

EYES on EUROPE

Des regards croisés pour une analyse critique sur l'Europe

Industrial competitiveness *versus* Sustainable development

Ideas for a better future



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Focus on practices & policies in the EU and Japan

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Industrial competitiveness *versus* Sustainable development

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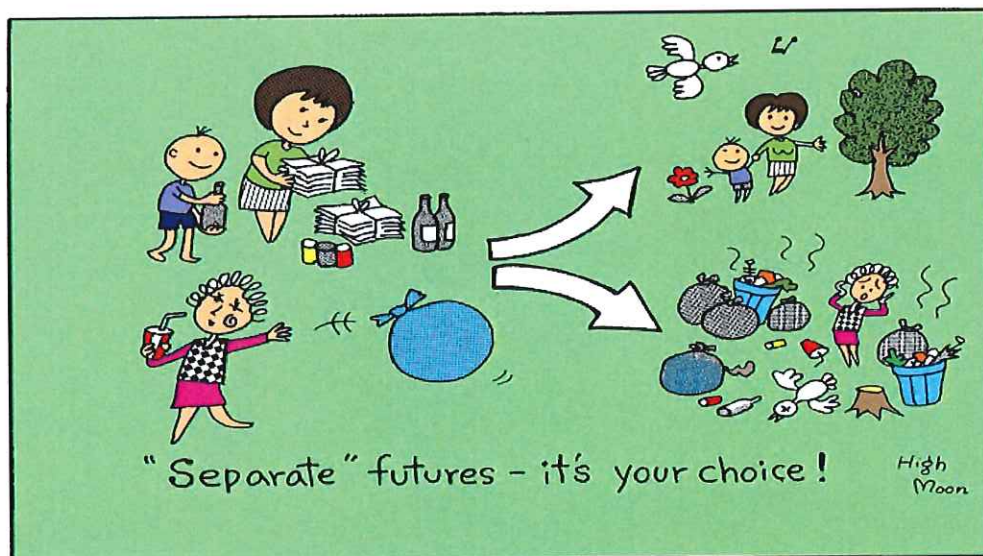
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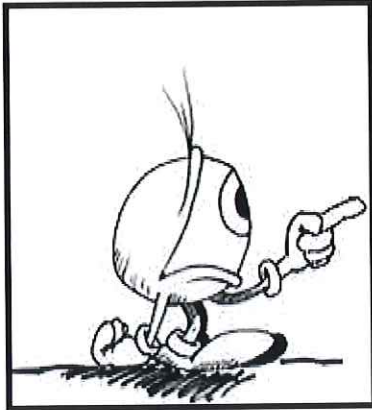
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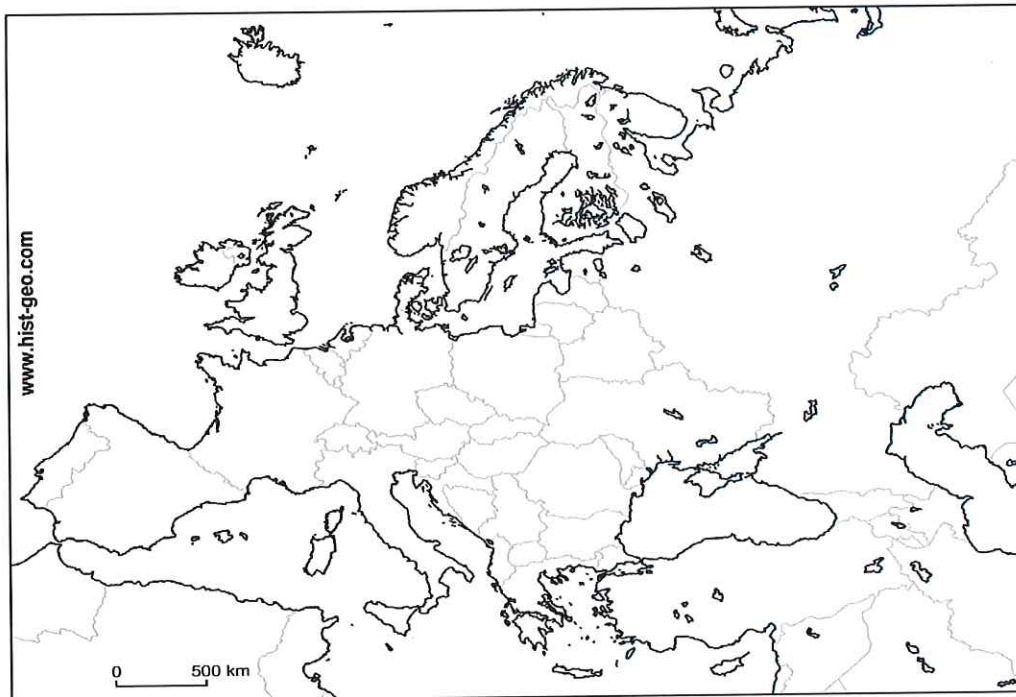
EYES ON ...

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EYES

New strategies
for Lisbon Strategy &
sustainable development
in the European Union



The Lisbon Agenda & European Citizenship

By ANN METTLER

The author is executive director of The Lisbon Council, a Brussels-based think tank and advocacy network



Europe is in crisis: Years of economic stagnation, high unemployment and loss in international competitiveness have taken a toll. Over 19 million citizens are without a job, 18% of them under the age of twenty-five. Public deficits are rising to astronomical levels, placing an unseemly burden on future generations which are faced with the mantra "today's debt is tomorrow's taxes". Meanwhile, pension obligations and social security systems are threatened by future collapse as Europe confronts a demographic crisis of unprecedented proportions.

The key to reinvigorating the European spirit, to create the engine that will lead to solidarity between people and among nations, is a return of a healthy, well-functioning economy -- one that people have faith in and that lays the foundation for lasting prosperity. Despite the efforts of many interest groups to portray a thriving economy as antithetical

to social cohesion or environmental protection, there is today a greater understanding than ever before that a sound, sustainable economy is at the heart of people's well-being. After all, it is the economically successful countries in Europe - first and foremost those of Scandinavia - that boast the best environmental record, highest employment participation rates and the soundest public finances. People in these countries take pride in their economy, they are part of the economy and - most importantly - the strength of their economy gives them confidence in the future.

In the economically depressed parts of Europe, particularly France but also Germany, there is a climate of fear and insecurity. Unemployment rates are in the double digits and both are facing mounting government debt, which has led them to repeatedly violate the Stability and Growth Pact they once conceived to enforce fiscal discipline. Once the

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engine of Europe, they are now slamming the breaks on further EU integration, be it through blocking completion of the internal market in services or closing off their labour markets. While Ireland, the United Kingdom and Sweden all welcomed workers from the EU's newest member states, mostly formerly communist countries in Central and Eastern Europe, France and Germany employed downright xenophobic rhetoric, accusing their new neighbours of a 'race to the bottom' and 'social dumping'.

The crux of the problem in so many parts of Europe is the citizens' lack of faith that the future yields promise - that the time to come will be better than the time that has passed. Unless governments and other societal bodies can again instil the confidence that once made Europe successful, prosperous and proud, the "pain" associated with reforms will be felt most profoundly in those countries that fail to embrace modernity and that fight change. After all, where is the pain? In Denmark or Ireland - successfully reformed economies - or in France, with its blocked and sclerotic political system?

In an effort to bring the people along and make them realise that governments are not trying to reform because they wish to inflict pain and degradation upon their people, it is indispensable that Europe articulates a more comprehensive future-oriented understanding of the concept of "sustainability". While the validity of "sustainability" is universally accepted when it comes to the environment, Europe lacks a similar understanding in the equally important areas of public finances and social security systems. As is, too many governments are trying to spend their way out of the economic malaise they face, piling up debt that will be the taxes of our children and generations to come. The same holds true for our social security systems, particularly in the area of health and pensions. We know that we will face an unprecedented demographic crisis with a rapidly aging and rapidly declining population. Already, our social security sys-

tems have come under tremendous strain, and need to be urgently and comprehensively reformed in order to provide future beneficiaries with the security and stability they deserve and we have come to take for granted.

After all, what good will be a healthy environment if our tax burden will have to rise to astronomical levels while the social safety net evaporates? Applying sustainability only to the environment, while ignoring other, equally important fields of public policy, is short-sighted, irresponsible and will cost our children and future generations dearly in terms of quality of life, security and prosperity.

Without a reinvigorated economy that takes into account the interests of young people and future generations, Europe will compromise its internal cohesion and international credibility. We simply cannot preach sustainable development and far-sightedness to others while we pass on to our children an indebted world that will deprive them of any political room to manoeuvre. It is high time we learn to live within our means, treating the interests of future generations as seriously as we treat our own. At stake is nothing less than the fate of the European project, the well being of our citizens and the sustainability of our culture.

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Competing for a living planet

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The notions of competitiveness and sustainability have attracted plenty of attention over the last years. They have been endlessly discussed, to the point of becoming top political priorities, often in tension. They are part of a questionable universe of vague conceptions, which abound in political and institutional quarters. These notions are useful, though. They try to capture broad contemporary trends and construct mental points of reference to portray the world we want to live in. They make our debates more focused. The downside is that they do not explain much in substance.

Over the last years the European scene has witnessed vivid debates between the supporters of what should go first! From the outset, an initial assessment demonstrates that the ideological linkages in this general (and frequently generalist) debate are still very strong. Too often the lack of accuracy proliferates, giving undeserved relevance to almost fundamentalist positions. Both notions have a basket case tendency, where almost every policy area

can be included. Both allow for intuitive assertions and easy rhetoric. Confusion increases when the environment comes into play. Some of the frequent misinterpretations are the following:

- * Competitiveness & sustainability are two different teams: which side are you on?
- * Sustainable Development equals protecting the environment.
- * Climate change is an aspect of the future.
- * The protection of the environment inhibits economic growth.
- * It is never too late to be environmentally friendly

In fact, the environment is still the great unknown in the overall debate. This article aims at correcting some of the elemental misinterpretations, as well as hopefully shedding some renewed light in the competitiveness debate.

THE DEBATE IN EUROPE

The latest consensus agrees on concentrating on our competitiveness as a short term objective, while keeping the sustainable development agenda as a long term target. Such a political statement is endowed with a compelling sense of coherence; however, is that enough?

Fortunately, in Europe the debate is a vigorous one. In fact, a great deal of work and permanent dialogue are in place. Against the usual nagging of the community of non believers, the Lisbon Strategy and the Sustainable Development agendas (in their different versions) set up useful frameworks to work together. They are valuable platforms to debate the societal models that we are aiming at. We understand the necessity of its existence and they provide a sound basis to discuss the common future that we want. It will certainly take time to deliver results, but the most valuable elements are their constructive and dynamic nature that lets us learn from what others are doing without imposing a one-way route, but being open to constant improvement. In conclusion, the tools are in place. We have the knowledge and the strategy is well designed. So, what is missing?

The current lack of political leadership to look at the long term and take bold decisions poses a problem. Currently Europe lacks the political determination to even pursue goals that are badly needed in our societies or strategies where it has a clear competitive advantage. Europe, by virtue of its own history of balancing the economic, social and environmental spheres should have a much more forceful role to lead the way in the international arena and persuade others to follow.

WHY IS THE ENVIRONMENT IMPORTANT?

It is still a common conviction that the environment is an obstacle to economic growth. There is a strange sense of burden on what the environment represents. It rarely comes to the front as a necessary tool for improving our living standards or a genuine opportunity for guaranteeing the value and sustainability of our economic growth. It emerges as something we have to cope with and raises questions when it is portrayed as an evident economic driver for the future. In short, we know that the arguments may be right but they still need to be much more convincing.

The truth of the matter is that the debate on how the environment could become an engine of competitiveness is full of ambiguities. First, because there is not a lot of consistent information available. Second, because it needs to be fully proved how it can be applied to market mechanisms. A simplified picture shows that while, unfortunately, there is not yet a great economic case for the private actor to be more environmentally friendly, nobody will eventually profit from keeping the current path of global development.

On the one hand, our mindsets still regard natural capital as an unlimited given, a permanent disposable ready for the production process. There are not yet great incentives for the protection of the environment. In general, the private actor will not recoup the costs of being environmentally friendly. The benefits frequently pass unnoticed, spreading unevenly across society and during a long period of time. It is true that we start to see big companies going for a more sustainable agenda by virtue of their own understanding that it is the only alternative, and also certainly due to international agreements like the Kyoto Protocol. However, so far, regulation and taxation are the only practices and both have a negative connotation.

In addition to this, there is also an added psychological component. In cultures where consumption accumulation is socially rewarded, the environment

Europe lacks the political determination to even pursue goals that are badly needed in our societies or strategies where it has a clear competitive advantage

comes across as having a negative impact on our life-style. In other words, we all agree that driving pollutes, but we will not give up driving our cars. Something similar happens on a larger scale. The present attitude is surely not the one that would facilitate giving up short term gains and favor a more sustainable future. Public awareness and consumer behavior will have a decisive role to play to push this agenda forward. However, we are not there yet. This is the reason why there is a clear case for the public sphere to lead in this area.

In the end, in a world where a short term gain mentality rules, what are the incentives to protect the environment? Apart from the obvious ones: increasing our quality of life and the responsibility towards future generations (although some may not consider being responsible as an incentive), another two, more concrete and self-interested elements, naturally come up:

- The enormous cost of not protecting the environment
- The role of sustainable models as the optimum alternative

THE COST OF NOT PREVENTING

There is a clear correlation and an interesting analogy when you compare the environment with our health. Preventing and managing your life in a reasonably balanced way is certainly not a costly issue. On the contrary, the cost of not preventing is far too high, and too often the possibility of recovery is unlikely. This also happens with our natural capital. Natural capital is about our basic resources: air, water, forests, minerals, etc.

Unfortunately there is not yet a clear public conscience about the consequences of not preventing the degradation of the environment.

They resemble the possibility of disasters in a remote future. There is still a need to explain better that the mismanagement of the natural capital has enormous direct implications for human health, and therefore for human security and economic growth. Air and water pollution can be counted in human lives and enormous costs in premature illnesses as we see in many cities of East Asia. Soil degradation, a common feature occurring in vast regions of Africa, rapidly affects the agricultural sector, implying a decrease in productivity and jobs and serving a favourable context for extreme poverty, diseases and conflicts. Global climate change may lead us to more severe floods and droughts, as we have already witnessed in the United States and Europe.

If we extend this to the competitiveness debate in its latest form, there is plenty of data to avail that not taking care of the environment will naturally undermine the capacity of countries to grow economically. The cost of repairing the damage will be disproportionate, if not impossible to recover. Indeed, sometimes it is too late to be environmentally friendly, examples abound around the planet.

GLOBAL COMPETITION, THE ENVIRONMENT AND COMPETITIVENESS

When you look at the dynamics of the world, one of the most worrying trends is being forced to participate in a race to the bottom. The urgency to reverse that trend is immense. Competitiveness in Europe has a more balanced approach, allowing for social and environmental concerns. In other parts of the world that is certainly not the case. The single major obstacle to achieving a sustainable future - with all that this implies - is the inevitable tendency towards patterns of growth that are far from what

the planet can afford. Just think about it. Looking into the near future, the world's population is forecasted to reach almost 8 billion people. Imagine the demand in terms of food production, industrial goods, transport, energy, etc. The current map of the world highlights disturbing unachieved targets on basic human needs. It is difficult to foresee a global tendency towards a more sustainable future when basic social development, mainly in education and health, is still far from being a realistic objective. In that context, the global version of competitiveness may easily increase the existing inequalities, and therefore become an engine of increasing distress towards our common future.

