed goods**- The natural environment provides many goods like building materials, fuel-wood, meat and fish used for consumption, medicinal plants etc which are not sold though they are of value.

iii. **Non-marketed services**- The environment also provides various services like watershed protection by forests or water filtration by submerged vegetation which are unsold, which are not included in system of national accounts as it is sometimes difficult to estimate the value.

iv. **Consumption of natural capital**- The depletion of natural resources are treated as income in system of national accounts, but this should be treated as depletion like all other machines, equipments.

Some twenty five countries have experimented with environmental accounting over the past twenty years. Few of them are mentioned below,

- **China**: One of the most noteworthy attempts to implement the concept was carried out by the People’s Republic of China. In 2006, the Chinese government released its environmentally adjusted GDP—its green GDP, prepared jointly by the State Environmental Protection Agency and the National Bureau of Statistics (SEPA and NBS 2006).
- **Norway** has compiled physical accounts focused on energy resources and air pollution.
- **Indonesia** was the first country for which forest depletion was calculated and integrated into a "green GDP."
- **Namibia** is carrying out a phased testing and implementation of the SEEA
approach to environmental accounting. It is focused on several key natural resource sectors, and is designed to answer such questions as how to allocate water among competing uses and how land degradation affects the productivity of rangeland.

- The **Netherlands** routinely constructs the "National Accounting Matrix Including Environmental Accounts" (NAMEA), an extended form of the national accounts input/output matrix which tracks pollution emissions by economic sector. These data are used to track how far the country is from its environmental protection objectives.
- **Chile's** Central Bank undertook to develop environmental accounts focusing on the forest and minerals sectors. Their work suggested that the country's forest-based development strategy may not be sustainable.
- **Costa Rica** undertook a forest depletion exercise similar to that of Indonesia; the work was carried out by the Costa Rican Centro Cientifico Tropical and the Washington-based World Resources Institute.
- The **Philippines** Environmental and Natural Resource Accounting Project (ENRAP) have been working on environmental accounts since 1993. Their work applies a method which treats the environment as a productive sector in the economy, and integrates the valuation of pollution impacts, non-marketed goods and services, and other economic aspects of the environment into the conventional accounts.

Source:  

i. IUCN- Environmental Accounting: What's It All About?  

ROLE OF CLEAN DEVELOPMENT MECHANISM IN ACHIEVING GREEN GROWTH

It is estimated that India’s annual CO₂ emissions (in thousands of metric tons) was 1,510,351 in 2008, 5.78 per cent of the world's total. However, per capita emissions of CO₂ are 1.4 MT (Metric Tonne) per annum whereas; Green House Gas emissions in India accounted for 4.25 per cent of the world’s average.\(^\text{13}\)

One way to reduce these emissions and promote Green Growth is through the flexible instrument of **Clean Development Mechanism (CDM)** under the **Kyoto Protocol** which aims to contribute to the objective of cleaner environment for the world and assist in sustainable development. Under the article number 12 of the Kyoto Protocol ‘Clean Development Mechanism (CDM) is a bilateral agreement between an entity from developed country (Annex-B country) and an entity in developing country (host country). These are project based emission reduction targets. Under CDM the investor (Developed countries) will invest in projects in the host country (LDC) where the cost of abatement of GHG to the investor is lower than domestic abatement. By doing so countries can earn certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets. A CDM project activity might involve, for example, a rural electrification project using solar panels or the installation of more energy-efficient boilers, afforestation, forest preservation etc.\(^\text{14}\)

Let us consider an example in which firms in a country say India decided to invest in a oil extraction project, and has decided on a particular technology at the cost of X billion Rs. An entity from an industrialized country say Japan (which could even be a company) offers to provide India with slightly better technology, which costs more

\(^{13}\) International Energy Agency (IEA), 2008

\(^{14}\) Clean Development Mechanism Chapter 4, Hitomi Kimura, Ancha Srinivasan and Keisuke Iyadomi
(say Y billion Rs.), but will result in lower emissions. The industrialized country will only pay the incremental cost of the project – viz. Y minus X. In return, the investing countries will get **Certified Emission Reductions** (CERs), or credits, which it can use to meet its Kyoto commitments.

By doing so not only does the investing country sell developing country their technology, but they also meet their Kyoto. Countries like the Japan can continue to pollute at home, so long as it makes the reductions elsewhere. On the other hand developing countries benefits not only from receiving advance technology but also from stronger infrastructure sector. Thus CDM not only promotes sustainable development and emission reductions but also gives industrialized countries flexibility in reducing their emissions.

