MOVING TOWARDS SUSTAINABILITY
Opportunities for action on climate change, poverty and water

CIRCULAR ECONOMY
What do we need to do to trigger the shift?

URBAN MOBILITY
Why should Europe embrace multimodality?

HEALTH REPORT
Coping with prostate cancer

DIGITAL DEMOCRACY
Rt Hon John Bercow, MP on digitizing the UK Parliament
MENA Telecoms Infrastructure Symposium

27th - 28th October 2015
Marrakech, Morocco

For more information, phone: +44 (0) 203 137 8656
email: information@parlicentre.org or visit: www.parlicentre.org/menatelecoms
Moving towards sustainability
Opportunity for action on climate change, poverty and peace

Editorial View
2 Jonathan Lloyd, Editor, Government Gazette

Resource Efficiency
3 Jocelyn Blierot, Ellen MacArthur Foundation
6 Karl Falkenberg, Director-General, DG Environment
7 Sirpa Pietkeinen, MEP
8 Jo Lienen, MEP
10 Hans Bruyninckx, European Environment Agency
12 Birgit Munch-Kampmann, CRI
14 Dr. Ligia Noronha, UNEP
15 Piotr Barczak, European Environment Bureau

Financing for Development
18 Pedro Silva Pereira, MEP
20 Heidi Hautala, MEP
21 Eric Solheim, Chair, OECD DAC

Sustainable Urban Mobility
23 Keith Taylor, MEP
24 Merja Kylönen, MEP
26 Interview with Violeta Bulc, European Commissioner
30 Sean Carroll, ICLEI - Local governments for sustainability
31 Juan Caballero, EUROCITIES

Sustainable Development Goals
32 Magdy Martinez-Solimán, UNDP
34 Neven Mimica, European Commissioner
35 Linda McAvan, MEP
36 Luca Bas, IUCN
37 Sally Nicholson, WWF
38 Emily Daglish, ICPS
39 Gonzalo Fanjul, Barcelona Institute for Global Health
41 Olivia Arigho Stiles

Water for Development
42 Karin Lexin, SIWI
44 Dr. Prof. Damir Bedjanovic, UNESCO-IHE

Coping with Prostate Cancer
47 Dr. Riccardo Valagni
48 Professor Sara Faithful
49 Dr. Colin RW Hayward
50 Dr. Howard Urnovitz
51 Prof. Dr. med. Mathias Goyen
53 Dr. Hein Van Poppele
54 Dr. Christine Geoffraud-Ricourd
55 Dr. Emanuelle Crocetti
58 Arvind Venkataramana, ICPS

Policy Watch
56 Lojze Peterle, MEP
57 Mayur Mandalia, IDF, Europe

Digital Democracy
62 Antonio Mugica, CEO, Smartmatic
63 Corina Casanova, Federal Chancellor of Switzerland
66 Rt Hon John Bercow, MP, Speaker, House of Commons

Elections and Governance
68 Christian Preda, MEP
Towards a sustainable tomorrow

Welcome to the October issue of the Government Gazette. As always, it is packed with useful comment and analysis featuring some of the most critical issues surrounding sustainability.

Seventy years ago, a previous generation of world leaders came together to create the United Nations. In the coming weeks, during the 70th session of United Nations General Assembly, international governments will meet once again to take a decision of historic significance. Counting down to the United Nations summit for the adoption of the post-2015 development agenda in the last week of September in New York, our current issue shares the vision of the UN in alleviating poverty, managing climate change and enabling a sustainable environment where all life can thrive.

In our extended focus on the Resource Efficiency agenda of the European Union, we look at a few imperative reasons to make the transition from linear economy to a circular economy that not only helps preserve resources and reduces emissions, but also boosts businesses and generate jobs. The ideas of how to do “more with less” are being taken further in the EU’s Environment Action Programme. Leading experts in circular economy and representatives from the European Commission and European Parliament have discussed what we need to do in order to trigger the shift; making a few convincing arguments for the change and outlining the opportunities from the transition.