There are two clear misperceptions that cut across the debate about competitiveness, growth and sustainability :

The first one is to see those in confrontation. As in the management of our daily life, it would be silly to be measured by our rate of competitiveness or sustainability. Those may be significant, but of doubtless much more relevance is the capacity to grow in a balanced manner, where both the quantitative and the qualitative aspects of our development become a guarantee for the future. In other words, it is important to have money in your pocket but also to make sure that the conditions for having it tomorrow are in place. The modality of how we manage the physical, human and natural resources at our disposal, in combination with appropriate systems of governance and the increasing awareness and participation of people in this process will define our collective prosperity in the years to come.

Finally, the second one is to see us in confrontation, in a suicide international battle towards economic survival. International agreements rarely work. However, maintaining a living planet concerns us all. The international community must increase its efforts to find a workable mechanism to reverse a path that may be already beyond our control. The consequences of not doing so are already visible in many parts of our planet. Few visions are more upsetting than the devastation of unrecoverable nature. There is not much sense in measuring your prosperity against mine. It is not about turning competitiveness into a new god, but to release the potential of competing to achieve the prosperity of all.

In the end, it makes sense to support a viable strategy for "growing clean", as well as the willingness and desire to commit to it.

Case studies of practices in public sector and at firms level

By ISABELLE MARAS

Coordinator of a EU pilot project on rural youth participation

Independent consultant



The concept of Sustainable Development first gained a real political importance with the United Nations Brundtland Commission report of 1987 ("Our Common Future").

Sustainable development can be described as a vision of progress linking economic development, protection of the environment and social justice. It therefore tends to highlight the current lack of attention paid by many current policies to long-term issues and the close ties between different policy areas. In the end, this concept can simply be defined as the search for a better quality of life for everyone, today and for generations to come.

Following the 92 Earth Summit, the UN Conference on Environment and Development held in Rio de Janeiro¹, the European Union paid a tremendous attention to sustainable development.

Indeed, the European Council discussed in June 2001 at Göteborg a Strategy for Sustainable Development proposed by the Commission. A second paper, *Towards a global partnership for Sustainable Development*, adopted in February 2002, added a global dimension to the EU Strategy. This document was an important input to the 2002 World Summit on Sustainable Development held in Johannesburg.

In the aftermath of Johannesburg and Rio world conferences, the EU signed up the Kyoto Protocol in 1997 and committed itself to reducing green-gas emissions in 2012 by 8%, relative to the levels emitted in 1990.

Since 2000, the EU has drawn up papers and strategies² while adopting a number of legislative measures on the basis of the EU's Environment objectives and in support of the Kyoto commitment.

The Sixth Environment Action Programme (2002-2012) of the European Community identifies four environmental areas to be tackled for improvements (four priority areas for urgent action): Climate change, Nature Biodiversity, Environment, Health and Quality of life and Natural Resources and Waste³.

The ongoing EU Sustainable Development Strategy priorities are related to the above-described environmental objectives: Climate change & Clean energy, Public health, Natural resource management, Mobility land use & Territorial development.

Following the recent review of the 2001 Sustainable Development Strategy by the Commission on 13 December 2005, the next Sustainable Development Strategy is expected to be adopted in June 2006 by the European Council.

Which initiatives in public sector and at firms level do illustrate the multiple aspects of sustainable development which have been promoted through the EU Sustainable Development Strategy? How do projects originating from the private sector contribute to sustainable development out of the EU-supported programmes? To what extent are they related to the current and upcoming Sustainable development Strategy's priorities?

What determining aspects in the project implementation are highlighted through those examples?

In the context of EU political impulse and awareness raising measures taken towards EU citizens, let's review some initiatives and practices which are being or have been led so far in the public sector and at firms level throughout Europe.

CASE PRACTICES

These past years, many awareness initiatives have been launched by the European Commission and supported by the EU institutions in order to promote and bring the principles attached to sustainable development close to the EU citizens.

In the field of energy, the Sustainable Energy Europe Campaign 2005-2008 has been set up to change the landscape of the sector and promote innovative practices among citizens. The problematic of energy is indeed of growing concern as it covers many aspects of daily life.

Launched in July 2005, Sustainable Energy Europe 2005-2008 is meant to contribute to the achievement of EU energy policy goals and targets in the fields of renewable energy sources, energy efficiency, clean transport and alternative fuels. The Campaign sets up a network in order to stimulate an increase in private investment in sustainable energy technologies and the sharing of good practice and dissemination of activities stimulating replication.

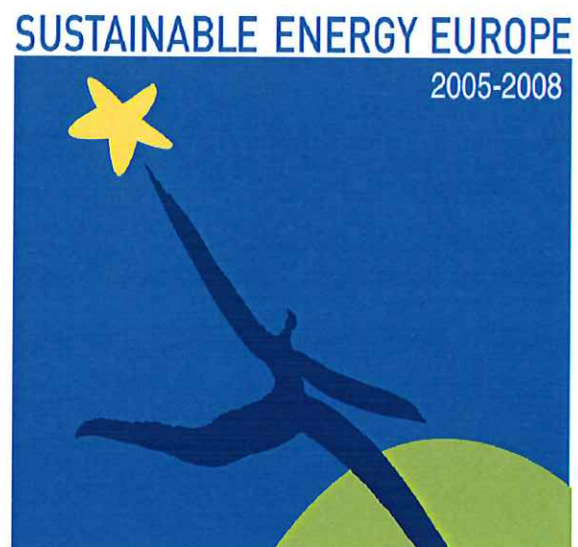
"Nowadays, most environmental problems which are faced concern energy consumption. When one speaks about this field, one has to concentrate on two main points: how to diminish the waste of energy consumption and how to use cleaner energies", underlines M. Pedro Ballesteros Torres, from the DG Energy & Transports of the European Commission. "Everything concerning buildings or transport is related to our daily life and depends on our individual decision: it cannot be directly tackled by any political decision". As a consequence, M. Ballesteros Torres says: "It is not only a problem to address at Member state or European Union level, but at citizen's level. And a very decentralized approach is necessary".

At the European Commission level, there has been two traditional pillars: the legislative one (with a political mandate to implement legislative measures) and the "technologies-oriented" pillar (through the implementation of programmes supporting new and cleaner technologies). There is today a gap to fill : "Communication seems to be the effective way to touch the citizens in order to promote a good use of old technologies", adds M. Ballesteros.

Since november 2004, the new Commission has been working on the third pillar, which functions on a voluntary basis, without any financial incentive: this axis is seen as a complement and not as an alternative to the two former ones.

According to a bottom-up approach, the goal of the Sustainable Energy Europe campaign is to create a panoply of initiatives by providing many services to European citizens through a wide network of local and regional promoters. In nine main campaigning areas, the promoters are well-known umbrella and network organisations involving sustainable energy actors, the Campaign associates, as well as 34 Campaign partners which are sustainable energy public and private stakeholders having developed a sustainable energy project with a significant impact.

It is nevertheless worth mentioning a paradoxical element - even if some environmental parameters have been included in the building code of conduct of the newly renovated Berlaymont building. No EU official buildings - not even the Directorate General Energy or Environment - have been built so far with sustainable resources and according to "sustainable development-friendly" benchmarks. Though it would concretely constitute a great showcase for any visitor - professionals, students or citizens - of the European capital.



The Green Energy Clusters: focus on the solar thermal and biomass sector

A private partnership led by private companies, the Green Energy Clusters is a European Community's Intelligent Energy Europe supported programme that aims to stimulate regional RES - Heat markets through the establishment of regional SME (Small and Medium Enterprises) clusters. It entails seven project partners in Sweden, Austria, the United Kingdom, Norway and France.

The key issue addressed in the project is that most market actors in the solar thermal and biomass sector are small and/or medium sized enterprises. A wide range of environmental results are expected such as a reduced use of heating oil (reduced emissions of carbon dioxide) and an increased use of thermal solar energy bioethanol for road transport but also increased sales, new partnerships between companies in their respective country as well as between companies from different countries. In addition, the CO₂ emissions have decreased by about 10% during the past 5 years.

Klima Partner Programm Frankfurt am Main: an efficient energy saving programme

A founding member of the Climate Alliance of European cities in 1990, the city of Frankfurt am Main has been active in the field of sustainable energy for more than 15 years. The city has committed itself to reduce CO₂ emissions by 50% by the year 2010.

With this partnership led by a public authority, the main following areas have been successfully tackled by the city: promotion of small and medium scale cogeneration; analysing and benchmarking of electricity in office buildings; integration of energy planning in urban development planning, low energy and passive houses and elaborate municipal energy management.

By doing so, the city Frankfurt am Main was awarded the Climate Star in 2004 for its innovative Biomass-fired power plant and has also been ranked on the 6th place among large cities in Germany's Energy saving community award.

The city is currently setting up a new energy and climate protection programme for Frankfurt for the period 2006-2010, involving many stakeholders and implementing definite measures. This initiative aims at implementing an action plan together with landlords, banks, housing companies, industry, the airport, crafts persons and NGOs for 2007. The Commission is also funding the ManagEnergy

initiative in order to support the European network of energy agencies across/throughout Europe and other organisations working in the energy field at local and regional levels⁴.

Power-saving measures in schools in Modena (Italy): promoting sustainable changes in energy management

The objective of Modena's local authorities was to introduce permanent changes to energy management in schools based on sustainability-related principles according to voluntary agreements. They therefore decided to offer a wide range of incentives ranging from the financing of new equipment to technical support. Energy conservation opportunities were evaluated (more than 20 audits carried out by the local energy agency so far) in order to assess what changes would work best for each school building, the goal being to guarantee at least a 15% energy saving once the work completed⁵.

Since the start of the project in 2001, primary and secondary schools in Modena have been benefiting of the opportunity to improve their energy performance and to receive a share of the savings made from cutting back on electricity and gas consumption. The energy produced from renewable sources is currently estimated to an equivalent (in electricity and methane) of about 1.4 % of the overall provincial administration's energy consumption.

The main benefit for Modena lies in the overall improvement in heating facilities; Furthermore, the educational benefits seem to have been valuable, as pupils have learned about energy savings with/through the energy agency's complementary teaching projects (creation of a renewable energy laboratory for primary school pupils, development of a solar energy outdoor area, drawing up of a teaching module on energy saving).

According to a replication objective, the local administration must be well prepared to make improvements in buildings in order to successfully convince school managers to adopt energy-efficient measures and to change the energy-consumption habits.

The "nearby heating Kronoberg" biofuel initiative: one of the most successful renewable biomass-energy projects in Sweden

The main objective of this heating scheme was to use the abundant natural and renewable biomass to replace fossil fuel-derived heat and power with woodships, shavings and pellets.

The success of the first biofuel-fired district-heating plant in Sweden - built over 20 years ago - and the strong political will to increase regional and national sustainability led to the goal of achieving at least 50% renewable energy use in the county of Kronoberg by 2010 and to be fossil-fuel free by 2050. The driving force was to add to this ambition regional employment prospects, new business development and increased diversification of the mainly rural economy characterized by a small industrial sector and its focus on forestry⁶.

The key actor was the Energy Agency for Southeast Sweden (Energiekontor Sydost) by promoting and demonstrating the feasibility and profitability of the heating plants. The energy agency targeted public and private enterprises together with neighbouring mechanical and forestry industries.

The investment in the plants (€ 45-48 million) has strongly boosted locally produced bio-fuel and energy by 250 GWh whilst increasing local and regional business development. Eight diversified companies have been established in association with the energy initiatives, providing 50-100 new local jobs. The estimated reduction in carbon dioxide emissions is 83000 tonnes per year. At the academic level, the project has also increased knowledge and expertise in the business sector of bio-energy in the local university, with the establishment of two professorships and 8 postgraduate research positions .

To repeat such an initiative, a determining factor is to develop the political will to achieve a sustainable energy economy and integrating all stakeholders aspirations.

The Renewable Energy House in Brussels: a private sector initiative towards citizens

Illustrating the EU will to raise the EU citizens' awareness and stimulate their initiatives through best practices, the Renewable Energy House in Brussels constitutes an outstanding example of a concrete achievement in the field of sustainable development.

This REH concept was born in 2000, when several European renewable energy associations decided to share a common building in order to make the best use of energies. According to Mrs Christine Lins, Secretary General of the European Renewable Energy Council (EREC)⁷, "These organisations were looking for a place to demonstrate that it was possible to concretely promote renewable energies. The mix between the best technologies in the field of sustainable development and synergies between members is really important". As of 1st January



2006, the new Renewable Energy House serves as the headquarters for the European renewable energy sector: the office groups for the first time together all the leading European renewable energy industry, trade and research associations. Originating from private initiative, this House is principally oriented towards citizens, as "it includes many aspects of patrimony protection, the inclusion of the best technologies within the building code and will welcome public visits".

In an urban environment, the Renewable Energy House is indeed a model showcase on how to integrate renewable energy technologies in a monument-protected building .

An "integrated approach " towards SD : Michelin and its challenge Bibendum

At firm level, the French corporation Michelin, world leader in the tyre industry , has been implementing an "integrated approach" of sustainable development for a few years by organizing the well-known Challenge Bibendum, an international event for sustainable mobility.

Relating to the promotion of clean motor vehicles, this initiative is part of a global action plan, the Michelin Performance & Responsibility approach which covers many aspects of sustainable development, and among them the social dimension⁸.

Created in 1998 by Michelin - on the occasion of the 100th birthday of Bibendum, the Michelin firm's mascotte - and the only worldwide event of its kind, the Challenge Bibendum can be described as a forum for players of the automotive world where issues relating to the clean, safe cars of today and tomorrow are debated. Validated by an international independent jury, the tests made during the challenge are an opportunity to gauge the progress made in a wide range of areas, including fuel consumption, pollutant emissions, acceleration, braking, road handling, safety and design.

Mr. Jacques TORAILLE, Head of Michelin Performance & Responsibility approach explains: "Our contribution to sustainable mobility is well beyond the production of tires, this theme concerns many aspects of our activities. Hence the Michelin

Responsibility Charter covers diverse themes such as the resistance to the tyre worn through use to reduce oil consumption, security as work or the environmental performance of our sites". He underlines "Since we think that we have a major role to play in the field of road mobility: the Challenge Bibendum exists".

The 2003 Challenge, held in San Francisco (United States), was opened to urban buses and trucks for the first time. The last ones were held in Shanghai in 2004 (China is a key country in terms of sustainable mobility) and Kyoto in 2005. The next Challenge will take place in Paris in June 2006. "The Challenge Bibendum occurs in a friendly atmosphere, according to the simple call for automobile constructors: "Come and present your safest and most innovative motor vehicles", Mr Toraille adds. "This event is about sustainable mobility and also road mobility, those issues being closely inter-related with road safety".

Therefore, the Challenge Bibendum gives a yearly picture of the evolution of mobility-related technologies in the industry sector. According to Mr Toraille, "It is fascinating to see that some solutions which seemed efficient at a certain time can become much less valuable as time passes and inversely. It is an outstanding example of how to face a real challenge and find innovative, satisfying solutions with numerous beneficiaries on a winner-winner basis".