India has high potential market for carbon credits along with vast technical human resource; strong industrial base etc which makes gives it a comparative edge over other developing countries. Globally, there are more than 4,000 projects under various stages of CDM. About 3226 projects are already registered as CDM projects, out of which about China holds 1449, followed by **India (684)**, Brazil (193) and Mexico (127). India’s CDM projects are likely to have a share of about 15% of 487,814,849 the total global CERs issued by Executive Board. Currently, China dominates the carbon credit markets which hold a share of about 44.87%, followed by India holding 21.28% in registered projects. India with its wide spectrum of projects with different sizes can earn annual revenue which is estimated range from US$10 million to 200 million.\(^\text{15}\)

**Steps Taken By India towards Clean Development Technology:**

i. **Transport Sector**

Transport sector has always been India’s Achilles heel. Growing emphasis on moving traffic from road to rail and creating dedicated corridors for high density routes can save up to 347-500 Mt CO\(_2\) equivalent in the next 20 years.

\(^\text{15}\) India, CDM and Kyoto Protocol
Some of the projects in this period include the creation of dedicated rail freight corridors between Delhi-Mumbai and Ludhiana-Kolkata; modernisation of 4 metro and 35 non-metro airports; constructing 7 green-field airports; further developing the Golden Quadrilateral highway network (connecting Delhi, Mumbai, Kolkata and Chennai) and other national highways; as well as developing 1,000km of expressways and construction of 129,707km of rural roads in India. Each of these endeavours is carbon intensive (large quantities of steel, cement, fossil fuel and power are needed) and will test the ability of the country to improve its carbon intensity of GDP going forward. The climate nightmare is, however, the estimated increase in the car density. Currently, India has 8 cars/1,000 people; China 15/1,000; Brazil 165/1,000 and the USA 500/1,000. By 2050, India is likely to have 382 cars/1,000 people with Brazil having the highest number (645/1,000). The transport sector that currently contributes less than 10% of total Indian emissions is likely to double in the next 20-30 years. Transport policies and the introduction of mass rapid transport systems could significantly change the nature of the emissions profile in this sector, and as in the case of power, this would require investments from within and outside the country.16

CDM in transport involves switch of existing transport mode to less carbon intensive mode of transport which is well exemplified by Delhi Metro Rail Corporation (DMRC) which has become the first railway project in the world to be registered at the UN under the clean development mechanism (CDM) scheme, enabling it to earn carbon credits worth Rs. 1.2 crore every year for the next 10 years. 17

The Indian Railways is doing its bit for the environment. It has come out with a project for registration under the clean development mechanism (CDM) monitored by the UN Framework Convention on Climate Change which is expected to result in annual reduction of approximately 1 lakh tonnes of

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16 Responding to Change: Searching for a Path through the Climate Haze(part II), Samir Saran, February 2011
17 Clean Development Mechanism, Project design development form (CDM-SSC-PDD) – Version 03
carbon-dioxide (CO$_2$) emissions. Through a number of initiatives, Indian Railways is looking at a good stream of revenue through carbon credits.\textsuperscript{18}

ii. \textbf{Agriculture Sector}

Agricultural is the least discussed sector in context to emissions. According to the International Food Policy Research Institute (IFPRI), it accounts for 20\% of India’s total GHG emissions. While CO$_2$ emissions in agriculture are barely 1\% of the total, Indian agriculture accounts for 50\% of India’s methane (CH$_4$) emissions. Nitrous oxide (N$_2$O) emissions, at 0.31Mt, account for an even larger share. India’s paddy cultivation area of 432.3 million hectares is the largest in Asia, and accounts for the bulk of GHG emissions from agriculture. Though flood irrigation of rice is the second largest source of GHG emissions from agriculture, India’s per hectare emissions from rice cultivation are approximately 10\% of the global average. Due to the highly sensitive and political nature of this sector, it is unlikely that any drastic policy changes could be expected.\textsuperscript{19}

CDM projects have not been designed to benefit the agriculture sector, which is the backbone of Indian economy. The CDM projects neither involve any technology transfer to agricultural nor focus on activities that can improve agricultural productivity and increase income from primary sector. Therefore, the overall potential to increase agricultural income via the CDM route is limited.

iii. \textbf{Power Sector}

According to the Central Electricity Authority, India’s installed energy capacity for thermal power as of February 28, 2010 is 100,599MW. India’s total capacity is 157,229MW. Nuclear energy is at 4,340MW, hydro energy is at

\textsuperscript{18} Indian Railways
\textsuperscript{19} International Food Policy Research Institute
36,863MW and according to the Ministry of New and Renewable Energy, green energy is at 15,427MW. India’s per capita energy consumption is less than 500 kgoe (kilogram’s of oil equivalent), compared to the global average of 1,800 kgoe.\textsuperscript{20} According to India’s Integrated Energy Policy 2032, the projected per capita energy consumption of India in 2032 would be well below the 2003 levels of the developed countries. Since the power sector emissions contribute nearly half of the per capita emissions in India today, this sector alone would contribute an additional 3.5-4.0 Mt CO\textsubscript{2} per capita by 2032. Power sector investments have long lifecycles of 30-40 years, and therefore will shape India’s abilities to reduce emissions to 2 Mt CO\textsubscript{2} per capita by 2050.\textsuperscript{21}