Defined as meeting the needs of today without compromising those of the future, Sustainable Development is an urgent priority for the world’s political leaders -- both of developed and developing countries. Indeed, 2015 has been designated the European Year for Development. In our section on sustainable development, Magdy Martinez-Soliman, Assistant Secretary-General of United Nations presents the opportunities for action on climate change in the post-2015 development agenda. Neven Mimica, EU Commissioner for International Cooperation and Development reaffirms his commitment to realising an ambitious development agenda through a viable implementation strategy. Likewise Linda McAvan, MEP identifies funding as the major issue, especially if global leaders are to take decisive action on sustainability.

Tackling the increasingly challenging water situation and growing disparity in access to water and sanitation facilities across the globe, Karin Lexin, Director at the Stockholm International Water Institute (SIWI) addresses the link between water and climate change mitigation and offers a blueprint for future climate policy. As tackling the present challenge requires unusual approaches and innovative products, Prof. Dr. Damir Brdjanovic from UNESCO-IHE analyzes some of the innovations concerning the sanitation chain.

As the issues relating to financing for development will be central to the implementation of the post-2015 development agenda, the present issue includes a section on development aid. It features contributions from MEPs Heidi Hautala and Pedro Silva Pereira who take a closer look at the outcome rhetoric of the Addis Ababa conference. Erik Solheim, Chair of OECD’s Development Assistance Committee portrays the European Union as a development superpower.

Moving beyond the confines of UN’s post-2015 development agenda, we take a look at adopting a sustainable culture towards urban mobility. As several European cities and towns opt for a multimodal lifestyle echoing the theme of this year’s EUROPEANMOBILITYWEEK, European Commissioner for Transport, Violeta Bulc speaks to Government Gazette on the commitments of the European Commission in improving multimodality. MEPs Merja Kyllonen and Keith Taylor highlight actions that can change Europe’s current mobility patterns.

Will the traditional form of paper voting disappear in the near future? A push to allow Internet voting in elections is growing stronger in the United States and Europe along with advances in the underlying technology.

However, there have been a few successes in at least three European countries. In our section on digital democracy, the Federal Chancellor of Switzerland Corina Casanova discusses how the trend of online voting is slow but sure to catch up. John Bercow, Speaker of the House of Commons and Member of Parliament for Buckingham, reaffirms that Britons should be able to cast their vote online in the 2020 general election and analyzes the key issues in digitizing the UK Parliament. Further, Antonio Mugica from Smartmatic makes a case for electoral technology and takes a look at the potential benefits of running an automated election.

The current issue also includes a Health Report that addresses some of the most pressing questions relating prostate cancer care and treatment and features contributions of some of the major delegates.

Jonathan Lloyd, Editor, Government Gazette
Will Europe seize the opportunity of the circular economy?

A Circular economy could increase European competitiveness and deliver better societal outcomes. It could result in twice the benefits seen on the current development path. By adopting the principles of a circular economy, Europe can take advantage of the technology revolution, could create more jobs, increase average disposable incomes, halve carbon emissions, and do much more. Jocelyn Blériot, Executive Officer, Lead, Communications and Policy, Ellen MacArthur Foundation, presents the findings of their nine-month study and explains how the circular thinking might persuade companies to seek ways of retaining the value of their production costs.

Despite having reached a high level of finesse and sophistication, Europe’s current linear model is highly dependent on its finite resources and resources outside its borders, exposing it to resource inefficiency, limited gains and restricted productivity.

The European Commission’s much anticipated circular economy package is due at the end of the year, and the European Parliament continues to push for ambitious legislation on the topic. As discussions bring together advocates for a regenerative European growth and competitiveness, converging signals seem to indicate that a transition to a circular economy could be the next major political project for Europe.

Industrialised economies are at crossroads. There is a need for a system which can decouple growth from the consumption of finite resources. Conventional “reductionist” strategies based on doing less and chasing gradual efficiency gains won’t provide a long-term solution - only buy us a bit of time. Europe’s economy remains very dependent on resources it largely sources outside of its borders and, despite having reached a high level of sophistication, it is still surprisingly wasteful in its model of value creation.