The Performance & Responsibility approach also implies to get involved in the local community life. By instance, awareness raising actions towards children in the field of road safety are being led in new Member-states, where Michelin firms settled, in Poland and more recently in Hungaria. "The support brought by a firm such as Michelin to those initiatives must be understood not only according to moral values but also from the firm's point of view, we do not intend to be falsely modest", says Mr Toraille. "Indeed, it is only when the actions are profitable to everyone - citizens and firm - that they can be solid and sustainable in a genuine long-term perspective".

This approach towards sustainable development principles has been backed up by the Michelin participation in two initiatives. On April 7 2004, Michelin signed the European Road Safety Charter and thus showed its commitment to contribute to reducing the number of deaths on European roads by 50% by 2010. Furthermore, Michelin has been committed to the Sustainable Mobility Project, in partnership with 11 corporate of the World Business Council for Sustainable Development involved in the transport sector⁹.



Michelin integrated approach of sustainable development refers to one of its main underlying concept: the Corporate Social Responsibility.

corporate responsibility & sustainable development in South-Eastern countries

At corporations level, the CSR guiding principles and potential achievements are promoted within the CSR Europe organisation. Referring to the overarching concept of sustainable development, numerous initiatives are being led in the CSR field, and notably in several Eastern National Partner countries of CSR Europe.

At its beginning in 1995, CSR Europe was an initiative launched by the European Commission President Jacques Delors and senior European business leaders.

A non-profit organisation, CSR Europe is an European business network of CSR professionals promoting corporate social responsibility. The organisation is thus based upon the sharing of CSR solutions (through business and best practices exchanges) and focused on sustainability and competitiveness. It consists of over 60 leading multinationals and reaches out to a further 1400 companies through 18 National Partner Organisations.

Main objectives of CSR Europe are to help firms integrate CSR in everyday business, to offer business managers learning, benchmarking, and capacity building opportunities as well as to stimulate a broader stakeholder dialogue between businesses, European policy makers, governments, investors, social partners, civil society and academics.

In that perspective, CSR Europe launched a European Roadmap for Businesses for a sustainable and competitive enterprise. This Roadmap serves as a set of goals and strategies to integrate corporate responsibility in daily business practices¹⁰.

The Czech Business Leaders Forum: towards the promotion of socially responsible business practice

Founded in 1992, the Czech Business Leaders Forum constitutes one of CSR national partner organisations and counts more than 50 corporate

members. Its mission is to demonstrate and account for socially responsible business practice in Czech Republic and in global market place, as well as to create a synergy between actors of civil society (businesses, government, academia, NGOs) in order to improve the social, economic and physical environment in the country. CSR is a relatively new idea for Czech companies and in the aftermath of the enlargement, several initiatives set up since the creation of the Forum can be highlighted.

The Health, Safety & Environment Award has since 1993 annually awarded improvement of the environment in the community, a region, a workplace. In October 2003 took place a conference on "CSR & Company Competitiveness" held by the Italian-Czech Chamber of Industry in the Czech Republic, while activities promoting transparency have been initiated in both private and public sector. In Spring 2004, the first national conference on CSR was hosted in Prague in cooperation with CSR Europe.

PERSPECTIVES

Throughout the European Union, this range of examples proves to what extent the principles attached to the concept of sustainable development, which are strongly promoted at EU level, can be concretely integrated by both public and private actors through results-oriented projects and guidelines, according to a genuine "ownership process".

All in all, the replicability of these case practices seems largely to depend on a common involvement¹¹ and a sound political both focused on one goal: to convince that a behavior change at all levels - citizens, public sectors, corporations - is worth being implemented in order to adapt and protect the natural and social environment we have inherited against the potential threats of future.

REFERENCES

- 1/ This EU-strategy for sustainable development was meant to cover economic, social, environmental and financial aspects, as well as coherence of EU policies and governance at all levels: harnessing globalisation ; fighting poverty and promoting social development; sustainable management of natural and environmental resources.
- 2/ Articles 174 to 176 of EU Treaty, modified Preamble and article 2 B) making the principle of sustainable development one of EU's main objectives.
- 3/ The 6th EAP was adopted in 2002 and runs until 2012. It requires the European Commission to prepare 7 Thematic Strategies: Air Pollution (adopted 21/09/2005), Prevention & Recycling of Waste (21/12/2005), Protection & Conservation of the Marine Environment (24/10/2005), Soil, Sustainable Use of Pesticides, Sustainable Use of Resources (21/12/2005), Urban Environment (11/01/2006). See http://europa.eu.int/comm/environment/newprg/strategies_en.htm
- 4/ ManagEnergy's main aim is to facilitate information's sharing. According to october 2004 figures, there were some 380 energy agencies within the ManagEnergy network (following the enlargement, a raising number of fundings for energy agencies was expected by the Commission in new Members). The Intelligent Energy-Europe programme provides support to new agencies.
- 5/ Project's main partners are: Modena province, Modena municipality, the local energy agency AESS (Agenzia per l'Energia e lo Sviluppo Sostenibile) and some local primary and secondary schools. See website: www.aess-modena.it/
2 oil-fired boilers have been converted to gas, and one gas boiler to run on biomass fuel. A solar-thermal domestic hot water plant has been installed in a school gymnasium, and 15 photovoltaic roof panels fitted in several school buildings.
- 6/ See www.energiekontor-so.com/
- 7/ Those actors represent fast growing economic sectors in Europe with an annual turnover of more than 15 billion € employing more than 300.000 people and supplying 8% of current energy demand. <http://www.erec-renewables.org>
- 8/ For more details: www.michelin.com/corporate/front/templates/affich.jsp?codeRubrique=77&lang=EN
- 9/ The World Business Council for Sustainable Development (WBCSD) is constituted of 180 international companies united by a common commitment to sustainable development through three pillars (economic growth, ecological balance & social progress). In its Mobility 2030 report (2004), the WBCSD identified seven priority objectives for more sustainable mobility through responsible approaches. www.wbcSD.org/templates/TemplateWBCSD5/layout.asp?MenuID=1
- 10/ CSR Europe members are committed to promote some principles: conduct business responsibly by contributing to the economic health & sustainable development of the communities in which they operate, offer their employees healthy and safe working conditions, ensure fair compensation, good communication, equal opportunity for employment
- 11/ This article reviews examples of practices in the field of sustainable development across Europe. They have been chosen subjectively by the author because they might represent a wide variety of approaches, achievements in the field of sustainable development and might therefore have sound possibilities of replication. This article is meant to raise the reader's awareness about this topic and to stimulate new ideas/initiatives towards sustainable development/in the sector: thus other outstanding examples could have been presented.

"Managing our wastes : choose safety and sustainable development"

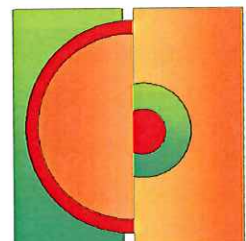
Les Entretiens européens

Reims- Congress Centre, 25th November 2005

The production of nuclear power produces wastes like any other activity, but some of those highly radioactive wastes still "live" during hundreds of thousands years. How to manage them so that they remain harmless for our descendants and their environment? This is a huge technological challenge for the society. Poisoned chalice for the future generations?

For more than twenty years, the nuclear countries and the scientific community have tackled this problem all over the world and in Europe: one seeks, one seeks... Then two years ago, the European Commission took the initiative: we need to take decisions and fix a calendar, like Finland already did. The European Parliament supported the step but the Council temporizes ... when it does not prevent actions to go ahead.

More than ever the European Commission is determined in front of a rather reluctant Council. It leans on the European Parliament's vote and on a new asset : European public opinions (Eurobarometer) are in majority for the continuation of a nuclear production for electricity but they set a condition : finding a solution for waste. This increased acceptability has also a result within some Member states (for instance in Portugal and Great Britain).



La gestion des déchets nucléaires

Each Member State should now define its national Programme of management for its nuclear wastes, according to its own calendar, and commit to respect it. Indeed, the Commission does not lay down a single calendar, nor a single solution.

The European Commission considers the possibility to support research by the creation of a joint enterprise on the Galileo model. The problem is that for the moment "nobody knows exactly what each Member State devotes to its research in wastes". This initiative would allow to say to the public opinions: "all possible efforts are made to solve these difficult problems by adding the budgets and competences of the States, the European Union and the producers". But this proposal meets a true barrage according to François Lamoureux, Director General, DG Transport & Energy.

Since fifteen years, France has carried out researches on three technological options: transmutation, geological storage, surface storage. In 2006 the French national Assembly must choose one of these three options. The French government organizes a direct consultation of the citizens. Les " Entretiens européens " opened a debate in 2003 and 2004 with national economic and political leaders, citizens and local representatives. This in a European exchange of experiences and ideas.

This year in Reims, the " Entretiens européens " were in line with the national public debate : which decisions to take into 2006? A first Round Table dealt with the decision-making process: How to associate the citizens ? The referendum is not the

only best solution, other ways are to be explored: the Belgian local partnership is promising. A second Round Table raised the question of the local sustainable development: is a Laboratory for the in-depth storage of radioactive wastes, the anteroom of a "dustbin"? This is the main fear of citizens. However a Laboratory for such a challenge or a possible Center of storage, is a formidable opportunity for the creation of new qualified jobs. According to François-Michel Gonnot, the Laboratory represents 250 jobs and with the storage it is 400 to 500 new permanent jobs. Around this infrastructure, other activities can come along the top of it : indeed, waste producers such as AREVA, CEA, EDF are committed to negotiate with local partners. Moreover, it would have a European influence if it fits into the scheme of formation for our European neighbors and into the sustainable development prospect that Europe wants to promote in the world. As Rolf Linkohr said "the comparison of experiments makes it possible to imitate the best and it is the advantage of Europe of not having shame of it anymore". Sustainable development is at the heart of European politics. And it requires in particular that everything is sorted, treated, recycled after use.

The waste of the XXIst Century is a raw material or a very elaborate product, placed under high monitoring if it is not used any more. The nuclear waste is an activity of high technology for the development of which billions and years of research are devoted.

A positive assessment : wastes' producers are ready to commit.

"Managing our Wastes : choose safety and sustainable development "

Opening : Claude Fischer, director of the "*Entretiens européens*"

Conclusion : Philippe Herzog, Chairman of *Confrontations-Europe*.

Audition de François Lamoureux, Director General Energy in the European Commission

First Round Table animated by Dr Peter Haug, FORATOM Managing Director

Second Round Table animated by Rolf Linkohr, former Member of the European Parliament, President of the C.E.R.E.S.

Participation of 8 countries : Germany, Belgium, Canada, France, Hungary, Slovenia, Sweden, Switzerland

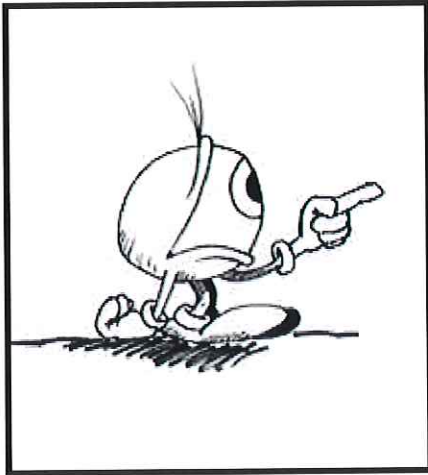
Sponsorship : European Commission, Minister in charge of higher education, and research, MINEFI, Andra, town of Reims

In cooperation with : Confrontations-Europe, FORATOM, CERES

With the partnership of : Areva, CEA, EDF, Electrabel-Suez.

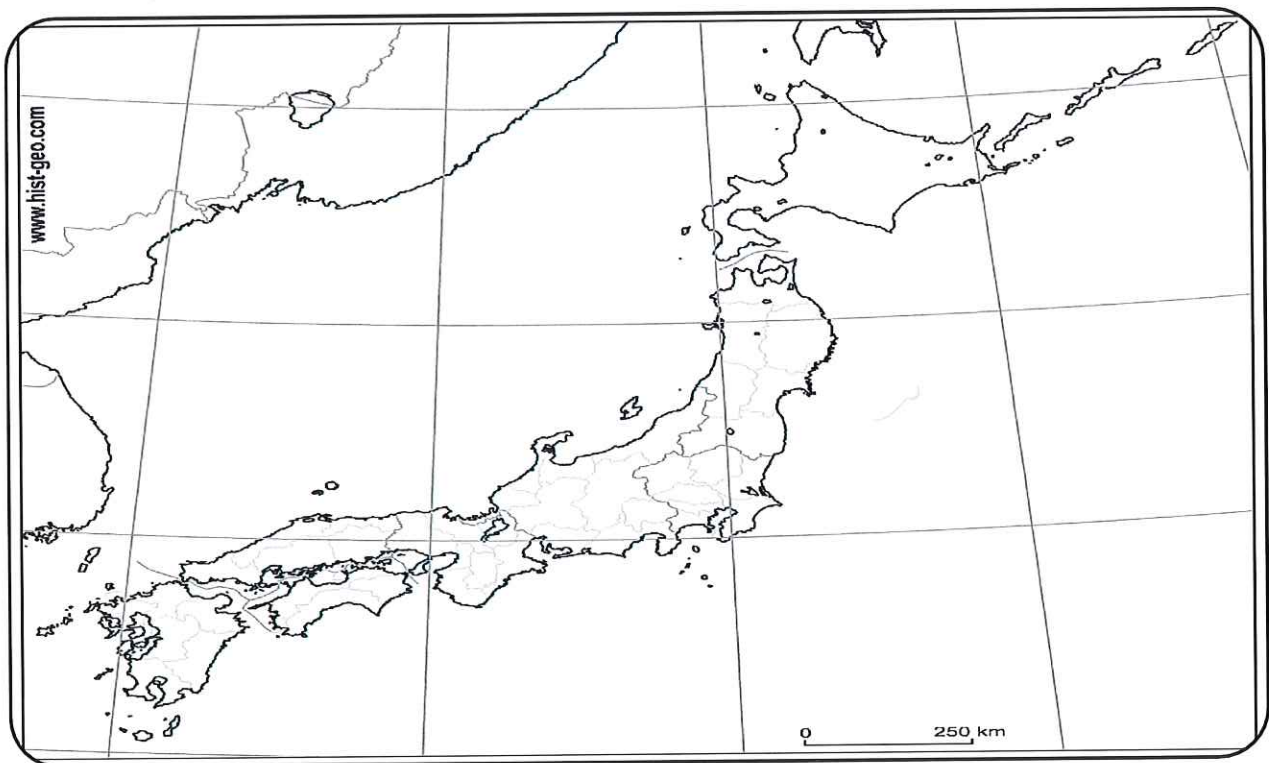
EYES ON ...

EYES ON ...



EYES

New strategies for sustainable development in Japan



Japanese sustainable development through Aichi Expo

By SHINJI KANNO
President of EUROVISION & ASSOCIATES
Secretary General of EU-Japan Advisory
Bureau



In September 2005 the curtain came down on the Aichi Japan 2005 World EXPO. Although this expo, Japan's second, did not receive much attention in Europe, during its 183 days in operation it attracted 22,000,000 visitors and has been hailed as one of the most successful expos ever held. One weekend in September, as the Expo drew to a close, myself visited the site and had an opportunity to feel the enthusiasm of the many Japanese who flocked to the event. Even on finding that after leaving their homes in the early hours and waiting 2 hours to board the monorail connecting public transportation to the site, 3 hours to get in the gate itself, and on entering late on a hot summer's day, finally having to wait in line for hours yet again to tour the most popular exhibitions, most visitors left with a feeling of satisfaction on participating in a once in a decades event, even if their major lasting impression was of a "tide of people" rather than the exhibits' theme of "future technology".