Reliance Power aims to earn Rs. 5,000 crore from carbon credit from the three ultra mega power projects of 4,000 MW that it is developing along with many other projects. The company seeks to earn almost Rs. 2,000 crore in 10 years by registering its 4,000 MW Tilaiya ultra mega power project for carbon credits after it got two of the other mega projects registered with the Clean Development Mechanism Executive Board (CDM-EB) of United Nations Framework Convention on Climate Change.\textsuperscript{22}

Majority of people in developing Asian countries, rely on fuel-wood for cooking which is a major source of harmful air pollutants and has also resulted in excessive pressure on biomass resources and deforestation. Recently, a study conducted by the World Health Organization (WHO) and the United Nations Development Programme (UNDP) estimated that approximately 828 million people are using improved cooking stoves out of which more than 74 million are in India. A new generation of improved biomass stoves which are not only cheap but also provide higher energy efficiency and lower indoor air pollution are being developed. Shifting from fuel wood to liquid fuels, such as conventional liquid petroleum gas (LPG) and kerosene, or bio-fuels,
including ethanol and Biodiesel which provides an energy source that is environmentally friendly and has social and economic benefits, including reduced greenhouse gas emissions, increased energy security, and rural employment. If Biodiesel is used to substitute kerosene in diesel engines, it also has the advantage of providing clean and affordable energy to rural communities. In India, the Planning Commission has developed an ambitious National Biodiesel Mission program (Planning Commission 2003). Under this program strong incentives have been given to the production of Biodiesel from non-edible oil crops, especially *Jatropha curcas* and *Pongamia pinnata*, in marginal land (Box 3).

**Box 3: Case Study: The Ranidehra Jatropha Electrification Initiative in India**

A successful case can be found in Ranidehra, Chattisgarh (eastern India), a village with 110 households mainly dependent on agriculture for their livelihood. This underdeveloped and remote village had no access to electricity, and relied on sunlight or unaffordable kerosene lamps. In 2005 the remote village electrification initiative was initiated, in collaboration with the Ministry for New and Renewable Energy, local governments, nongovernmental organizations, farmers, small and medium-sized enterprises, and other enterprises, with an overall budget of US$ 89,000. It aimed at promoting *Jatropha*-based Biodiesel production to empower rural isolated communities to be energy independent and self-sustaining. Biodiesel, produced by local villagers, brought a multitude of benefits, including energy to run tractors, water pumps for irrigation, generators to supply street lighting, rice dehusking machines, and a computer centre. Electricity from *J. curcas* proved to be costlier than that from the power grid but is cheaper than kerosene.

In 2005, villagers started planting *J. curcas* saplings on the periphery of their agricultural land. Since 2007, 107 households (553 people) have access to 3.0 hours of electricity a day and 3.5 hours of streetlights, using 1 ton of *J. curcas* seeds per month. Additionally, local farmers established the Village Energy Committee and a women’s self-help group in the village to increase awareness and provide technical skills to households.
BRIEF INTRODUCTION TO ENVIRONMENTAL POLICY

The National Environment Policy builds on the existing policies (e.g. National Forest Policy, 1988; National Conservation Strategy and Policy Statement on Environment and Development, 1992; and the Policy Statement on Abatement of Pollution, 1992; National Agriculture Policy, 2000; National Population Policy, 2000; National Water Policy, 2002 etc). It is intended to be a guide to action: in regulatory reform; programmes and projects for environmental conservation; review and enactment of legislations by Central, State and Local Government.23

The dominant theme of this policy is that while conservation of environmental resources is necessary to secure livelihoods and well-being of all, the most secure basis for conservation is to ensure that people dependent on particular resources obtain better livelihoods from the fact of conservation, than from degradation of the resource. The policy also seeks to stimulate partnerships of different stakeholders, i.e. public agencies, local communities, academic and scientific institutions, the investment community, and international development partners, in harnessing their respective resources and strengths for environmental management.

Environmental policy is any action deliberately taken to manage human activities with a view to prevent, reduce, or mitigate harmful effects on nature and natural resources, and ensuring that man-made changes to the environment do not have harmful effects on humans.24 The main goal of the environmental policy is to limit the harmful effects of production or consumption on the environment known in economics as externalities which can be either positive or negative. A negative externality occurs when the

23 National Environment Policy, 2006
activity of one entity (a person or a firm) adversely affects the utility and welfare of others in a way which is outside market mechanism. In reality, these negative effects are costs of production that neither the producer nor his customers need to carry directly because they are imposed on others.