According to our research carried out with the McKinsey Center for Business and Environment and supported by SUN (Stiftungsfonds für Umweltökonomie und Nachhaltigkeit) in 2012, only 40 percent of discarded materials were recycled or reused, while the European economy only captured 5 percent of the original raw material value through recycling or waste to energy processes.

In a context characterised by volatility on commodity markets, and bearing in mind that the European Union is the world’s biggest importer of raw materials, looking at decoupling economic growth from the consumption of finite resources seems to be the way forward in order to build resilience and gradually design...
CIRCULAR ECONOMY - an industrial system that is restorative by design

1. Hunting and fishing
2. Can take both post-harvest and post-consumer waste as an input

SOURCE: Ellen MacArthur Foundation - Adapted from the Credle to Credle Design Protocol by Braungart & McDonough
out negative externalities. Powerful trends are starting to shape a new economic landscape, but can these be harnessed and guided by a clear framework in order to achieve the systemic shift called upon by a growing number of corporate and government leaders?

Our “Growth Within” report reveals that by adopting circular economy principles, Europe can take advantage of the impending technology revolution to create a net benefit of €1.8 trillion by 2030, or twice the benefits seen on the current development path (€0.9 trillion).

This would be accompanied by better societal outcomes including an increase of €3,000 in income for EU households. This would further translate into an 11 percent GDP increase by 2030 versus today, compared with 4 percent in the current development path.

The circular economy would have significant impacts on the European environment

Carbon dioxide emissions would halve by 2030, relative to today’s levels (48% by 2030 across the three basic needs studied, or 83 percent by 2050). Primary material consumption measured by car and construction materials, real estate land, synthetic fertiliser, pesticides, agricultural water use, fuels, and non-renewable electricity could drop 32 percent by 2030 and 53 percent by 2050, compared with today.

In the last few months, it has been evident that the European Commission has made the circular economy a priority.

First Vice President Frans Timmermans, Vice President Jyrki Katainen, and Commissioner Karmenu Vella were all present, and engaged in discussions, at the stakeholder conference in June, with Frans Timmermans indicating that he "passionately believes in the opportunities of the circular economy."

Over 800 stakeholders were present on the day, and the room remained full until Vice President Jyrki Katainen closed proceedings by clearly stating that he is “convinced that the circular economy can enable a triple win: economic, environmental and social.”

The momentum engendered at the stakeholder conference in Brussels has continued throughout the summer. On July 9th, the European Parliament passed an important resolution on the circular economy that called for a 30 percent increase in resource productivity by 2030. The resolution was voted 394 to 197 in favour of a report that formalised the Parliament’s expectations for the revised Commission package.

As Danish MP and former Environment Minister Ida Auken puts it, “The circular economy should be a central political project for Europe, as it offers the potential to set a strong perspective on renewed competitiveness, positive economic development and jobs creation.” Redefining value creation mechanisms by basing them upon use rather than consumption constitutes a change of economic paradigm: we can maximise the utilisation of existing assets, start to design restorative and regenerative processes to reap economic as well as societal benefits. There are already companies out there taking advantage of the shift, it is now time to scale up and create the right enabling conditions - which requires all stakeholders to enter a constructive dialogue.

Sending positive signals

Rather than making circularity a regulatory hoop through which to jump, policy can send positive signals to producers that see the economic advantage of circular business models: the time has come for innovative models of collaboration to emerge and create a new wave of positive economic development.

The need of the hour is a genuine 21st century industrial enlightenment, reliant on systems thinking, steeped in cross-disciplinarity and based on what New Scientist editor Roger Highfield refers to as the “snuggle for existence” - a creative cooperation on which most long-lasting and resilient systems are built and rely.
A few days ago, the outcome document of the post 2015 agenda “Transforming our world: the 2030 agenda for sustainable development” was adopted. It will formally be endorsed by Heads of State at the Summit later this month.