However, the EXPO's significance lies not in the clamor it stirred up but rather in how, by reflecting the industrial society of the times, it can serve as a model project for the next generation. In this sense, by reflecting not only on the bright spots but also the shadows behind Japan's industrial development in the post-war period, we can see that the Aichi World EXPO has sent out an important message concerning how we can proceed with sustainable development globally.

The Osaka World EXPO, held in 1970 during the period of Japan's rapid no-holes barred advanced economic development, painted a rosy picture of the country's industrialization. However while swift economic development over the past 60 years has brought Japan great affluence, it has also resulted in a steady weakening in the linkages between nature and lifestyles. Japan has to take another look at its experience of the past decades and look for the road to genuine affluence and sustainable develop-

ment. The Aichi EXPO posited that the key to the solution lies in nature's wisdom. By learning from the mechanisms of nature, we can use new technologies to devise sustainable future directions in harmony with nature.

A land of rivers and mountain ranges, ice floes in the north and coral reefs in the south, Japan has a hugely varied landscape with distinct seasonal changes. Historically, the Japanese people lived in harmony with nature and practiced simple yet effective uses of energy in their daily lives. In a land with few resources, the habit of putting everything to good use is deeply engrained in a people's way of life, and in the course of daily life, the people gained profound insight into and appreciation for the workings of nature and devised ways of utilizing nature's bounty. The Japanese culture and lifestyle too evolved in harmony with the natural environment. Most of the pavilions at the expo suggested that the wisdom, skills, and culture of Japan, fostered along with the cultivation of nature, could be recreated in new technologies.

Living in and adapting to a climate with four distinct seasons including blistering summer heat and stifling humidity, the Japanese have cultivated expansive wisdom and skills, together with profound sensitivities. One apt example is displayed in the traditional Japanese-style home.



Tatami Room

Exterior wood and mud walls enable the house to breathe, and interior sliding wooden-framed and paper sliding doors create paths for draughts while allowing flexibility in partitioning the living space. In addition, the disinfectant effect of tatami mat flooring is also an valuable element.

The Kimono is also well adapted to a climate of both heat and humidity and cold winter temperatures. First of all, various openings allow for good ventilation in warm weather, and in cold weather, the layering of the kimono's fabric traps body heat to keep the wearer warm.



Kimono Obi

In addition, the obi serves not only as a gorgeous ornamentation, but also as a means of providing warmth. Unlike western clothing, which is sewn to fit the wearer's bodyline, the kimono is given its shape by the wearer's body itself, and therefore, in order to maintain a beautiful line, good posture is vitally important. Therefore, through wearing a kimono, one can preserve both one's heart and mind.

Kimonos carefully washed for long-term use and recycling, thinned timber converted into charcoal, Zori (Japanese slippers) made from rice straw, and traditional screens made of natural materials such as bamboo and reeds which admit fresh air while effectively blocking the sun's rays. These are examples, not of man controlling nature, but of the centuries-old wisdom of the Japanese people for living in tune with nature. Even now people still sprinkle water on the streets and sidewalks of old Japanese towns: the water has a cooling effect, both physically and visually. In the EXPO's pavilion, this wisdom was applied to new technologies. It featured ideas for the future, focusing on cutting-edge tech-

nologies designed to utilize natural functions and work in harmony with nature.

The buildings and exhibits at the Pavilion offered numerous examples of eco-friendly new technologies that promise a bright future. However, technology alone will not help us overcome the world's environmental problems. People everywhere must recognize the importance of connecting with nature; we must share a common awareness that we are all citizens of the Earth. Indeed, the key message conveyed by the Aichi EXPO was "Rekindling the relationship between mankind and nature."

The "Slow Life", "Back to Nature", and other current eco-oriented principles and values draw their ideas largely from what is referred to as the "revival" model. In contrast, the Aichi EXPO depicted the vast potential of "nature power" and "human ability", through this format showcased a "developmental" model for progressive steps into the future, orchestrating constructive compromises with the environment. The message was conveyed that frontier science and technologies serving as solutions for the problems we face were born out of the delicate sensitivities and wisdom of Mother Nature.

In the meantime, a movement by Japanese corporations to create a manufacturing society, which supports the environment, is becoming active. The Toyota Exhibition Hall exhibit, which was instrumental in leading to the success of the EXPO, exhibited a futuristic car show, which garnered overwhelming popularity among the visitors. This, combined with a perception of an eco-friendly stance on the part of Toyota outside the EXPO has led to the company being highly ranked as an "environmental" brand in Japan.

This reflects consumer's impressions that the Japanese car industry is now leading the world in the development of fuel-efficiency technology and fuel-cell vehicles that run without emitting carbon dioxide, as represented by Toyota and Honda's hybrid vehicles. Even outside the domain of automobile production and sales Toyota is displaying a concern for environment as shown by its establish-

ment of the Toyota Shirakawa-Go Eco-Institute in Gifu in April 2005. The institute was opened to respond to educational needs of the environmental age, through cooperative interaction with nature schools and NPOs around the world. The institute is located at the World Heritage site of Shirakawa-Go and a wide range of courses are available which examine a combination of both environmental and socioeconomic issues to explore the challenges of creating a self sustainable society. "The visitors will experience at first hand a tradition of coexistence with nature and the great effort that has gone into achieving such an environment. Learn from the wisdom of our forefathers and build a new culture that can exist in symbiosis with nature," Mr. Inoue, the Director of the institute comments.



As Japan's leading carmaker, Toyota's incorporation of sustainable development features has also led to the strengthening of their contribution toward traffic safety.

Since 1987, Toyota has established "Driving Communication" Clubs around the nation, and in April 2005, in an effort to develop the program further, they opened the Toyota Traffic Center- Mobiliter, within the Fuji Speed Highway. At this

facility, anyone is allowed to take traffic safety courses, including high-speed breaking classes or environmentally friendly driving courses, developed especially by Toyota. In addition, the facility offers drivers the chance to experience the most recent developments in traffic safety technology. According to the company, this is sustainable mobility's eventual goal; a three dimensional, holistic program based on the concepts of educating people, environmentally sound driving, and the development of "zero death rate" automobiles.

Apart from Toyota, other Japanese companies are also developing products using "energy saving" technologies. The catalyst for this, which has led to fierce competition among manufacturers of electrical appliances, was a "energy conservation" law, setting standards for energy efficiency, which was drafted as a response to the high rates of consumer electronics use. As a result, manufacturers' energy saving technological developments have advanced and energy saving models, which meet the new standards, are being widely sold. Starting with high energy consuming products such as air conditioners (25%), refrigerators (16%), lights (16%), and televisions (10%), the energy-efficiency rates, along

with the user-friendliness and quality of the products have been steadily improving. As these energy efficiency rates have improved, consumer options have also increased and as newer and newer products are released their energy efficiency rates have improved.

In order to align itself with corporations' efforts, since April 2005 the Environment Ministry (MOE) has operated a national campaign entitled "Team Minus 6 Percent", which calls on people to take action to fight global warming. Prime Minister Junichiro Koizumi has assumed the role of team leader and a team administration office has been established at MOE. The campaign calls on people to take six actions: to set air conditioners at 28 degrees Celsius, to avoid wasting water at the tap, to choose and buy eco-friendly products, to switch off a car's engine when it is idle, to say no to excessive packaging, and to unplug any devices not in use. A no-tie, no-jacket fashion campaign for summer business wear, dubbed "Cool Biz," has attracted special public attention.

This may be seen as a positive example of cooperative efforts of the top-down approach taken by the government and bottom-up approaches favored by

consumer groups. Currently sustainable development programs in Japan are focused on environment, with social labor issues still to be dealt with. However, since last year, when the acronym "LOHAS (Lifestyles of Health and Sustainability)" became widely known, it can be said that the population began to become aware the importance of creating a healthy and sustainable society.

In Japan as in Europe, the internal problems of reductions in birthrates and budget deficits have combined with external pressures such as the globalization of the world's economy and China's economic rise to create problems for governments as they attempt to rethink traditional social economies. Japan's challenge is to harmonize the industrial innovation of the corporations, which up until now have supported her with a new sustainable society. The Aichi EXPO was an attempt to answer this challenge. Through it, Japanese people recognized their own history of special prosperity derived from linking their lifestyles to the natural world. These attitudes and sensitivities towards nature provide clues for resolving many of the problems of the 21st century which are impossible to surmount with science and technology alone, and offer the potential for new affluent lifestyles.



Japanese Efforts towards a Recycle-based Society

By SOICHIRO SEKI

Counsellor, Mission of Japan to the European Union



'MOTTAI-NAI'

A BEAUTIFUL JAPANESE WORD

In February 2005, Ms. Wangari Maathai, the Kenyan Assistant Minister for Environment and a Nobel Peace Prize Laureate of 2004, visited Japan. On that occasion, her praising of a Japanese word 'mottai-nai' reminded the Japanese people, including Prime Minister Koizumi, of that word's important traditional value.

'Mottai-nai' is an expression used on occasions when we refrain from wasting or throwing away something or when we try to use something for longer. According to my dictionary, a corresponding English word seems hard to find.

Ms. Maathai emphasized her impression during the trip that the Japanese people value things much more and the environment protection in Japan is worth admiring. She attributed Japanese people's attitudes to the word 'mottai-nai' as having taken root in our heart and expressed her intention to spread that word in Africa.

Since then, Prime Minister Koizumi has quoted Ms. Maathai's comment repeatedly when addressing the Japanese people in advocating the importance of saving resources and energy during such occasions as Asian-African Summit (April 2005) or EXPO 2005 held in Aichi, Japan.

BACKGROUND OF JAPANESE POLICY ON '3Rs'

Japan has long been very conscious of saving energy and materials because of its scarce energy resources. In addition, increasing the volume of waste and decreasing the capacity left in landfill sites have become a pressing issue for us.

In order to address these situations, the Japanese Government has been deploying '3Rs -Reduce, Reuse, and Recycle- Policy' as one of the top priorities for our environmental protection.

Before describing that policy, let me introduce some statistics which illustrate the situation in Japan.

The volume of waste disposed of by households and industries increased drastically in the late 80's, from 43million tons in 1985 to 50million tons in 1990. Approximately 3/4 of that total volume is, in Japan, disposed of by incinerators and the rest is recycled or land-filled. Due to the rapid increase of wastes and limited locations for landfills, there was concern that the remaining capacity of those sites would be exhausted in less than a decade. In addition, the cost of new incinerators and of handling waste had become an enormous burden for the municipalities.

Facing that situation, the Japanese Government took up the concept of '3R' and expanded the policy scope to a comprehensive approach from a recycle oriented approach

OUTLINE OF 3RS POLICY

Japan is determined to establish a Recycle-based Society through its 3Rs policy, which consists of following elements:

(1) REDUCE: decreasing the volume of waste through such measures as resource conservation or prolonging the life span of products

Japan has a national target of reducing the volume of waste taken out by households and industries : a 20% reduction in 2010 compared with 2000. In order to achieve it, the life style need to change. The national government and municipalities have been trying to heighten public awareness. Charges on the waste collecting is also regarded as an important tool and in which ways it can contribute to reducing waste have been examined from various cases around the country.

(2) REUSE: collecting the used products and reusing them (the whole or parts) through additional processes, if necessary. Bottles have long been the typical example of reuse. Nowadays the target of Reuse Policy is expanding to new areas such as cups used in stadiums, personal computers.

(3) RECYCLE: collecting products, bi-products and reusing them as energy input or materials for new products. Japan introduced a series of innovative recycle systems in various areas from the late '90s.

COMPREHENSIVE APPROACH

In maximizing policy effects, the 3 elements need to be addressed in a comprehensive, integrated manner, rather than separately. Japan has the Law for the Promotion of Effective Utilization of Resources. The Law uses cabinet orders to designate industries and product categories where businesses are required to undertake 3R initiatives, and stipulates by ministerial ordinances the details of the voluntary actions that they should take. 10 industries and 69 product categories have been designated, and actions stipulated include 3R policies at the product manufacturing stage, 3R consideration at the design stage, product identification to facilitate separate waste collection, and the creation of voluntary collection and recycling systems by manufacturers.

EFFECTS OF THE POLICIES

The latest situation on 3Rs in Japan is fairly encouraging : **policy and people's enhanced consciousness seem to be causing visible changes.**

Key dates of recycling

1997- : Recycle system for bottles (glass and plastic) and containers (paper and plastic)

2001- : Recycle system for electric appliances (TV sets, refrigerators, washing machines, air conditioners)

2001- : Recycle system for personal computers in offices

2003- : Recycle system for personal computers in households (voluntary)

2005- : Recycle system for automobiles

Every system listed above has its own collecting routes, charging system, and recycling sites designed based on each product's characteristics. Each system has been implemented fairly smoothly.

1/ Total waste volume peaked out and is gradually decreasing. Accordingly, the expected time before all the landfill sites are filled up is prolonging from 8 years to 13 years in these 9 years (1993-2002).

2/ The total recycling rate (ratio of collected quantity for the sake of recycle and reuse out of the total waste quantity) is increasing steadily from 8% to 13% in the period 1993-2002. If we look at the recycle rates of specific products (ratio of recycled material used in total production volume), the latest situation is as follows. Paper: 60%, Steel cans: 87%, Aluminium cans: 82%, Glass bottles: 90%. Japan is collecting more than 60% of used plastic bottles and the collected bottles are recycled into such products as fabrics, sheets and bottles.

TOWARDS THE WORLD

The value and necessity of 3Rs is universal. Japan taken the initiative to expand it on a worldwide scale. In the G8 Summit 2004 held in Sea Island, the 3R Initiative, proposed by Prime Minister Koizumi, was agreed upon. This led to the Ministerial Conference on the 3R Initiative held in Tokyo in April 2005 with the participation of 20 countries and 4 international organizations.

They shared information on 3R-relevant activities carried out and recognized the necessity of the following actions:

- (a) formulation and implementation of visions and strategies leading to a sound material-cycle society;
- (b) reduction of barriers to the international flow of goods and materials;
- (c) cooperation between developed and developing countries;
- (d) cooperation among stakeholders; and
- (e) science and technology suitable for the 3Rs.

We expect that this field of international cooperation will grow steadily into an important element of global sustainable development.

The Japanese Top Runner Program: Killing Two Birds with One Stone?

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The EU Lisbon Strategy argued that the enhancement of a competitive and dynamic knowledge-economy is the key for Europe to survive, while the importance of integrating environmental considerations in this process was stressed in among others the Göteborg European Council in 2001. A pathway identified to achieve this integration is to promote environmental technologies. In the EU, the Environmental Technologies Action Plan (ETAP) has been developed with the aim "of exploiting the potential of environmental technologies for meeting the environmental challenges faced by mankind while contributing to competitiveness and growth".

A potential concrete measure highlighted in the ETAP as well as in selected EU environmental policies is a so-called top runner approach, implemented in Japan for the improvement of use-phase energy efficiency of selected product groups. This article aims to provide a concise overview of the Top Runner Program and its achievement. It then discusses the implication of the approaches employed in the Program to EU policies by examining the significance and limitation of the Program.