Environmental policy is formulated and implemented on a national basis, even though externalities affecting the environment are by no means confined within national borders but are international in character.

THE BENEFITS FROM COMPETITION

The rationale of competition law is to promote competition and achieve economic efficiency through optimal utilization of resources which in turn increases the welfare of the consumers and will lead to sustainable growth. The importance of competition policy can be measured by calculating the benefits of competition and how they are created. Rivalry between firms ensures that only the most efficient and innovative firms stays in the market. Competition is a continuous process that works through efficient utilisation of companies’ resources, free entry and exit from the market, and ample incentives to innovate.

• Competition improves *utilisation of companies’ resources* as the relative gains from increased efficiency are comparatively superior in competitive markets than non-competitive markets. Therefore, there is an incentive to implement efficiency measures where competition is strong which in turn leads to increased and efficient productivity.

• *Free entry* to the market is one of the most basic fundamentals of effective competition. Companies that are not able to keep up with development in the market gradually leave the market which enables more efficient companies to

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replace to achieve higher productivity in the economy.

- The incentive to innovate is generally stronger where competition is vibrant. Innovation benefits consumers by creating new products and services.\textsuperscript{26}

Box 4: Advantages of Competition

- Increased productivity
- Lower prices
- Increased innovation and increased R&D
- Increased supply of goods and higher quality
- Entry & Exit
- Better utilization of company's resources

COMPETITION
RELATIONSHIP BETWEEN COMPETITION AND ENVIRONMENTAL POLICY

Economic theory and empirical evidence shows that competition is desirable as it contributes to efficiency in economic activity which in turns increases the welfare of consumers and society. Healthy rivalry between competing firms ensures efficient and innovative development of new products. It is difficult to measure the extent to which competition affects productivity; it is believed that stronger competition leads to higher productivity growth. So we can say that competition contributes to economic growth.

Environmental and competition policy shares the same objective of safeguarding and promoting social welfare and both correct for market failures. However, each of these policies addresses a different aspect of welfare. While environmental policy promotes social welfare by correcting for environmental externalities, competition policy contributes to economic efficiency, thereby increasing the welfare of consumers and society. Green Growth strategy can only be achieved through cost efficient and coherent policies and it is up to the competition authorities to ensure that this relationship receives due attention.

There are important links between competition and environmental policy. Market mechanism if used efficiently can be highly supportive in Green Growth strategies since it facilitates the formation of correct price signals which ensure that the correct incentives are in place for pollution abatement and innovation. Ensuring effective competition is important in this context, since otherwise price signals reflecting environmental externalities can not be effectively transmitted. Effective competition and low barriers to entry are also crucial to innovation and market dynamics, which again play an important role in achieving environmental goals at a lower cost. An environmentally harmful subsidy may distort competition.
Environmental policy may also harm competition and lead to social costs which may outweigh the benefits from it. Requirement imposed on firms by the regulatory body to change their production methods into more environment friendly technology maybe costly for the firms since it raises the costs of production. Incumbent firms can use their market power to lobby stricter environmental standards which raises the cost of production and creates entry barriers to the market. Regulatory requirements that lead to greater sunk costs also raise barriers to entry. Environmental benefits could be used to defend horizontal practices or arrangements otherwise deemed restrictive under competition law.27

A FRAMEWORK FOR GREEN GROWTH - SELECTING POLICY INSTRUMENTS

Transition to a green economy will require dedicated policy approaches to promote the development and transmission of green technologies, and to facilitate the reallocation of capital and labour resources across sectors. While Green Growth will offer many new job opportunities, including skilled jobs in emerging green innovative activities, some jobs will be at risk so there is a need to facilitate the re-allocation of workers from contracting to expanding sectors, such as those that replace polluting activities with cleaner alternatives or provide environmental services. Labour market policies in such scenario should ensure that workers and firms are able to adjust quickly to changes brought about by the greening of the economy by helping workers to move from jobs in contracting sectors to jobs in expanding sectors.

Green business development is in its infancy in most countries mainly because it is not easy to give up traditional practices. So businesses and policy makers needs to stimulate the demand for green products and services through public policy. Another

27 Competition Policy and Green Growth, A joint report by the Nordic competition authorities
barrier in this transition is the dependency of the low-income households on pervasive government oil subsidies.