With this, there is an agreement establishing a universal agenda for sustainable development calling on the world to move towards sustainable consumption and production patterns and efficient use of natural resources, halving per capita global food waste, sound management of chemicals and wastes, substantially reducing waste generation through prevention, reduction, recycling and reuse, more sustainable practices at the level of businesses, building people’s awareness of sustainable development and lifestyles.

Let’s recall the basics: We all rely on natural resources, such as land, air, water, metal ores, minerals or wood, to live and thrive. Natural resources are derived from the environment. Some of them are renewable whereas others are not. Some are essential for our survival while most are used for satisfying our desires. However, natural resources are limited and we are currently not using them in a sustainable way. Fast growing population of consumers globally and the increased per capita consumption of an expanding middle class are challenging the very essence of our consumerism society.

By 2050, the world population may reach 9 to 11 billion, and middle income earners globally will have grown from 1.8 billion in 2009 to 4.9 billion already by 2030, with consumption rising sharply. Global extraction of resources is expected to increase by 75 percent in 25 years.

Demand for food, feed and fibre will increase by 70 percent by 2050, while 60 percent of the ecosystems underpinning their supply are already degraded or used unsustainably. On top of that, to keep the global temperature increase below 2°C, CO2 emissions between now and 2050 must be kept limited to a maximum of 1000 billion tonnes. This would compel us to leave most of known oil, gas, and coal reserves in the ground. Together, they account for 2900 billion tonnes of CO2 equivalent.

Pressures on resources and environmental concerns are one of the key long-term trends affecting growth.

In a world where demand and competition for finite and often scarce resources will continue to increase, and pressure on resources is causing greater environmental degradation and fragility, sustained growth and prosperity will critically depend on making better use of those resources.

The Circular Economy concept offers a solution to this challenge

By Karl Falkenberg, Director General of the European Commission’s DG Environment

It is an alternative to the prevalent linear economic model, which is based on the “take-make-consume-discard” consumption pattern. We cannot afford to live like that for much longer.

Moving from a linear to a circular economic model makes economic sense. In 2014, the Commission had estimated the potential net benefits from improved resource efficiency for businesses in the EU to be in the range of €245 to €604 billion. Increasing resource productivity by 30 percent could also create 2 million extra jobs by 2030.

However, what do we need to do in order trigger this shift to a circular economy?

While experts debate whether a full systemic change is required, including a radical shift in the way we produce and consume...
land filling a last resort for waste that cannot be reused, recycled or recovered. However, we should remind ourselves that waste is just one part of the story. We must not neglect the other half of the economic circle. Issues such as sustainable product policy, with product design as the guiding principle, should be at the heart of the changes.

We need to design clean materials and products with a view to their future re-use and recycling; we need credible information on these products that consumers can easily understand to make the right choices. We should fight early obsolescence by enabling repair and upgrading of products.

To this end, we need a solid set of actions promoting innovation for circular economy, including new business models, technologies, and tools such as public procurement. To achieve this, we need good legislation, dedicated EU funding, and a serious implementation effort.

The upcoming EU package on Circular Economy will present proposals for action at the EU level that contribute to the first two elements – the third one will require mobilising additional political will in the Member States so much more will need to be done at national, regional and local level.

More than ever, the future of our planet is in our hands. We know the tools we need to make the shift. We should now start using them.

Circular economy presents an economic and ecological win-win scenario

Several businesses have recognised these facts and have started acting appropriately. Sirpa Pietkainen, European Parliament’s rapporteur on resource efficiency spells out the huge opportunity within the circular challenge.

It has been forecasted that global demand for resources will triple by 2050. That demand, however, cannot be satisfied. We already consume some 1.5 planets’ worth of resources every single year, and following the estimates, would need around four planets full of resources to satisfy the demand by 2050 under business as usual. There are however limits to growth – we only have this one planet.

We are in overshoot mode, and that mode has to be switched to a more sustainable one.

In June, the European Parliament’s environment committee adopted my report on circular economy. The report emphasizes the need for a true paradigm shift, one that will benefit both our economy as well as our environment. Saving natural resources is not only about saving raw materials for future generations but creating multiple benefits starting from reducing waste and ending with new innovative business opportunities. Europe is extremely dependent on imported raw materials and energy, much more so than many of our competitors. When raw materials are running short, what are the guarantees that this flow of raw materials will keep up?