What is the Top Runner Program, and how has it been implemented?

The Top Runner Program was introduced in 1999 as a part of the revision of the Law concerning the Rational Use of Energy (Energy Conservation Law). The aim is to address energy use from transport, in the commercial and private sectors, which have shown a significant increase in the past 30 years, despite the remarkable improvement of use-phase energy efficiency of energy-using equipment per product. As of March 2005, 18 product groups have been covered by the Program and it is currently expanding.

In principle, among the targeted products available in the market, the use-phase energy efficiency of the one that achieves the highest energy efficiency (top runner) becomes the basis of the standard. The standard setting takes into account the potential for technological innovation and diffusion. On one hand, this means that product with outstanding energy efficiency does not become a standard setter, especially when the achievement of the standard would require the usage of a unique technology applied to the product. On the other hand, when the potential technological development is perceived to be great, the level of standards may become higher than what the top runner product achieves.

Within the same product group, differentiated standards are set reflecting one or more parameters that affect the energy efficiency of the respective product groups. Examples of such parameters include function (copying machine: number of copies made per minute, TV sets: whether video cassette is included or not, the number of additional functions), size (refrigerator: internal volume, TV sets: size of the screen), weight (passenger vehicles), type of technologies used (refrigerator: refrigeration method), fuel used (e.g. passenger vehicles) and the like.

Differentiated timeframes, from 3 to 12 years, are set for the respective product groups. Producers (manufacturers and importers) that put more than a certain number of products on the market must make sure that the weighted average of energy efficiency of the products put on the market meets the standard. The standards and the timeframe were reviewed once the target year arrives (e.g. TV sets), or when a substantial proportion of the products fulfils the standards prior to the target year (e.g. computers).

Producers are requested to provide information on energy efficiency to consumers both on a mandatory and voluntary basis. For example, a labeling scheme indicates whether or not a product achieves the Top Runner standards as well as the degree of achievement in comparison to the Top Runner standards (see Figure 1). Moreover, energy efficiency performance catalogues have been published twice a year since 1999 to enable consumers to easily compare the energy efficiency of products they intend to purchase. An award system also exists for retailers to encourage them to actively promote energy efficient equipment.

The standards set in the Top Runner Program are utilized in a couple of policy instruments, such as the Green Purchasing Law and the Green Automobile tax scheme. There has also been an annual award provision for energy efficient products and systems since 1990.

The Top Runner Program takes a "name & shame" approach for enforcement. As for monitoring, although there is an information provision requirement on the energy efficiency of individual models, the aggregated results are officially collected only when the target year arrives.

Results so far

When examining the fulfilment of Top Runner standards, the results have been very positive. Producers of product groups, for which the target year for achieving the standards has already arrived - such as air conditioners, TV sets with cathode ray tubes and videotape recorders - meet standards not only on a weighted average basis but also on an individual model basis. The levels of efficiency achieved by some models are substantially higher than the Top Runner standards. The average energy efficiency improvement of these product groups therefore went beyond what was expected to be achieved, via the fulfilment of the Top Runner standards. Product groups such as cars and computers have managed to attain the standards prior to the target year (See Figure 2, below).

A straight-forward comparison of standards between those set in the Top Runner Program and those abroad is difficult due to the difference in products and measurement methods. However, according to a study, Top Runner standards for some product groups - such as air conditioners and refrigerators equipped with special technologies - are higher than those available elsewhere. For other product groups such as cars, the relative stringencies differ depending on the parameters (in the case of cars, their size). Japanese manufacturers interviewed seemed to be rather confident that technological improvements can boost competitiveness. It can be said that manufacturers must be at least sufficiently equipped with the technology as their counterparts abroad in order to achieve results they have managed to attain so far. Manufacturers interviewed informed us of a handful of measures taken to improve energy efficiency.

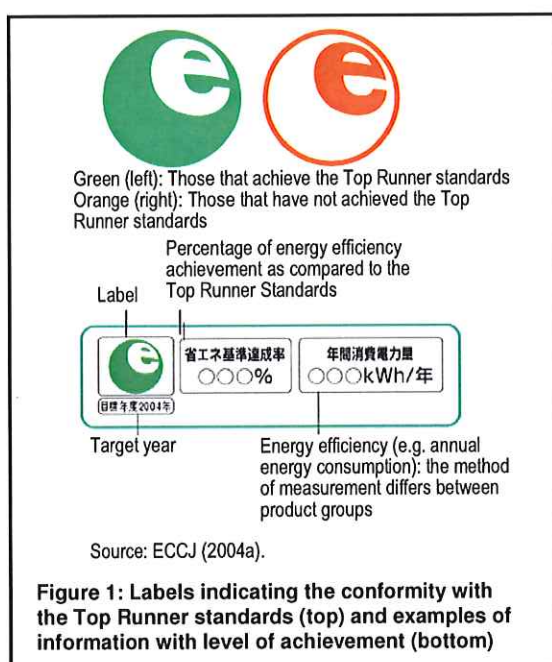


Figure 1: Labels indicating the conformity with the Top Runner standards (top) and examples of information with level of achievement (bottom)

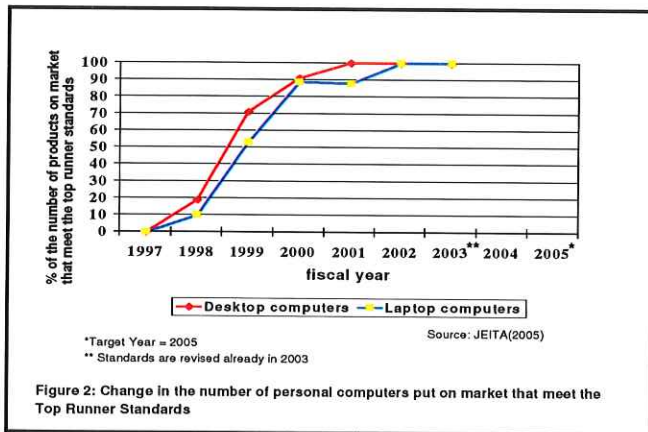


Figure 2: Change in the number of personal computers put on market that meet the Top Runner Standards

Significance and limitation: implication for EU policy

The review of the Top Runner Program together with interviews with stakeholders, provides some insights into EU environmental policy making. These can be discussed from the viewpoint of :

- 1) the mandatory nature of the Program,
- 2) the level of the standards,
- 3) the synergy with other policy instruments and the wider application of the approach
- 4) the consumers' uptake.

1. The mandatory, yet lack of stringent penalties: Interviews with manufacturers revealed that the Top Runner Program has contributed to an industry-wide environmental improvement and to the acceleration of the commercial application of environmental technologies that have not been used and/or the wider application of such technologies (diffusion). It has forced producers to fulfil the standards and incorporate use-phase energy efficiency into their product development strategy, even for products whose energy efficiency may not be the priority in product design (e.g. computers). The program justifies manufacturers putting extra resources towards introducing new technologies in the market that would otherwise have been sleeping on the engineers' shelf.

However, some experts were sceptical of the effectiveness of the "name & shame" approach. The majority of the producers addressed in the Top Runner Program are large, well-known domestic companies. This may be one reason why this approach has been working out well. It could also facilitate the information gathering regarding the status of the companies' progress which could benefit for policy makers. Addressing other types of producers may necessitate more stringent enforcement and monitoring mechanisms.

2. Level of standards: environment, economy or both: Manufacturers and experts interviewed agreed that the standards have been set on a realistic level, enabling all the manufacturers, if they work hard, to manage to meet the standards. Meanwhile, setting standards at the "realistic" level can facilitate steady improvement but may not contribute to radical change. As has been criticised by some experts, the change made may not correspond to what is necessary for the creation of sustainable society.

Factors affecting the level of standards include the priority between environmental protection and economic growth, the perceived seriousness of the issues addressed and decision making process. When a policy aims to pursue the dual goals of environmental protection and economic growth, there seems to be a tendency that the latter dominates. It also depends on the seriousness of the problem as perceived by policy makers, manufacturers and the public. Having direct channels with individual producers instead of going through the industry associations may help extract the opinions not affected by the interest of the whole industry.

An issue raised in this discussion is the differentiation of standards within the respective product groups - for instance, different standards are set between heavy cars and light cars, and between TV sets with wide screens and those with small screens. On one hand, such differentiation is fair to producers whose products consume more energy in general (heavy cars, TV sets with wide screens), and facilitate the availability of diverse products. On the other hand, when examined from the viewpoint of reducing energy consumption in absolute terms, one could question how much the existence of energy-consuming products should be justified. The current exclusion of outstandingly energy efficient products from becoming a standard setter can be also questioned from this viewpoint.

3. Synergy with other policy instruments: The use of the Top Runner standards as criterion for other policy instruments seems to provide a positive effect. For example, the utilisation of the standards in the Green Procurement Law, which was introduced prior to the arrival of the target years set forth for the respective product groups under the Top Runner Program, contributed to the speedy fulfilment of the Top Runner standards on an individual model basis. The Green Automobile tax scheme also incorporates the Top Runner standards as one criterion for the selection of environmentally superior cars. The modest tax reduction for consumers is perceived to be the most effective driver for triggering changes in consumers' purchasing behaviour. While the effect of the Top Runner

Program may be limited to the promotion of relatively incremental progress, awards - and the improved corporate image attached to it - can contribute to the development of products with outstanding environmental performance.

The approach may work well for defined and quantifiable aspect of environmental impacts (use-phase energy efficiency) but the application of the approach to other environmental aspects may face boundary problems. It can be difficult to decide which parameters of products are used to determine the Top Runner in the case of, for example, design for end-of-life. However, it is not necessary to address all environmental impacts of the products' entire life in the one piece of legislation. The parallel introduction of several pieces of legislation that cover different environmental impacts during the products' life as a whole would motivate producers to incorporate these various issues in their product design strategies.

4. Low consumers' uptake: more incentive necessary?: Given that the Program addresses the use-phase energy efficiency of products, the real environmental improvement occurs only when consumers actually purchase energy-efficient products. Changing purchasing behaviour by providing information to consumers faces challenges, even when consumers can directly benefit from cost savings during the use-phase. Despite the availability of products that are significantly more energy efficient, their relative high initial cost make them less competitive than the cheaper, less efficient counterparts. The degree of appreciation of the cost savings during the use phase differs between different types of consumers. The situation may be worse when there are no direct health impacts or cost implication to consumers. The perceived effect of a Green Automobile tax scheme suggests that more incentives are needed to influence a larger number of consumers.

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Anti-Global Warming Initiatives by Corporations and Citizens

By JUNKO EDAHIRO and Writer Kiyoshi Koshiba

Japan for Sustainability

We share information on developments and activities originating in Japan that lead toward sustainability, with the aim of building momentum toward a sustainable path for the world

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Under the Kyoto Protocol, which entered into force in February 2005, Japan is required to achieve its target of a 6% reduction in greenhouse gas (GHG) emissions. Japan's GHG emissions in the base year 1990 were 1,237 million tons of carbon dioxide (CO₂), which needs to be reduced to 1,163 million tons per year during the first commitment period (2008-2012) in order to achieve the targeted 6% reduction. However, since the amount of emissions in 2003 was 1,337 million tons, 8.3 % higher than in the base year, a 14.3 % reduction is actually needed to reach the target.

Looking at emissions by sector, about 20% come from the industrial sector, about 10% from the household sector, and about 10% from the transportation (private automobile) sector. Moreover, emissions from all of these sectors are significantly increasing. This is due to the increasing amount of energy consumed in offices and homes and for carrying passengers. We now take a look at some anti-global warming initiatives taken by companies and communities.

Since experiencing two oil crises in the 1970s, Japanese firms, especially manufacturers, have made enormous efforts to save energy. As a result, primary energy consumption per unit of gross domestic product has been reduced, and the country is now a world leader in energy efficiency.

“The spirit has been passed to modern businesses in their efforts to curb global warming, and positive results have emerged”

Fuji Xerox Co. Ltd., which had emitted a total of 145,000 tons (CO₂ equivalent) of GHG gases in 1990 at its domestic factories, reduced its GHG emissions to 111,000 tons (23% reduction from 1990) in 2003. Furthermore in April 2005, it eliminated all GHGs except CO₂ from the production processes at its Japanese factories, including those of affiliated companies.

Toshiba Group has been carrying out various projects aimed at achieving, by 2010, a 25% reduction of energy-originated CO₂ emissions per nominal production volume, as compared to 1990. The group aims to reduce annual CO₂ emissions by about 500,000 tons, equivalent to 25% of its estimated emissions in 2010.

Not only striving to reduce GHG emissions from its own companies and plants, Toshiba also focuses on the development of energy-efficient products to reduce CO₂ emissions. Let's look at refrigerators. Electricity used for refrigerators typically accounts for about 20% of total electricity consumption at home. As their energy efficiency has improved in the last several years through the initiatives of manufacturing companies, many types of refrigerators consume only one-third to one-sixth the amount of electricity compared to those of ten years ago.



Note: Carbon dioxide too is a gaseous waste.

Regarding the dishwasher/dryer, which recently has become common in Japanese homes, Hitachi Home & Life Solutions, Inc. released the industry's first dishwasher/dryer that uses what it calls "nano-steam" technology. Compared to washing by hand, the appliance uses less electricity, gas or water, resulting in a reduction of CO2 emissions by 65 % per year (equivalent to washing 60 dishes, or dishes for seven people).

Fuel cell cogeneration systems, which provide both electricity and hot water to homes, have been developed and installed in growing numbers. In 2005 Tokyo Gas and other companies started to install these systems in households and to collect operational data necessary for subsequent large-scale implementation.

Aiming to promote appliances that help reduce CO2 emissions, the Development Bank of Japan (DBJ), in collaboration with power companies, launched a new loan program in April 2005 to facilitate the leasing to households of energy-efficient home appliances, water heaters and automobiles. This is because it is important not only to develop such energy-efficient appliances, but also to offer programs and systems to promote their adoption, if we are to reduce the environmental impacts of society as a whole.

Local municipalities have also been making efforts to develop systems that facilitate citizens' and corporations' activities to reduce CO2 emissions. For example, in its Master Plan for the Environment, adopted in January 2002, the Tokyo Metropolitan Government (TMG) set a goal of reducing GHG emissions by 6% below 1990 levels by 2010, and in February 2002 began implementing its own countermeasures, called the "Tokyo Challenge," to curb global warming.

In January 2005, the TMG revised its Municipal Environment Protection Ordinance and mandated large businesses to establish their own CO2 reduction targets. The TMG has also decided to promote several projects in collaboration with corporations, including a cooperative delivery system where supplies are delivered by consolidated delivery agents to multiple department stores in Tokyo.

When all of the 15 Tokyo-area companies (with 30 stores) belonging to the Kanto Department Stores Association participate in this project, in 2005 the number of delivery vehicles on the road will be reduced by up to 50%, easing traffic congestion and reducing CO2 emissions by 4,000 tons per annum.

Many other local governments, including Iwate Prefecture, have also been encouraging companies by establishing rules such as those that officially recognize those companies that actively implement environmental measures. On another front, Shiga Prefecture is supporting a citizens' environmental project -- an energy-saving point system -- in which a participating group of households is awarded a grant in proportion to the reduced amount of electricity consumed by the group in a year as compared with the previous year. This system is expected to raise citizens' awareness about global warming, to reduce their electricity bills and to support the group's activity.