There is no “one-size-fits-all” prescription for implementing strategies for Green Growth. Greening the growth path of an economy depends on policy and institutional settings, level of development, resource endowments and particular environmental pressure points. Advanced, emerging, and developing countries will face different challenges and opportunities, as will countries with differing economic and political circumstances. Efficient resource use and management is a sole aim of the economic policy and regular fiscal and regulatory interventions that are not normally associated with a ‘green’ agenda will be involved. And in every case, policy action requires looking across a very wide range of policies, not just traditionally ‘green’ policies.28

Green Growth strategies will require a mix of policy instruments, including market-based approaches, regulations and standards, R&D, and information-based instruments to facilitate consumer choices. Market-based instruments are widely accepted as a relevant tool that could be used to engage the private sector and lead enterprises to adopt green activities. These flexible instruments entail the so-called carrot and stick principle, i.e., monetary penalization of activities that result in pollution and natural resource exploitation, and monetary rewards for environmentally beneficial actions. In essence, market-based instruments provide a stimulus to consumers and producers to change their behaviour towards more efficient use of natural resources by promoting technological innovation.29

Market-based instruments alone can not bring about a shift to greener consumption and production patterns. Other approaches, such as voluntary instruments and information-based measures like energy efficiency ratings, eco-labelling etc. can play an important role in raising awareness about the environmental damage caused by a specific activity as well as about the availability of clean alternatives.

28 TOWARDS GREEN GROWTH, Green Growth Strategy Synthesis Report
29 Climate Change and Green Asia, Flexible Financial Incentives for Inclusive and Green Growth, V. Anbumozhi and A. Bauer.
The real social and ecological costs of resources are rarely reflected in the prices, resources are used inefficiently and with socially unsustainable production methods. Economic and fiscal policy along with regulations and Green instruments will be needed to correct for these market failures.

Governments can choose between two broad categories of policy tools to correct for negative environmental externalities: economic and administrative policy tools. Economic tool includes taxes and subsidies which work indirectly via the price mechanism while administrative tools like tradable permits work through regulated quantities traded in a market. Regulations, standards and prices that reflect the true social and ecological costs of products will be needed to shift consumer choices towards more efficient uses of resources. Information based instruments such as rating and eco-labelling can usefully supplement other environmental policies when information about the environmental impact of products is lacking.\(^{30}\)

Many cases of restrictive and anti-competitive practices have been found not only in developing countries but also in developed countries which are following green growth and for a country like India which is a relatively new player in this market, it is important for Competition Commission of India to learn from the experiences of other competition authorities to ensure that effective competition remains in the market and no company is able to follow restrictive and anti-competitive practices.

As far as taxes and subsidies are concerned, though it is true that they distort competition, their applicability varies from country to country depending on the fiscal resources available. Both are important instruments when it comes to promoting

\(^{30}\) Competition Policy and Green Growth, A joint report by the Nordic competition authorities
Green Growth and can be used together which will give the firms further incentive to innovate and follow green mechanism. As noted in case of some countries, green taxes are levied on firms which are creating pollution more than the standard levels and the revenues from it are being used to give subsidies to those firms which are keeping their pollution below the standard level. A policy like this gives incentive to the firms to innovate and adopt new technology to go green.

i. GREEN TAXES

Green taxes, also known as excise or environmental taxes are levied on environmental pollutants or on goods whose use produces such pollutants. Such taxes embrace the standard solution to the externality problem. Direct taxes on emissions are considered economically efficient because they give polluters an incentive to reduce their pollution to the point where further reduction would cost more than paying the tax. Indirect taxes, such as taxes on related goods, or alternative policies, such as mandated technology standards, may not reduce pollution in the least costly way. There are important challenges involved like determining the correct tax level.\(^{31}\)

Taxes provide clear and sustained incentives to reduce environmental damage. A tax on pollution gives a cost-advantage for businesses that brings their pollution level down vis-à-vis competitors that do not. It also creates a market to develop and sell new and smarter green technologies for reducing pollution. To achieve economic efficiency, taxes should target externality, implying that priority should be given to taxing pollution emissions directly.

Currently, revenues from environmental taxes amount to about 1.7 per cent of GDP in the OECD countries, ranging from about 0.7 per cent in North America to about 2.5 per cent in Europe.\(^{32}\) Such revenues can offset distortions from taxation and could also be used to meet the financial commitments and environment mitigation in developing

\(^{31}\) TOWARDS GREEN GROWTH, Green Growth Strategy Synthesis Report

countries like India. Such revenues could finance priorities, such as education, health care and poverty alleviation.

A number of countries are now introducing carbon taxes as part of their national climate change policies. CO₂ taxes have existed for a number of years in a few countries, such as Sweden, Iceland and Ireland and CO₂ taxes are also under consideration in France, Japan as well as several emerging economies.