Resource scarcity also increases prices - that is simple economics.
Almost 90 percent of European companies expect their material input prices to continue rising, according to a Eurobarometer survey.

If we look at these facts, it is clear that European economy can't survive - let alone grow - unless we take some radical steps to increase our resource efficiency and move towards a true recycling economy. We have to stop wasting precious resources and start using them more efficiently. However, there is a huge opportunity in this challenge.

The one who can deliver solutions for the resource efficiency dilemma, is also the winner of the new economic race: this means solving the problem of doing more with less – getting more added value with less resources. In circular economy there is no waste, products are designed to be durable, reusable, repairable and recyclable, and when they come to the end of their life the resources in them are pumped back into productive use again.

This is a major paradigm shift where we need to produce the same welfare for the people, better competitiveness for our industries and profits for our companies with a tenth of the resources for goods we are using now.

Business-driven studies demonstrate significant material cost-saving opportunities for EU industry and a potential to boost EU GDP by up to 3.9 percent by creating new markets and new products and creating value for business. The Commission has calculated that increasing resource productivity by 2 percent would create 2 million new jobs in the EU by 2030.

Many businesses have already recognised these facts and started to act accordingly. They have taken a leap to a different mind-set, to one where the whole logic of successful business is turned upside-down. These firms have created new business models to deliver greater resource efficiency and circular models including increased renting, sharing, leasing, different types of industrial symbiosis, bio-innovations a remanufacturing and many more.

In order to support this change we also need to change the rules of the game

That is the work of us politicians. Regulation is never neutral. A lot of our thinking and also a big part of the current legislation is created for the needs of consume-and-throw-away-society. Therefore, it needs to be changed to fit the new world order.

To drive the business revolution, we need to create a stable and predictable regulatory environment.

At the present moment, what we need most are commonly-agreed and harmonised indicators and targets to measure the change. We have to abolish environmentally harmful subsidies. We need to draft newer legislations that will make sure what is considered waste today is not considered such anymore - but seen as a resource. This requires a change to how things are being produced: products need to become more durable, easy to upgrade, reuse, refurb, repair, recycle and dismantle for new resources.

Perhaps the most compelling reason to embrace resource efficiency and circular economy models is that we don't really have a choice. Further pressure on supplies of resources as demand increases in emerging markets will force us – sooner or later – to use those resources more carefully.

---

**Resource efficiency is not a choice, it is inevitable**

Calling for a paradigm shift towards circular economy, Jo Leinen, member of European Parliament says we can’t continue with a business as usual scenario anymore. If we do, immense pressure on availability of resources will arise and potentially limit chances of growth and prosperity

According to several estimations, there will be nearly 9 billion people living on this planet by 2050. Most certainly, all of them will have similar expectations for a high standard of living. By 2030, there will be another 3 billion extra middle-class consumers whose living standards would have risen.

This is definitely good news but worrying at the same time. If we continue with a business as usual scenario, there will be immense pressure on availability of resources and this could potentially limit the chances of growth and prosperity for such a large population.

With the expectation that the demand of resources will triple by 2050 and the demand for food, feed and fibre will increase by 70 percent, there is no doubt that we will exceed our planet’s boundaries, moving beyond the safe thresholds within which humanity can continue to develop and thrive.

Crossing these boundaries could generate abrupt environmental changes and irreversible damages to our ecosystems. Resource efficiency is not a choice, it is inevitable. Our choice is whether to develop it now, or whether we wait until a point when critical resources are exhausted and expensive.

The changeover from resource-inefficiency

The challenge in hand is to transition from a resource inefficient infrastructures, resource inefficient economic and financial systems, resource inefficient business models and resource inefficient behaviour. The overarching objective is thus to decouple resource use and its impacts from economic growth.