In collaboration with ICLEI-Local Governments for Sustainability, consisting of about 470 local governments from 67 countries, Kyoto City, the birthplace of the Kyoto Protocol, has been seeking to create a "World Mayors' Council on Climate Change" (tentative name), an international network of municipalities dedicated to curbing global warming. This is a Japan-initiated global movement to achieve the Kyoto Protocol targets.

In this final section, we take a look at a system called "Household Environmental Accounting," one of Japan's special countermeasures against climate change. It is a system to calculate the amount of CO2 emissions from each household by measuring the consumption of electricity, gas and water as well as the amount of waste. A wide variety of organizations such as local governments, companies, and citizens' groups are involved in this initiative.

A prototypical household accounting book produced by the Japanese Ministry of the Environment features an easy-to-use environmental management system based on the PDCA (plan, do, check, and act) cycle. It helps citizens become aware of the interaction between their daily lives and the environment, take actions to reduce their environmen-



Note: The total value of the earth's natural ecosystems is estimated to be around twice that of the total global GNP. (Nature vol. 387, 1997)

tal impacts and practice environmentally friendly lifestyles.

Shimonoseki City of Yamaguchi Prefecture provides the Household Environmental Accounting program on its website. It allows users to calculate the amount of CO₂ emissions per household by entering their utility consumption data for electricity, gas, water, kerosene, gasoline and light oil. Their emissions data can be compared with the average of all users and families of the same size. There is also an "eco-saving" assessment feature that allows users to visually compare their energy costs with those of an average household.

Matsushita Electric Industrial Co., known worldwide as Panasonic, supports employees and their families to join a Household Environmental Scorecard program. The number of participating families has increased steadily from the initial 3,300 to 27,000 in 2003. The average CO₂ emissions per household per year were cut 23% between 2002 and 2003.

Yamaha Motor Co., the Japanese motorcycle manufacturer, introduced an "Eco-Commuting" system for its employees in December 2004. This was preceded by several years of Yamaha's involvement in an ecological accounting book-keeping campaign, which revealed that huge fuel costs were being paid by its employees for commuting. In January 2005, the company began issuing a monthly allowance of

1,000 yen (about U.S.\$9.71) to employees who walk and/or ride a bicycle more than two kilometers to commute to work. An allowance was also instituted for employees who use public transport "Park & Ride" services. The frequency of company commuter bus services was also increased. The introduction of the new system has encouraged 60 more commuters to walk part of the way to work, and the new allowances apparently led to this favorable reception.

We have described in this article how environmental activities of companies and individual citizens are facilitated by their own initiatives as well as municipalities' policies. It should be noted, however, that the emissions cut by over 14 percent, needed for Japan to meet its Kyoto commitments, would require a major shift in taxation and other institutions, including the introduction of a carbon tax and the compulsory purchase of power from renewable sources.

TOYOTA

Corporate Social Responsibility in Japan

By KYOKO SAKUMA

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In Japan "CSR" is attracting more press coverage than the critical appreciation related to company responsibility and accountability. Unlike in Europe where CSR has its origin in the societal and environmental concerns of what is generally called the 'civil' society and understood as an evolving process in a multi-stakeholder debate, CSR in Japan seems to have developed more into a kind of management standard and a competitiveness tool for companies. Indeed many Japanese companies and CSR consultants are busy defining "the real" Japanese CSR standards to counter the Western-imposed CSR standards. However some entrepreneurs take the view that there is no such thing as "Japanese CSR", because CSR is an individually-thought solution to societal problems based on individual company's inherent values.

This report will present the recent CSR reporting efforts in Japan, and some issues of concern related to Japan's societal challenges on the way towards sustainable development. The report seeks to capture the general views on CSR expressed by major stakeholders, namely companies, civil society and governments, to show how the concept of CSR as

perceived in Japan might or might not embrace social and societal challenges. Finally, the report introduces three innovative Japanese companies, which have been providing solutions to the social challenges without referring to CSR.

BURGEONING CSR REPORTS

According to the survey conducted by KPMG International Global Sustainability Services, Japan ranks top among 16 countries in terms of the number of top 100 companies with separate CSR reporting in the last three years. 72 % of top 100 Japanese companies published a separate CSR report in 2002, and 80% in 2005. This percentage is higher than among the comparable top 100 in UK (71%), and far higher than Canada (41%), France (40%) and Germany (36%). Moreover, Japanese companies comprise more than 20% of the total

reports using the Global Reporting Initiative (GRI) guidelines, making Japanese companies top among the global GRI reporters.

CSR reporting is not confined to large companies: 23% of Japanese companies (51% among large companies) prepare a separate report covering both environment and society, and 32% have established a CSR department or a CSR committee, according to the study made by Keizai Doyukai, Japan Association of Corporate Executives.

The amount of reporting and the ardour for CSR is surprising in the absence of a legal obligation or mounting pressure from civil society. The motive as researched by Keidanren, the Japan Federation of Economic Organizations, seems rather to be driven by its popularity with the media, the CSR drive of business organisations and the increasing demand by SRI research companies and others to answer CSR questionnaires and inquiries.

It is definitively in the right direction to increase corporate disclosure on these CSR indicators. But if reporting is a means to a goal, then, what are the real goals of CSR in Japan?

JAPANESE COMPANIES AT THE CROSSROADS OF SOCIAL RESPONSIBILITY

In order to better understand Japan's social challenges for the future, we need to look at some statistics and trends.

Decline in working population

The Japanese population will have declined by 10 million, and one in five will be over 75 years old by 2030. The birth rate in 2004 was the lowest (1.29), despite a required birth rate of 2.1 to maintain the population level. The working population has declined since 1996 and a further decline is expected when a large portion of the working population retires at the age of 60 in 2007. This means that today, one pensioner is supported by four workers, but by 2015, one pensioner will only be supported by two workers.

Some argue that a lower birth rate is a natural result of long un-tackled structural problems in Japanese corporate life. Women and young couple see little advantage of having children. When women have little chance of retaining jobs during and after pregnancy and birth, childcare leave and holidays are difficult to take, long working hours and low participation of men in household chores disable proper

child-rearing, and when there is an acute shortage of available nursing facilities, and no preferential tax system in spite of expensive educational fees etc.

Normalisation and an attractive working environment

Of the 49,340,000 working population as of April 2004, 31.5% were so called non-regular workers, whose social security coverage is limited or nil. Companies have been steadily replacing expensive 'regular' employees, i.e. those with an open-ended contract, with cheaper and more convenient short time or part-time i.e. 'non-regular' contracts. Yet the workload for each regular employee is increasing, and taking paid leave is becoming more difficult. According to the General Survey on Working Conditions, the percentage of an average worker's annual paid holiday consumption over an average of 18 provided paid holidays was 46.6% (8.4 days) in 2004, a 0.8% drop from the previous year. As job evaluation and remuneration are more and more based on results rather than working hours, unpaid overtime is also increasing, especially in smaller companies. In 2004, 20,299 cases of non compensated overtime were detected despite a legal obligation to pay compensation. Individual labour disputes are also on the rise, as employees do not feel the constraints to lay off non-regular workers.

Long working hours and overtime inevitably create stress and mental health problems. Mental health problems are increasing particularly in large companies (>1000 employees), with nearly 80% having 1-3 employees who are taking longer than one month leave due to mental health problems.

Under this condition, disabled people and people with sick or disabled dependents have little chance of finding a normal job or staying in their jobs. In fact, despite the government's appeal to comply with the 1.8% statutory employment rate for disabled people, the average practice among Japanese companies has been around 1.48% since 1998. Companies employing below the required rate are found more in the service sector: the transport sector (83%), the retail and food sector (71%), the financial and the real estate sector (64%). Moreover, many of the compliant companies record a figure just above the required rate. However what is needed is not compliance with the required disability employment rate, but a human resource management by which disabled people, people with childcare and family care obligations and other people with disadvantages can develop careers in the workplace.

Increasing low-skilled young people

In the meantime, unemployment rate remains around 4.4% (May 2005) and this rate among young people is as high as in Europe. At the same time, a shortage of younger skilled workers has become evident. Freeters people, who have never taken up real regular jobs, amounted to 4,170,000 in 2001. This represents one in five of the working population, and in the age group between 18 and 34, one in three are "freeters". A typical freeters' lifetime income is approximately one-quarter of the average income of regular full-time employees, and translates into 1/5 of the tax income of regular workers. Companies are trying more and more to retain experienced retired workers (at 60) to keep the skill level in house, but they cannot depend on them forever. Besides, freeters are not paying any more into the social security system, which can be seen as a national tax income loss of 150 billion JPY.

While the freeters are a long-term risk factor for Japan's economic growth, one 2003 survey shows that 30% of companies evaluate the experience of freeters as negative (up 12% compared to 2000) and only 12% actually employed freeters as regular employees. On the other hand another study indicates that 70% of freeters want to have regular employment contracts.

The challenges ahead for Japanese companies, therefore, could be summarised as the following:

- (1) Shorten working hours by making workflow more efficient and provide a working environment more suitable for child-rearing generations;
- (2) Create jobs innovatively for people traditionally excluded from job markets, such as women, disabled people, the young unskilled population and foreigners;
- (3) Stay competitive and profitable so that jobs and talents are retained in house and that tax payments both by companies and employees contribute to the national budget.

Having these issues in mind, let us look at the views from companies, civil society and governments on CSR to find out if there is coherence between what ought to be done and what is being done.

CSR: CORPORATE VIEWS

Since Keidanren, the Japan Federation of Economic Organizations, first announced its Charter for Good Corporate Behavior in 1991, a

series of revisions were introduced in order to give the Charter the function of a guideline. An accompanying monitoring mechanism was also installed. The 2004 version of the Charter, while upholding the importance of communication with stakeholders and of addressing concerns including human rights, child and forced labour and poverty, clearly states that "legal compliance is the core of social responsibility and voluntary approaches should be a way forward".

The recent survey results of Keidanren confirms the similar thinking of major Japanese companies. While 75.2% of companies are conscious of CSR and more than 80% have a code of conduct or corporate charters, the prime reasons for taking up CSR were popularity in the media (66.7%), CSR-conscious activities in economic associations such as Keidanren (56.7%) and SRI questionnaires (39.3%). Reasons such as corporate mergers (8.4%), internal reform to combat scandals (13.3%) and benchmarking (10.7%) were found in a minority of companies. Finally, the survey revealed that legal compliance and administrative guidance compliance was the most important CSR issue today (96.6%) and in the future (73.6%), followed by safety and quality (64.7% and 43.9%), environment (66.3% and 60.5%), privacy protection and information security (61% and 39.3%) and risk management (42.5% and 56.8%).

In parallel, "the 21st Century Declaration" (2000) by Keizai Doyukai, the Japan Association of Corporate Executives, identifies specific responsibilities for Japanese companies. The core elements of the 21st Century Declaration is found in its 2003 Corporate White Paper in which President Yohei Kobayashi identified the two sets of changes required for Japanese companies to embrace CSR:

1. By using a market mechanism, corporations are expected to create values in a more efficient manner and to reinvigorate the sluggish market via improved profitability and competitiveness;
2. Consolidate the mission that corporations are obliged to meet all stakeholders' expectation in order to realise the above, and also establish a governance structure to implement the mission.

As the period of SRI questionnaires and the CSR boom in early 2000 coincided with Japan's experiences of corporate scandals such as illegal food labelling, food and product safety problems, and corruptions, CSR is as seen above very much understood by companies as a compliance issue.

However, if legal and guidance compliance become the basis of Japan's CSR, how do we meet the future social challenges?

CSR: CITIZEN'S VIEW

In the 2002 survey conducted by the Japan Institute for Social and Economic Affairs (JISEA), 62% of interviewees preferred purchasing goods produced by responsible and ethical companies. A surprising result came out however in the similar 2005 survey: only 19% preferred purchasing goods produced by responsible and ethical companies. This result was attributed to the increasing number of people placing higher priority on quality, price and taste in selecting goods and services (77%), compared to 2002 (33%). Given that 99% of interviewees recognise that consumers are the most important driver for CSR, this result opens a question about the evolving elements of CSR in Japan.

Diminishing consumer pressure is also a counter trend to the globally heightened awareness of consumer responsibility. According to the global CSR Survey conducted by APCO Worldwide in 2004, 72% of people interviewed actively purchased goods and services produced by companies taking initiatives in CSR and stopped buying products as a result of corporate irresponsible behaviours. 61% recommended others to follow their decisions.

Japanese individual investors' interest in CSR issues, on the other hand, seems to be more concentrated on environmental issues, product safety, and consumer protection. Unlike their US and UK counterparts, issues such as employees' rights, health and safety, labour standards in overseas factories are relatively new domains for them. However, a recent remarkable growth in foreign ownership and individual ownership suggests that CSR-related issues might soon be tabled or discussed at general shareholders' meetings.

As was the case in Europe for a long time, trade unions are not perceived as the most important driver for CSR in Japan. Unionisation rate has been in decline in recent years, and Rengo (the Japanese Trade Union Confederation) is also redefining its role in the debate about CSR. While a Rengo CSR policy is in the making, Rengo's research institute states that trade unions have to take an active role in defining the "social" aspects of CSR, as the present CSR debate might develop without tackling real social issues.

CSR without real social issues and challenges sounds odd, but until the civil society becomes an accepted dialogue partner for management, there probably remains a risk. Low awareness of consumers on issues beyond one's own living environment has been attributed to the fact that the Japanese word "Shakai" (society) might be widely understood as "Seken", which defines the world in which one identifies oneself only in relationship with one's acquaintance. If this is true then, a lot needs to be done to raise awareness in Japan about the neighbouring poverty, discrimination, harassment and other social issues.

CSR: GOVERNMENT VIEWS

Unlike in Europe, where amongst others the European Commission has outlined a policy for the main CSR issues, based on the political commitment for jobs and competitiveness as stated in the Lisbon Strategy, there is no over-arching official policy framework to promote CSR or sustainable behaviour and growth of companies in Japan.

Several study groups with membership extending from academics, companies, SRI practitioners to consumer organisations, have been formed in key ministries, with a view to developing their sometimes-competing initiatives in their respective areas of CSR. The Ministry of Economic, Trade and Industry (METI) Discussion paper on CSR (September 2004) concluded that it is difficult to resort to laws and regulations whenever business ethics scandals in management, accidents caused by products and services arise. It also suggests that leaders are needed in corporate, civil society and governments to advance CSR in such a way that not only the negative aspects of corporate activities are highlighted but also the positive contributions of companies are promoted. METI also published a 'CSR Guideline and Checklist for Small and Medium Enterprises (SME)' in 2005.

An expert group formed by the Ministry of Health, Labour and Welfare (MHLW), on the other hand, recommended (2004) that the MHLW should promote labour-related information disclosure by companies, introduce model indicators for checking performance, and set up awards and good practice promotion among others. The paper also highlighted that MHLW needs to coordinate with other ministries to make CSR policies effective. In parallel to the individual Ministries' papers, in April 2005 the Japanese Government published the "Japan 21st Vision", a framework paper by top experts from different domains and disciplines that

touches on CSR related subjects and suggests making Japan an "open and cultural rich country" by the year 2030. The 21st Vision spells out three main strategies to realise this "image";

(1) Create a virtuous cycle of rising productivity and growing income;

(2) Take maximum advantage of globalisation;

(3) Create systems to provide public values as selected by the citizenry.