Differences in green tax levels between states can give rise to inconsistent competitiveness between companies depending on where the company is located. Therefore, differences in environmental taxes can distort competition. Furthermore, the differential could render environmental policy less effective as polluting companies attempt to avoid the taxes by moving around. Such conduct could also impact the level of competition in states, leaving some with less competition and others with greater competition (as well as greater pollution). However, the effect on competition of such moves is mitigated by the fact that in most cases such companies would presumably continue to sell their products in the same markets as before while their manufacturing facilities moved.33

The competitiveness of a sector is considered to be the most precise level to evaluate the potential effects resulting from environment tax as firms face extra production costs. Practices by government like giving rebates, refunds or any other tax exemption not only increases administrative costs and undermine the environmental purpose of the tax but also distorts competition, for example, say if one company is getting a tax rebate and other company isn’t in the same sector, then the company which is getting rebate will have a comparative advantage over other company, as its cost of production is lower.

**ROLE OF CCI:**

Thus CCI through advocacy should ensure that companies are not able to take advantages of tax differentials and that the rebates and refund must be regarded as a

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33 Competition Policy and Green Growth, A joint report by the Nordic competition authorities
temporary and limited measure, with a clear objective of easing the transition for firms towards cleaner technologies investments so that it doesn’t distort competition.

ii. **SUBSIDIES**

The term ‘subsidy’ can refer to a variety of transfers, payments, supports (such as tax exemptions) and protections associated with government policies. Before introducing subsidies, it is important to analyze its net effects on welfare. Environmental policies that involve elimination of environmentally harmful subsidies are generally in line with competition policy.

Subsidies can have far-reaching and unintended consequences, but these are not always easily detected or visible to the public. Environmentally-harmful subsidies to fossil fuel energy consumption or production amount to a de facto reward for carbon emissions. The IEA estimates that subsidies to fossil fuel consumption in 37 developing and emerging economies amounted to USD 557 billion in 2008 and USD 312 billion in 2009. India’s fossil fuels pricing controlled by government is distortionary. Petrol and Diesel are not subsidized but of kerosene and LPG are on welfare grounds that they do not necessarily reach the targeted population. Removing these subsidies would lower the global costs of achieving a given goal to reduce greenhouse gas emissions, and would constitute an important contribution towards addressing climate change.

The economic theory holds that subsidies distorts competition and can adversely affect international trade. Indirect subsidies in the form of less stringent emission regulation/requirements may lead to unfair or reduced competition between companies in the same sector, competing sectors of the same country or between countries. Another competition-related concern may arise in respect of subsidies for

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emissions reduction. Taxes on emissions can be viewed as subsidies (negative taxes) on emissions abatement.

Subsidies benefit the company that belongs to the subsidized group and may result in more polluters, each polluting less, but with no net decrease in emissions. This clearly distort competition between the polluting companies, depending on how the subsidy was determined and would harm economic efficiency and thus undermine the competition policy goal of boosting economic efficiency.

**ROLE OF CCI:**
CCI through advocacy, ensure that the subsidies are determined through proper mechanism so that it doesn’t harm economic efficiency. Also, it should ensure that subsidies that distort competition like, subsidies on fossil fuel etc. are removed.

### iii. TRADABLE EMISSION PERMITS

 Tradable emission permit schemes are an alternative to environmental taxes and may for instance limit the quantity of allowable emissions by issuing a fixed quantity of emissions permits, which polluters may then trade among themselves for permit price which plays a role analogous to an environmental tax. Under the Emission Trading Scheme (ETS), the total number of permits issued and the marginal abatement costs together determine the price for emissions. Thus, for a given total quota, the actual emissions price is determined by the market. Many competition authorities have argued that emission permits in general should be auctioned and that incumbents should have no preferential treatment compared to newcomers.36

Currently developing countries such as India are not part of the emissions trading regime since it has no binding targets to reduce GHGs under the Kyoto Protocol.

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36 OECD (2006), Environmental regulation and competition
because the mechanism by which developing countries participate in reduction of GHGS is through hosting CDMs projects but in future India has the potential to become an important market for tradable emissions.

Low prices of tradable permits in the secondary market, due to collusive practices would lead to lower incentives for innovation and would distort competition. Achieving the objective of attaining market prices at the auction will depend on how the auction is designed. Different designs can deter or facilitate collusion. In the latter case, this might undermine the policy objective of competitive prices and correct price signals, in addition to transferring the economic rent of emission quotas from the authorities to industry.  

**ROLE OF CCI:**
CCI, through advocacy, should ensure that a well functioning, competitive market for GHG emission permits exists that can help in determining the appropriate price for emissions. When auctioning emission permits, auction design is important to ensure efficient pricing and avoid collusion. Thus, the CCI must seek to deter and detect collusive practices before, during and after the auction process.

**iv. GREEN PUBLIC PROCUREMENT**

Green public procurement (GPP) means bringing environmental concerns into the tendering process for goods and services.