Of course that requires more than a legislative approach. It requires changes in our everyday life, and that in turn requires profound changes in thinking, behaving, producing and consuming as well as changes in economic and social structures. Today’s economy and consumption patterns are based on a linear ‘take, make, dispose’ model with a ‘fast turnover’ principle. Many gadgets, especially mobile phones or tablet computer, are often designed to be replaced after two or three years, well ahead of their expected lifetime. This leads to some critical resources getting scarce while increasing volumes of waste and pollution, thereby imposing greater threats to welfare and wellbeing.

The solution is a circular economy, where products are designed to last and can be repaired, reused, recycled and remanufactured.

The development of such a resilient, resource efficient economy does not only implicate the decoupling of growth and the use of natural resources, but offers major benefits in terms of job creation, innovation and environment protection. The EU needs to start the transition to a circular economy to ensure sustainable growth, resilience and benefits for the society.

To achieve this, it requires an industrial transition towards a well-functioning economic system where materials are sustainably sourced, reused and recycled in order to limit the amount of virgin raw materials ‘entering’ the cycle as well as the end of life waste ‘leaving’ the cycle. In the future product policy, products are designed to last, to be repairable, reus-
The consumer should be informed about the ecological footprint of the product. Once it is purchased, there should be an opportunity to get upgrades and updates to improve its performance. Planned obsolescence or the need to replace the product every two or three years to get a better performance will be a thing of the past.

In addition to the advantages for the consumers, the circular economy offers benefits to companies as well.

It’s increasingly evident that there is a limit to growth in terms of availability of natural resources, which means our companies must respond to increasing costs and scarcity of natural resources. In the business-as-usual scenario, companies tend to become more dependent on resource imports and vulnerable to price hikes.

To avoid this, they have to leave this path and become more resource efficient.

Reuse, recycling and remanufacturing of products thus reduces the threat, from a business point of view, to competitiveness, profits and business continuity. Furthermore, all services around a product in a circular economy – from sustainable design, to maintenance, upgrading, repair, reuse and remanufacturing – require more labour and will thus create new jobs.

Setting the right incentives to decouple economic growth from natural resource use

The need of the hour is a coherent policy framework for the transition towards a circular economy. A policy framework with a carrot-and-stick approach: binding targets to become more resource efficient. This should be combined with rethinking taxation in a way that it will be beneficial for all: shifting taxation from labour to the consumption of non-renewable resources and removing VAT from recycled materials.

Especially, at a point where Europe faces multiple crises, it becomes essential to increase our competitiveness and become less dependent on resources imports. Circular economy is therefore a win-win policy and Europe can’t afford to delay action. Doing more with less has become the comparative advantage in the 21st Century.

“The EU should enable the transition to ensure sustainable growth, resilience and benefits for the society. To achieve this, it requires an industrial transition towards a well-functioning economic system where materials are sustainably sourced, reused and recycled in order to limit the amount of virgin raw materials ‘entering’ the cycle.”

GOVERNMENT GAZETTE OCTOBER 2015 9
Our planet has limits. Currently, we are using more resources than our planet can produce in a given time. Our overconsumption is not just weakening the ability of our natural systems to regenerate and to produce, but also lowering their capacity to adapt to challenges such as climate change. Unsustainable use of resources is not just an environmental problem. It has economic and social implications. Access to resources, exposure to pollution and the state of our natural capital are key factors in determining our health, well-being and quality of life in general.

Our unsustainable use of natural resources and its impacts on our quality of life require us to reformulate fundamentally the way we produce, consume and live. In short, we need to green our economy.

In addition to goods and services, current production and consumption systems also produce residues – pollutants and unused pieces of materials or simply waste. Any part that is not utilised actually represents a potential economic loss as well as an environmental problem. Of the 4.5 tonnes of waste treated in 2012, less than half was fed back into the economy. For municipal waste, our studies confirm that the potential gains of better management in the European Union are immense. Municipal waste is only a part of the waste generated.

Throughout the entire production and consumption system, we are actually wasting valuable resources, some of which are very difficult or impossible to replace. For example, when the electronic devices containing rare earths are sent to landfills, they have no value; only environmental costs – a pure economic waste on top of the loss of irreplaceable resources.