The strategy (1) relates to items such as creating high intellectual and cultural values, fostering and utilising human resources and eliciting individual motivation.

The strategy (2) advocates that Japan contributes actively to the resolution of global issues such as measures to address global environmental issues, assures stability of energy supply, and form a peaceful and stable East Asia.

The strategy (3) includes reforming government-dominated markets, implementing "selection and concentration" of public services via inter-regional competition in creativity and ingenuity, providing good public security and assurance of their effectiveness and equality of opportunity, and creating systems for society to support people who bear and rear children so as to alter the trend toward a declining birth rate.

A critical comment appeared in the Nikkei newspaper on 18 May 2005, saying that the Vision lacks the strategy of creating a social safety net for compensating the smaller government and government budgets. The Vision is written with the aim of curtailing government deficit and gives signals throughout that the private sector takes that lead and that individual responsibility in managing creativity and wealth becomes evident. The Nikkei article argues that the government must ensure an infrastructure or supporting system for an enriched aging society, which cannot simply be measured in GDP terms.

WILL IT BE JAPANESE CSR STANDARDS?

It is difficult to say that the present generally accepted "CSR practices" adequately address the challenges faced by Japanese companies to enable them to play a role in Japan's sustainable growth and development. The corporate sector cannot be blamed. The Japanese government does not clarify policy measures within its 21st Vision on how to make Japan a place in which all people in the world wish to work, live and visit, and more importantly, how

to make use of the private sector's capacity to achieve the aims of this Vision.

The Law unifying the welfare system for physically and mentally disabled people, which was enacted abruptly in October 2005, in this context is a worrying example. The new Law transfers the prime financial and administrative responsibilities to municipal governments with financial support from the central and prefectural governments. But as criticised both by the disabled and NPOs representing them, the Law, in the name of boosting efficiency of services for the disabled and encouraging the disabled to be independent, aims at financial cost reduction. It is certainly a positive point that the Law will make the subsidy system and disability evaluation criteria more transparent. However, it will also require disabled people to pay medical costs and care services for the amount they require, and their financial capacities to do so will be judged based on the household income in 2006.

An overwhelming majority of disabled people in Japan have no employment and earn no more than 10,000 JPY a month. Thus this new law will lead to a substantial increase of the burden for families with disabled people. If it was the government's intention to use the private sector capacity to ensure stable and flexible jobs with adequate income and career perspectives, then a policy framework and instruments to ensure clear rules might be needed.

In the absence of a framework promoting best practices, it is very encouraging to know that some companies in Japan demonstrate in an innovative way to use the market mechanism to maintain jobs at home or include socially disadvantaged people. KOA provides a workplace suitable for the local agriculture/farming environment, OX Engineering produces wheelchairs that would give disabled people the opportunity of going out. Yamato Transport, together with its Foundation creates jobs that enable disabled people to pursue careers.

What is common for these companies is that they do not quote CSR. The very question to be asked in advancing and deepening CSR debates in Japan might be therefore "Will companies be ready to face the social and political challenges beyond technical solutions? "

Corporate social responsibility in Japan *Case study*

The following three companies are relatively less known than the most popular stocks in the SRI funds. However, their unique and innovative way of operationalising their sense of social responsibility into their core business deserves appreciation. All three companies have sought to provide solutions to Japan's social challenges (see article), while remaining competitive in the market. Whilst many case studies and reports have been written on large companies, the following cases will shed light on smaller companies' good practices in Japan.

By KYOKO SAKUMA, Sustainability Analysis & Consulting

KOA

Koa Kogyo, a manufacturer of fixed resistors, was established by Kazuto Mukaiyama in 1940, and was dedicated to "bringing sunshine to his home Ina Valley" (Nagano Prefecture, approximately 200 km northwest of Tokyo) whose important sericulture industry had been devastated by the worldwide depression of the 1930s. Today KOA supplies resistors and other electronic components such as integrated circuits, coils, printed circuit board, etc, to over 900 companies worldwide, including Nokia, Ericsson, Motorola and other leading electronics producers.

KOA's management philosophy is built on the founder's mission to society: to create communities where agriculture and industrial activities co-exist and prosper and to minimise harmful industrial effects by engaging farmers and their families as employees. This philosophy is embedded into KOA's innovative business strategy and in efficient

operations, making KOA a unique community-oriented company, in contrast to its competitors who have been shifting production (thus jobs) to China and other cheaper overseas locations.

Employee welfare and motivation

Firstly, KOA locates its 15-20 production sites in every village of Ina Valley, so that jobs are created throughout the Ina community. Today 85% of production and 70% of 3,174 group employees are found in the local areas. Job evaluation is made transparent to all employees, and the in-house labour union and the management have taken sufficient time to discuss performance remuneration in order to minimise negative impacts on employees.

Lean production and workflow

The prime reason why KOA can keep jobs at home is its continuous improvement in production workflow to curtail waste and inefficiency. KOA Profit System eliminated unnecessary layers of manage-

ment to achieve small-lot, customised production and direct delivery from factory floors to customers. Large-volume, high-speed, and high-cost production equipment has been replaced by self-made state-of-the-art low-volume, low-speed, low cost equipment. This in-house innovative manufacture of equipment serves not only as a source of employee motivation, but also as a work-life measure, as employees are able to shorten working hours to do farming and forestry as a result of an efficiency gain.

Creating a circulatory community

KPS, through its waste reduction in production and workflow can also reduce energy, resource consumption and waste production. As a majority of employees live in the areas surrounding Tenryu River, KPS aims to eliminate any negative impacts on soil, water and air in individual workflow. In parallel, KOA is experimenting several community projects, with a means to apply the KOA philosophy to its business. Shinrin Juku (forestry school), which was initially launched to help traditional forest management skills to be transferred to younger generations, manages seminars and trainings designed and given by the KOA's full-time staff. KOA Farmpark grows rice and fruits to enable the employees to share the joy of harvest with the local farmers.

Annual integrated community-shareholders meeting

Since 1995, KOA places the local community at an equal footing as its shareholders, by integrating its annual shareholders' meeting (GSM) into the annual community assembly. After the GSM, the KOA president invites local residents, employees' families, suppliers, etc to be involved in a dialogue about the company management and future strategy, the levels of use of local resources and achievement in local community contribution. Later in the afternoon, Kanshasai (Thank you Festival) is organised to promote grass-roots interaction between the employees and the local residents.

The future managers must pass the test for living the KOA Story. By doing this, KOA aims to ensure social, environment and economic prosperity in the years to come.

OX ENGINEERING

OX Engineer, formerly Sportshop Ishii, was established by Shigeyuki Ishii, a former engineer of Yamaha Motor in Chiba Prefecture in the 1970s. As a two-wheel engineer and racer, Mr. Ishii's major work included outsourced production of two-wheel bikes and test racing to prove quality and safety on OEMs, including Yamaha Motors. It was the founder's accident during test racing in the 1980s that gave birth to a new wave of OX Engineering leading the company becoming Japan's top wheelchair producers. After nearly a decade of trial and error, by 1995, OX Engineering had become a 100% wheelchair producer and ceased two-wheel bike production. Today OX Engineering accounts for nearly 90% of the wheelchair market in Japan and its popularity is growing in Asia and Europe.

OX's wheelchairs fundamentally altered the notion of "being in wheelchairs" - Wheelchairs are usually perceived as welfare goods, but Mr. Ishii introduced innovative elements such as high quality, speed and elegance. As a user of wheelchairs, Mr. Ishii's renewed management philosophy, although explicitly pronounced, is to promote normalisation in society where people on wheelchairs no longer fear going out in public and feel proud of having sophisticated and chic goods around them.

OX Engineering's success is not just the passion and commitment of its founder/president, but underpinned by long-term strategic plans and development.

Speedy R&D and motivation of employees

OX Engineering retains 15 or so core engineers who followed Mr. Ishii, when he announced that the company would shift entirely the production portfolio to wheelchairs. All of them were top engineers in two-wheel bikes, with knowledge and expertise in motorcycle racing technology. Among the employees there are those who won medals in Para Olympic games. To satisfy the engineers who want to have market recognition of its capabilities, OX Engineering ensures its development speed is the fastest in the market by flattening the organisational hierarchy and shortening the distance between the management and production floor. In order to secure talented and engaged engineers, OX Engineering is seeking to create a welfare engineering department at Chiba University, with whom it already runs a joint research program.

Focus on racing and design

to maintain high price

OX Engineering wheelchairs won 64 medals in the past four Paralympics. Distinguished from hospital wheelchairs, OX's wheelchairs are designed to meet the total satisfaction of users. Mr. Ishii has also created a market for wheelchairs for children. These child wheelchairs were formerly no more than simple bricolage added to adult ones. However, OX Engineering designed the wheelchairs to fit the child's bodies and to provide enjoyment. In fact, one OX wheelchair has 7 intellectual property (IP) rights, reflecting their level of high design and functionality. Because of this positioning, OX wheelchairs can cost as much as 300,000 JPY per wheelchair.

According to Mr. Ishii, the capability to provide a moral to your work is decisive to employee motivation, and thus, to succeed as an organisation.

YAMATO TRANSPORT & SWAN BAKERY

Masao Ogura, past President of Yamato Welfare Foundation and former Chairman of Yamato Transport, is said to be the first entrepreneur in Japan to construct disabled people facilities to make disabled people more independent. While many entrepreneurs are eager to grant money in the form of charity, Mr. Ogura focuses on a normalisation strategy by creating jobs for disabled people and enhancing management skills of care staff.

Mr. Ogura inherited his post of President from his father (founder) at Yamato Transport in 1971. He is remembered as a revolutionary man, who, upon launching its most popular express courier service, the so-called "Kuroneko Yamato Express" (literally black cat), fought with Ministry of Transport to reform the monopoly of individual small package market by postal service.

In 1993, after leaving the company as Chairman, Mr. Ogura set up the Yamato Welfare Foundation with his private money amounting to 2.4 billion JPY. From 1995 until he passed away in July 2005, he was engaged without any remuneration in building the capacity of more non-authorized small-size disabled people workshops and helping the independence of disabled people. Mr. Ogura's mission was to enable disabled people to earn a living wage and escape from the 10,000 JPY a month plus public-grant-dependency-cycle.

Creating jobs for disabled people

As a direct instrument to provide jobs, Yamato Welfare Foundation created in 1998 a new bread-baking company, Swan and its first bakery shop in Ginza (Tokyo). By 2003 nearly 100 disabled people found jobs in 11 Swan shops. In 2004, the number of Swan shops extended to 15, spreading to the Hokkaido area. In October 2004 Yamato Transport launched a normalisation initiative via its core business: Kuroneko mail delivery service by disabled people workshops and welfare facilities. Unlike a usual delivery contract made with an individual Kuroneko employee or sales driver Yamato Transport local mail centers (1560 in Japan) through the Foundation, concludes a mail delivery contract with the workshops and facilities at the same unit price. Because the contact is between organisations, the risk is better managed in such as postman replacement and role sharing with Yamato's staff. By the end of 2004, 89 facilities applied for the new mail services, 34 of which started the business. As of August 2005, 315 disabled people work as postmen

Yamato Transport introduces the model disabled people workshop "Lime", located in Machida City, Tokyo, on its website. Lime's founder, Mr. Amano, was awarded the 5th Yamato Welfare Foundation Prize (2004) for his engagement in assisting disabled people who wish to work in normal institutions and promoting disabled people employment in companies. Mr. Amano achieved 50,000 JPY a month for his workshop in 2003 (before establishing Lime) against the average 10,000 JPY.

Yamato Welfare Foundation has been empowering people like Mr. Amano. There is great potential that Yamato Transport can come up with other normalisation programs directly linked with its core transport and delivery business.

Competitiveness of enterprises for environment and energy saving technologies

All informations come from the website of Japan for Sustainability
unless otherwise indicated

Matsushita Electric Works Ltd. Wins Environmental Grand Prize

Matsushita Electric Works, Ltd., a core member of the Matsushita Group, won the Grand Prize for the 14th Global Environment Award, according to an announcement released on February 2005. The company was one of 124 applicants for the award, which aims to promote the coexistence of industrial development and environmental protection Sponsored by Fujisankei Communications Group, the award is presented to companies, local governments, universities and citizens' groups that actively pursue environmental conservation activities.

MEW was rated highly for its unique achievement in developing and diffusing energy-saving, long-life lighting equipment. Its ratio of eco-friendly product sales

for its full range of products surpassed 50% in 2003.

The Economy, Trade & Industry Minister's Award was won by Sharp Corp., the world's front runner in solar electricity generation system. Environment Minister's Award went to Dai Nippon Printing Co., which succeeded in reducing the amount of toluene, an ink solvent, that it discharges into the atmosphere. The Education, Culture, Sports, Science and Technology Minister's Award was presented to Shimizu Corp., one of the largest general contractors in Japan, which has taken a wide-ranging perspective in actively working to reduce, recycle construction wastes.

Hitachi Releases Water-Saving Dishwasher/Dryer

On July 2005, Hitachi Home & Life Solutions, Inc., a leading Japanese home appliance maker belonging to the Hitachi Group, released the industry's first dishwasher/dryer with nano-steam technology. This dishwasher loosens food residue from dishes using ultra-fine steam with a water droplet diameter of 1.5 nanometers. It washes away the residue by spraying high-pressurized water in sequence from nozzles at the top, bottom right and bottom left. As a result of its cleaning ability, the appliance uses only 9.8 liters of water, the least amount of water in the industry, to wash 60 dishes, or dishes for 7 people. Compared to washing by hand, it uses less electricity, less water, resulting in a reduction in carbon dioxide emissions of 65%. A silver ion coating, which Hitachi adopted for the first time in the industry in 2004, is used to keep the inside sterilized regardless of temperature. Nano-titanium, which has a deodorant effect, is also used to further improve cleanliness.

Nata de Coco Used for Thin Display Substrate

In collaboration with Kyoto University, three companies in Japan, Pioneer Corp., Mitsubishi Chemical Corp. and Rohm Co., have succeeded in developing a thin display substrate using nata de coco, a dessert ingredient made from coconut. This "bio-nanofiber composite" substrate is flexible and transparent, and was created in pursuit of an original concept for reinforcing a transparent polymer using nata de coco.

Made from coconut milk, nata de coco mainly consists of dietary fiber. In this process, it is compressed, desiccated and injected with a special resin to produce a flexible display less than one millimeter thick. The display not only has almost same strength and heat resistance as a glass display but is light and difficult to break as well. Made from natural materials, it also has low environmental impact and is inexpensive. This substrate is thus expected to be employed in flexible mobile displays, e-books, e-newspapers, e-posters, and other new products.

Toshiba Lighting Markets Ball-Shaped Fluorescent Lamp for General Use

Toshiba Lighting & Technology Corp., a subsidiary of Toshiba Corp., one of Japan's major electronics manufacturers, released on October 1, 2005 a new compact fluorescent lamp (CFL) named "Neoball Z Real," which perfectly duplicates the shape and light quality of regular incandescent bulbs.

With a tapered ball shape like an incandescent bulb, the CFL is compatible with almost any general lighting fixture. The small size of the emission area has been an issue for CFLs, but this has been solved by putting the greater part of the bulb's inverter into the base. In developing Neoball Z Real, the company achieved efficient light emission by boosting the ratio of emission area to the total surface area other than the base to 92% up from a 72 % ratio in existing products.