It is a powerful instrument that public authorities can use to:

- reduce their CO2 emissions and advance their climate change objective
- contribute to a more sustainable use of natural resources and raw material

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• create opportunities for emerging "green economies" and boosts the competitiveness of the European industry by stimulating innovation in eco-technologies

• Set an example for private and corporate consumers, thus encouraging the use of green standards in private purchasing.  

If correctly implemented, GPP lower costs for the procuring entity, improve the quality of the goods and services procured and expand the market for small and medium sized entities (SME).

GPP can have a negative impact on competition if the restrictions/ new requirements imposed lead to higher barriers for firms to enter markets and may lead to higher prices for the procuring entity. GPP could therefore be seen as a barrier to potential entrants. It is important to realise this when evaluating the impact of GPP on social welfare.

**ROLE OF CCI:**
CCI, through advocacy, should ensure that GPP is correctly implemented and that the new restrictions or requirements imposed by The National Environment Appellate Authority (NEAA) should not lead to any barriers for firms to enter the market and should not lead to higher prices for procurement.

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38 http://gpp.itcilo.org/index.php?id=1
RESTRICTIVE AND ANTI-COMPETITIVE PRACTICES IN GREEN MARKET

The transition to Green Growth implies that a host of green instruments will be implemented in many different areas. It has been found in many cases that companies have abused their dominance power in the market which has distorted competition. Many cases of restrictive and anti-competitive practices have been found not only in developing countries but also in developed countries which are following green growth and for a country like India which is a relatively new player in this market, it is important for Competition Commission of India to learn from the experiences of other competition authorities to ensure effective competition remains in the market and no company is able to follow restrictive and anti-competitive practices.

Box 5: Case studies: Restrictive and Anti-Competitive Practices

<table>
<thead>
<tr>
<th>CASE</th>
<th>COMPANIES INVOLVED</th>
<th>ISSUE</th>
<th>THE INFRINGEMENT</th>
<th>THE DECISION</th>
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<tr>
<td>New pricing scheme for processing and collecting scrapped electric and electronic products by Elretur (Norway)</td>
<td>Ragn-Sells complained against Swedish-owned company Elretur operating in Norway, serving households, municipal and industrial customers with services related to the collection, sorting, transport, recovery and treatment of residual products</td>
<td>In 2005, Elretur a non-profit company, which covers its operational costs by charging an environmental fee on sold EE products, published a new price list (i.e. environmental fees) for collecting and treating scrapped EE products. After the new price list was published, Ragn-Sells claimed that the new prices (i.e. environmental fees) were so low that they could hardly cover the average variable costs of collecting and treating EE-waste, and that the new price structure therefore constituted an abuse of dominant position. Elretur for its part argued that the environmental fee had</td>
<td>The NCA concluded that the competition issues arising from the building up of a reserve fund to a large extent followed from a regulatory framework designed and enforced by the environmental authorities. Thus, the NCA decided that the most</td>
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and waste. Ragn-Sells are involved in collection and treatment of EE-waste and had a temporary approval from the environment authorities for the same till 2007. Ragn-Sells sent a letter to the NCA asking the authority to instigate whether Elretur was in breach Section 11 (abuse of dominance) of the Norwegian Competition Law. been calculated and collected in a way that resulted in building up a reserve fund. Consequently, it was decided to reduce the reserve fund by a temporary reduction in the environmental fees. appropriate action was to follow up this case with a letter to the environmental authorities to point out anti-competitive effects of public measures and proposals.

<table>
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<tr>
<th>The market for recyclable containers: Rentpack - Norway</th>
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<tr>
<td>Rentpack AS is owned by the Norwegian Brewers association. The company owns a range of standard refillable packaging. Brewers and soft drink producers wishing to use these standard refillable packaging units for the Norwegian market have to rent them from Rentpack AS.</td>
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<td>In 2005, Rentpack’s Board of Directors, regarded as an association of undertakings under Section 10 (Agreements between undertakings that restrict competition) changed the fee structure for new reusable plastic bottles. The decision implied a differentiated tariff structure in the system for reusable bottles. Following the decision, the NCA received letters from several producers of mineral water, requesting the NCA to intervene against the fee increase.</td>
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<td>The NCA considered that the changed fee structure in the recycling scheme for recyclable drinking containers would affect the actors in the market for soft drinks and bottled water differently. Small and medium-sized companies would be affected unfavourably with respect to bigger-sized companies, i.e. small and medium-sized actors would be at a competitive disadvantage in comparison with bigger actors. Thus, the decision would lead to competition-restricting effects in the markets for soft drinks and bottled water. Consequently, in the NCA’s view, the fee increase was deemed appropriate action to follow up this case with a letter to the environmental authorities to point out anti-competitive effects of public measures and proposals.</td>
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<td>Scrapp metal - Iceland</td>
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<td>Blue Barrels – Iceland</td>
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The Swedish market for collecting used packaging materials in plastic: FTI - Sweden

FTI and TMR are both active in the market for collecting used packaging materials covered by the regulation on the responsibility for packaging materials.