The term ‘circular economy’ foresees a production and consumption system that generates as little loss as possible. It entails creating production systems that generate decreasing amounts of waste or that produce more with less input. In other words, our economy also has to become more resource efficient.

Europe has already achieved significant gains in increasing its resource efficiency. In the last decade, the EU economy created more ‘value added’ in terms of Gross Domestic Product for each unit of material (minerals, metals, etc.) consumed. This trend confirms that economic growth does not always have to come with an ever growing material use and environmental impacts. We can actually get more out of less, but much more needs to be done.

Increasing resource efficiency requires...
How can we make our economy circular and resource efficient?
Currently, we are using more resources than our planet can produce in a given time. We need to reduce the amount of waste we generate and the amount of materials we extract.

Cut here to create your circular economy.

12.4 tonnes of materials per capita were extracted in the EU.

3.2 tonnes of materials per capita were imported to the EU.

1.3 tonnes of material per capita were exported from the EU.

Read more: eea.europa.eu/themes/households and eea.europa.eu/themes/waste
considering entire systems, rather than sectors. A system comprises all the processes and infrastructures that exist in connection with a resource or an activity, which are essential for human activities. For example, we waste almost 180 kg of food per person every year in the European Union. This implies wasting the land, water, fertilisers and energy used in its production as well.

How can we change the food system to prevent food waste in a way that consumers, supermarkets and food producers all worked towards producing, selling and buying only what will be eaten?

What gets extracted needs to be used again and again. The leftover of one process needs to become the input of another. And it is possible. We are now able to capture methane from cattle farms and use it for heating — something unimaginable decades ago.

We also need to explore new technological possibilities and make innovative solutions the norm. And research and business communities play a key role here. Eco-innovation projects, renewables, and research in general all play a crucial role in designing better products and processes and reducing waste. The consumer and the producer are equally important players in greening our economy. The production process is geared to deliver what consumers want. We need to question whether we want to own more consumer products or we just want the services that the products provide.

More and more companies are adopting business approaches known as ‘the sharing economy’. This enables consumers to meet their needs through leasing, product-service systems and sharing arrangements, rather than purchases. This might require a new way of thinking about marketing and product design — with less focus on sales and more focus on making durable and repairable products.

A mix of economic incentives and regulations can boost innovation and can actually improve the competitiveness of European industry. Various EU strategies and legislation, such as Europe 2020, the Flagship initiative for a Resource-Efficient Europe, the Waste Framework Directive or the 7th Environment Action Programme, are already in place and try to instil sustainability in key economic activities in a long-term transition perspective.

As consumers, we also have a role to play in supporting the transition towards green economy. Throughout history, consumption patterns have constantly evolved. We can use this flexibility to our advantage, and can steer the course towards sustainability.

Greening an entire economy — European and ultimately global — is an immense task. Although the transition might be a long-term process, it requires immediate action. Today’s decisions, including those on key infrastructures such as energy and transport, will determine what our sustainable future will look like.

Europe has already achieved significant gains in attaining resource efficiency. However, improving the situation calls for a more systemic change along with inventive solutions both from the producer and the consumer.

Supporting the circular transition

Nordic businesses are already employing business models that are inspired by, or employ the logic of, the circular economy. Birgit Munck-Kammann, Director, Copenhagen Resource Institute explains why a circular system is the way forward.
The Circular Economy is riding high on the political agenda. Policy makers, business leaders, academics and NGOs argue that a circular economy can help solve pressing environmental and economic global challenges. Material consumption generally progresses along a “take-make-dispose” lifecycle, where virgin materials are extracted at one end, and waste is either landfilled or incinerated at the other. Even highly optimised, this is an inefficient system—it converts value to waste. In a world of finite non-renewable resources and renewable resources with a maximum carrying capacity, this model can only get us so far, and bring prosperity to so many. A circular economy bends this linear model until the ends meet: feeding waste, materials and used products back into the useful economy.

The business case for a circular economy is compelling. Studies show that the global economy could benefit immensely from a more circular approach, embodied by material savings, emissions reductions and job creation. In the Nordic countries, many large companies are already taking ambitious and important steps towards more circular business models, while smaller and sometimes lesser-known companies are already making it happen.