Test Starts for Home-Use Kerosene Fuel Cell

Nippon Oil Corp. of Japan and Tokyo-based Ebara Ballard Corp., a joint company of Ebara Corp. and Canada's Ballard Power Systems Inc., the world's largest fuel cell company developed a kerosene fueled one-kilowatt polymer electrolyte fuel cell (PEFC) system for residential use and started the world's first verification testing at Nippon Petroleum Refining Company's Yokohama Refinery.

The joint group believes that a kerosene-fueled PEFC will offer large cost benefits because kerosene is high in energy density and cost-effective. The group has overcome many technical hurdles by combining Nippon Oil's advanced catalyst-based oil reforming technology, Ebara Ballard's cutting-edge technology in fuel cell system and Ebara's production technology.

The newly developed test model of the one-kilowatt fuel cell unit for residential use has an electrical efficiency of 33%, paving the way to the target of 36%. The product is 1 by 0.9 by 0.3 meters in size.

Further joint development work will continue among the three companies with the focus on improving power generation and heat recovery efficiencies (total energy efficiency target is 76%) and compactness. The companies aim at a market launch in 2006.

Compared to a Toshiba incandescent light bulb, both electricity consumption and calorific value of the new bulb have been reduced to about one-fifth. These reductions result in lower electricity costs and lower heat loads that effect air conditioning or other room functions. The rated life of the new bulb is 6,000 hours, six times that of an incandescent light bulb.

CFLs are already in widespread use because of the advantages in energy conservation and longer life compared with incandescent bulbs. Domestic demand for CFLs has increased every year, and the company estimates sales of 23 million units in fiscal 2005, with further growth in the market.

Fujitsu Develops Energy-Efficient Flexible Color Electronic Paper

Fujitsu Ltd., a leading Japanese computer maker, and two of its affiliate companies, Fujitsu Laboratories Ltd. and Fujitsu Frontech Ltd., have developed the world's first color electronic paper which can continue to display the same image even after the power is turned off, it was announced on July 13, 2005.

The newly developed product has a memory function and needs no power to keep an image displayed. Moreover, for rewriting, it requires only one-hundredth to ten-thousandth of the amount of power needed by conventional products. Its film substrate makes the product extremely thin and flexible.

The product's structure consists of three laminated layers (red, green and blue) that provide more brightly-colored images than traditional reflective-type liquid crystal displays. It also uses unique technologies in which images displayed are not affected when the paper is bent or pressed with the fingers.

This new electronic paper is as handy as ordinary paper, and anticipated applications include information displays and advertising boards in public spaces, and promotion of a paperless society. Fujitsu plans to expand its marketing efforts to develop the product's applications, aiming to put it on the market in 2006.

Sharp Launches LCD TVs with Lead-Free Solder

Sharp Corp., a Japanese major electronics maker, announced on December 20, 2004 that on January 22, 2005 it will start selling the "AQUOS," a new series of liquid crystal display (LCD) televisions (models LC-20C7, LC-15C7, and LC-13C7) that will have high-quality images and bright screens.

These LCD panels have the highest brightness rating for this kind of product (500cd/m²), as well as environmentally friendly features.

In terms of energy-saving functions, a light sensor for the new models automatically adjusts the brightness of the backlight depending on the amount of light in the room light. In addition, the power is automatically shut off when the TV is not in use, or when no signals are detected from TV stations or users for a certain period of time.

As for materials, all circuit boards are made using lead-free solder, and internal wires and mechanical parts are made of halogen-free materials. To reduce the environmental impacts, the stand is made of more than 30% recycled materials, and it is designed to facilitate easy dismantling at the end of its life.

Daikin to Launch Energy-Saving Hybrid Hydraulic Pump

Daikin Industries developed a hybrid hydraulic pump called the "Super-Eco Rich" that can reduce power consumption by 95%. The Osaka-based company put this pump on the market in December 2005. Hydraulic pump systems are widely used for mechanical tools such as numerically controlled lathes and general industrial machinery. The new system is expected to improve energy conservation capabilities to further promote energy savings at factories.

In the Super Eco-Rich system, the hydraulic pump stops operating when pressure is being maintained: it only operates when the pressure goes below a specified level. Consequently, the system can reduce power consumption to almost zero while pressure remains steady, a condition which accounts for 90% of overall operation time. The company estimates that the Super-Eco Rich system can help cut annual electricity bills for a variable piston pump-based system from 42,000 yen (about U.S.\$372) to 2,000 yen (about U.S.\$18).

This development can also reduce the amount of oil required, and thus downsize the oil tank by 70% and the overall unit by 60%. It can help reduce the size of machine tools as well as reduce waste oil.

Honda delivered FCX fuel cell cars *Honda news - March 2006*

In a world first, Honda last year delivered one of its FCX fuel cell cars to a private individual in the US. Now a glimpse of how a Honda production fuel cell vehicle might appear in three to four years' time is provided by the FCX Concept, which boasts a fuel cell system that delivers more power in less space, in a unique, low-floor platform.

The sleek, premium four-door sedan's low centre of gravity and full-sized cabin offer the kind of driving pleasure and roomy interior previously unimaginable in a fuel cell vehicle. The FCX Concept also features a wide range of technology both for extremely efficient performance and to enhance the driving experience.

Fuel cell vehicles must accommodate a wide array of equipment: as well as the fuel cell stack, there is the motor and hydrogen tank which have traditionally been accommodated by raising the height of the floor. The packaging efficiency of Honda's new compact V Flow fuel cell platform means that it has been possible to create the lowest floor in a fuel cell car so far.

At its heart is the V Flow fuel cell stack in which the cells are arranged vertically. This is compact enough to fit neatly into the centre tunnel but capable of producing 100 kW of power and offering good performance even in sub-zero temperatures - previously an obstacle in the commercialization of fuel cell vehicles. The key to good fuel cell performance is water management, and Honda's latest stack uses an innovative vertical gas flow, whereby oxygen and hydrogen flow downwards, with the water that is formed efficiently discharged under the action of gravity. The design achieves ultra-low-temperature start-up performance on a par with that of a petrol engine.

The drivetrain features three energy-efficient motors to deliver all-wheel drive. The 80 kW front-drive motor is coaxial with the gearbox which allows for a short and compact front end. Each of the rear wheels contains a thin, eccentric 25 kW motor which contribute to the space efficiency of the low-floor design.

Depth of Cultures is European Strength

Interview MIKIO YOTSU

Managing Director of Hitachi Europe, Ltd

Interviewed by SHINJI KANNO,
Eurovision & Associates



In recent years, business activities and investments by Japanese companies within the European Union have been growing steadily, allowing Japan to become the fourth biggest trading country for the EU. According to JETRO, which focuses on the investments of Japanese industries in the EU, by the end of 2004, nearly 1000 Japanese manufactures produced, researched and developed, and carried out sale activities. Among them, Hitachi Europe is one of the most influential companies with 84 subsidiary companies within Europe and has over 5000 employees. Europe is not an easy area for a manufacturing base or forming a market. Mr. Mikio Yotsu (Managing Director of Hitachi Europe Ltd.) who serves as the chairman of the Japanese Business Council in Europe, spoke from the perspective of Japanese industry active in Europe about the EU business environment, competitiveness and sustainable development.

Firstly, I would like to ask you about your company's present and future situation in business activities in Europe.

Historically, we could state that our company's business became full-scale in 1982, when Hitachi was launched in Europe as a sales company.

Today, Hitachi Europe has a headquarters in Maidenhead, and it forms as the core role of business activities of Hitachi's group industrie in Europe. Hitachi's business consists of 7 industry segments, and in 2005 the world sales was \$84,365 million. Sales by market were 63% for Japan, 16% for Asia, followed by 10% for North America and 8% for Europe. Now, in order to raise as soon as possible the ratio of international countries in the market up to 50%, the company is trying to engage in various ways in globalisation. There are 84 subsidiaries of Hitachi within Europe and over 5000 employees; both of these numbers should increase.

The EU being a big market, its 8% share in global sales seems low. How does the company estimate this?

In truth, the expansion of the European market has just begun. It differs from country to country in Europe, however, as a whole there are demands for high value added products, therefore there is a need for a technical core. In this way, we recognize that from the perspective of a global strategy, the European market is a place to have an advanced business. Indeed, in terms of succeeding in China, experience and achievement in Europe is essential.

Does that therefore mean that Research & Development efforts that are directed towards the European market have become more important?

Research & Development in Europe is our core activities. The Research & Development centers in Europe are located in Dublin, Cambridge, Sophia Antipolis, and Milan, and we recently added Munich and Paris for the development of automotive equipment. In each segment, we collaborate with powerful universities or research institutions to perform basic research that will lead to global competitive power, which is one of the distinctive features.

Looking at the location of business as in Europe, it seems to lean towards the West. However, does the company consider actively expanding in the East?

For the specific goal of expanding our presence in Europe, as I mentioned before, we would like to double the sales. In order to do so, localization is necessary, which means manufacturing the products that were imported from outside the EU region within the region itself. For instance, the company will try to manufacture in an area where they could achieve a cost reduction since home electronics or digital media products such as plasma TV's are predicted to increase in demand in Europe in the future.

Today in Europe a big economic theme is "to attempt to intensify the competition and to increase the number of employees", but in your company's case, are there any possible obstacles in the European business environment or hopes of improvements in any field?

As one strategy for intensifying business in Europe from now on, we are considering "the shift from home electronics to digital media products". In this case, the major theme will be how to root the IT technology in European IT society. When the European IT market or industry is compared to the pace of IT expansion in America or Asia including Japan, it is clearly still fragile. Various economic initiatives lead by the EU are aimed at expanding the use of IT, nevertheless, it is considered that establishing the acceptance of the society or extending the recognition may take a while. There is another issue of system and regulations that gauge the activity of the industry that carries burdens. The example that could be cited is the high EU customs duties on audioVisual home electronic products. Nowadays, followed by the progress of technology, the numbers of products that enable audiovisual products or home electronic products to connect to

networks are increasing. The appearance on the market of such products may lower the boundary with IT products. Based on international law, there should be 0% custom dues on IT products in the E, therefore audio visual products or home electronic products such as plasma displays (PDP) or flat displays (FDP) should be treated as IT products as well. Promoting trade with foreign countries' advanced products will lead to the expansion of IT use in Europe. Moreover, this will promote competition between industries, which should increase the number of employees and stimulate the economy.

Concerning the expansion of employment in Europe, reforming the job market in Europe is the counter-planning theme, but how does the company consider this from the industry's standpoint?

Having headquarters in England and regarding business management in the whole of Europe, without a doubt the regulation of job recruitment in continental Europe lacks flexibility and seems to create a burden on industries. In that sense the current discussion held in Europe between the British Anglo Saxon model and the European social model is inevitable for the European competitiveness strategy, hence, I consider it a suitable action. The crucial thing is to provide industry with vitality and competitive power, to create employment, and to improve the quality of employees while maintaining the essence. Improving the employee's welfare is a core factor to the European social model.

Therefore what kind of scheme is the company planning with regard to intensifying industry's power of competition in Europe?

From now on, how we can progress in the localization, including production, sales, Research & Development, and management, is the key factor in achieving competition. It is important to provide products that best suit the European market under the management of Europeans. To mention different sectors aside from the digital media products, such as plasma display, as mentioned before, the company emphasizes automotive equipment as well as the heavy electric sector. The company lays stress on the automotive sector as a business that can

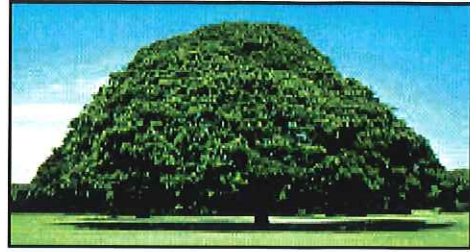


make great use out of its group's dynamic technology. The company engages in toughening the development and improving the business efficiency of engine management systems and drive control systems, manufacturing and developing the lithium ion batteries used in hybrid electric vehicles and vehicle information systems. In Germany there are Research & Development bases for automobiles and factories for fuel pumps, and these are expected to expand the demand of automotive equipment that make use of the eco-safe technology.

As for the heavy electric sector, Babcock Hitachi acquired a 90% stake in Babcock Borsig Power System GmbH (referred to as BBPS hereafter) in 2003, for the purpose of implementing a rational procurement of materials. BBPS has high-grade burner technology for various kinds of coals, such as lignite, bituminous coal and anthracite, and an advanced coal pulverizing technology. By buying up this company, Babcock Hitachi aims to strengthen international competitiveness as well as expanding the Pan-Pacific business area to the world including Europe, and is expected to provide the best solution for energy-related challenges and discussion about intensifying the Research & Development activities as a boiler manufacturing company.

In terms of providing a platform for the company's power of competition, discussion vigorously held in Europe up until now about intensifying the Research & Development activities must be important. As a Japanese industry in Europe, are there any issues concerning actively engaging in Research & Development ?

Indeed, the company reached an agreement by forming a partnership with the Railway research group of the Imperial College in London. The collaboration will seek advancement in new areas of railway technology such as energy consumption (including optimal train power consumption and source, and performance), environmental impacts of rail vehicles and fracture analysis of rail components. Hitachi's strong commitment to the three year deal will create PhD and undergraduate research opportunities for students at Imperial with Hitachi's leading railway research and development engineers in Japan working alongside Imperial's researchers. The Railway Research Group will initially analyse mainland European railway standards and strategies, with technical research in a number of areas. These will include hybrid propulsion configurations, lifecycle costing methodologies and quantitative measurement of passenger environments including ride quality and noise. Bringing our top researchers together with the Railway Research



Group at Imperial, we will be transferring knowledge and experience that has been gained in developing the technology that underpins the best railway system in the world. This new partnership ensures we have the resources to conduct comprehensive research into the European rail market and into technical developments for the future of rolling stock and track design. The collaboration will provide invaluable opportunities for our undergraduates, postgraduates and researchers

Meanwhile, in November 2003, Hitachi committed to Cambridge University on e-learning and founded the "Cambridge-Hitachi Soft Educational Solution Cooperation". The purpose is to co-develop the courseware (electronic resource) that follows the course study of the UK's Ministry of Education. They aim to sell the e-learning solution to the world through Hitachi Software Engineering which has succeeded in developing the courseware used for interactive electronic board (star board) and a Cambridge publisher who is strong in collaborating with content providers. In two years they released about 50 titles, though these products were based on England's educational course of study intended only for elementary and junior high school students, but from this Summer to Fall they plan to release ELT resources (English Language Teaching) for those who do not speak English as their mother tongue. These products are based on textbooks (for example English 305, Interchange) that were successful among ELT programs, thus allowing to spread these products worldwide immediately, and are already referred to by European countries other than the UK, for example: Mid Eastern countries, Mexico, Japan, Asian countries, and Australia.

Other than having universities as a partner, for example, Hitachi reached an agreement with Fraunhofer Institute for Secure Tele-cooperation (FhI-SIT) by co-researching the authentication technology using the Public Key Infrastructure (PKI). This collaboration aims to establish an inspection technology that enables communicating companions to approve their product without worrying about the differences of PKI environment within the countries. Among the security infrastructure technology of the network or the electronic machinery that uses Public Key technology, PKI especially applies to the authentication system that

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