On the 22 February 2008, the Swedish Competition Authority (SCA) received a complaint from TMR AB alleging that its competitor FTI abused its dominant position under Article 102. The abuse was alleged to take place in the market for collecting used plastic packaging materials.

Regulation (2006:1273) on the responsibility for packaging (the regulation) regulates the responsibility of producers of packaging materials. The law reflects a polluter pays principle, under which firms that place packaging materials on the market are held responsible for collecting and recycling the used materials. This responsibility is often discharged by FTI was a monopolist for about a decade until the challenger TMR entered the market with the idea of supplying services aiming at helping businesses to manage their responsibility for recovering and recycling plastic packaging. Under regulation 2006:1273, firms need to address their responsibility wherever a package may become waste in Sweden. This provision has made it difficult to duplicate the system for recovering and recycling packaging. Duplication is hard to bear financially in the rural areas of the country, and in areas where population density is higher, the lack of available space for placing bins is an issue. TMR was unable to construct a complete parallel system whereby TMR claimed that using some of the same bins as FTI to recover materials is necessary in order to be able to be active on

The SCA met with the parties one by one. After explaining to FTI the gravity of its refusal to supply, the company agreed to enter into negotiations with TMR. The decision to close the case was taken on 7 July 2009 since the complainant could no longer prove that there was a refusal to supply by FTI. Some months later the parties had entered into an agreement and both parties can now market a complete service in collecting and recycling used packaging.
infrastructure clubs; producers that jointly set up a system in which consumers can drop off their used packaging at a designated point from which it is taken for recycling by the producers.

The competition issue in the case was whether the infrastructure held by FTI constituted a necessary facility which could not be completely duplicated. FTI refused to grant access to the necessary bins. It may here be useful to add that the system created by FTI was established on municipal sites which could not be duplicated.

### Return system for scrapped cars in Norway - Autoretur AS - Norway

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<td><strong>Report by the Norwegian Competition Authority: an analysis of governmental regulations and competition in the recycling markets (2004)</strong></td>
<td><strong>The Norwegian Competition Authority set out to analyse governmental regulations pertaining to the various product recycling markets and competition within these markets. The analysis was presented in the report, “Evaluation of competition in Norway’s systems for product collection and recycling”. The report identifies competition-related problems associated with the current recycling schemes, and proposed some remedies to improve the system of recycling market in place in Norway often results in a single entity that takes care of the waste in question throughout the entire recycling process; the recycling market comprises multiple sub markets. The report points out those systems that rely on industry-organised recycling companies limit the potential for effective competition both in the value chain for discarded products and in the sale of products before they are discarded. This situation does not contribute to</strong></td>
<td><strong>• Firstly, most recycling companies have, for practical purposes, a monopoly in the recycling market. Because there is no real market competition, recycling companies need not operate at the lowest possible cost, and there is consequently an obvious risk that recycling companies’ services are over-priced. The product’s “environmental fee” is set at a level that allows recycling companies to cover their expenses enhances the problem.</strong></td>
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<td>the costs of running the scheme. Autoretur has contracts with subcontractors operating the return scheme. alternative and competing return schemes.</td>
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<td>• Secondly, the organisation of industry-wide recycling companies...</td>
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CONCLUSION

Competition policy and effective enforcement must be an integral part of any Green Growth strategy. Green Growth creates many new and innovative business segments into which new economic operators are emerging, competing for new customers and transactions, and forming ties with other business segments. One of the challenges of Green Growth is promoting the incentives to innovate.
Environmental policies can indirectly impose restrictions on competition by raising the barriers to entry which will reduce the incentives or opportunities for effective competition. Potential spill-over effects and other possible anti-competitive effects should be examined carefully.

To contribute fully to Green Growth is one of the great strategic challenges faced by competition authorities. Their enforcement activities will be crucial in ensuring that restrictive business practices do not undermine the Green Growth strategy. CCI has an important role to play in this context, in identifying and analysing regulations that may disproportionately distort or restrict competition. It should also try to find advocating green measures that are less distorting to competition and one that promotes economic efficiency and increases consumer’s welfare. There is a need to create a coherent and effective policy framework that prevents environmental degradation and enable long-term economic growth and development. It should also pay special attention to policy-induced distortions such as policy barriers to trade and investment in environmental goods and services, inefficient regulatory interventions and environmentally-harmful subsidies to fossil fuels, agriculture, forestry or fisheries.

There is a need for a well designed environmental and competition policy which will support the achievement of environmental goals in a cost efficient way and will promote Green Growth and in turn lead to sustainable development.
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