A recent project by the Nordic Council of Ministers—the inter-governmental body for cooperation in the Nordic Region—supported the move towards a circular economy by highlighting good practice, promoting innovative business models and bringing together people from different corners of the economy to share experience and explore new solutions.

The project drew on examples of Nordic businesses that are already employing business models that are inspired by, or employ the logic of, the circular economy. Examples were found across many different sectors, indicating that the principles of the circular economy can be applied to businesses throughout the economy. Listed below are a few key trends.

Selling services rather than products:

By identifying the service that a product provides the customer, and making the provision of that service the basis for a commercial relationship, rather than simply the provision of the product itself. This encourages higher product standards, a higher degree of repair, and better management of the product when it finally becomes waste. For example, clothing company Viga operates a subscription service for children’s clothes—as the child grows, the clothes provided grow with them. No textiles are thrown out, repairs are made where necessary, and clothes that are too damaged are recycled.

Managing and reprocessing waste:

Production and delivery often result in waste of either production material or packaging material. By re-processing production material, re-engineering production processes to prevent waste, and by rethinking delivery options, waste, and the associated costs, can be significantly reduced. For example, Skagenfood, a fresh produce delivery service specialising in fish, pays for the return of all packaging through the regular Danish mail service.

Repair and re-manufacture:

Taking old products back and repairing or remanufacturing them so that they can be sold as new products rather than second-hand products. This is particularly prevalent in the business to business sector which often involved high quality and high value products. For example, Martela helps customers through the process of selecting and buying furniture, maintaining the furniture while in use, and collecting the furniture once the customer no longer needs it. The furniture is then repaired, re-upholstered, and sold back into the market.

Integrating circular economy thinking into the mainstream involves more than collecting a handful of good ideas

In April 2015, the Nordic Council brought together decision makers from business and government in Copenhagen to share experience, identify barriers and forge partnerships. The one-day workshop addressed circular economy in the context of different business sectors and different business models. The ultimate aim of the workshop was to develop specific policy messages and actions that could support and promote circular business models.

Policy for supporting and promoting circular business models can take many forms and touch on highly diverse policy domains, from macro economic framing to product regulations to waste definitions. However, several issues consistently crop up as relevant for the ongoing viability of circular business models. Simple, transparent and long-term objectives and regulations often go a long way toward providing a level the playing-field for all actors, and allow businesses themselves to set long-term targets and follow long-term development plans. Here are a few suggestive starting points.

Enable and support better quality re-use and recycling:

Material recycling can easily become the lowest common denominator if waste collection systems do not prioritise maintaining the value of discarded goods and waste.

Public procurement as a first market for innovative circular business models:

Public expenditure can be used to support innovative circular solutions. This can help reduce costs and increase services in the public sector, and provide a needed boost to innovative businesses.

Set targets for re-use:

Recycling targets are already in place and provide political and legal impetus to improve waste handling, but they can also drive potentially re-usable goods down the value chain towards material recycling. Re-use targets could help alleviate this problem.

Strengthened requirements on reparability and product warranties:

Helping the formal and informal repair industry through easier access to information, and extending mandatory warranty periods to increase overall product quality.

Moving an entire economy from one mode of delivering material prosperity to another will not happen overnight, and it is not surprising that entrenched business practices and processes are difficult to change. Through a combination of education and market forces, however, businesses are realising that the circular economy represents an opportunity rather than a threat. Better policy can help reinforce and capitalise on this change in attitude.
Implementing innovative measures to “decouple” natural resource use from economic growth is paramount, and one way to do so is adopting the circular economy model. Dr Lígia Noronha, Director of the United Nations Environment Programme’s (UNEP) Division of Technology, Industry and Economics calls for a shift from a ‘take, make, dispose’ approach to a circular economy model.

To make the transition to a circular economy, cities will need to set specific targets on efficient resource use, formulate plans to reach those targets, and be supported in the development of an enabling framework to encourage innovation at local level.

“The 20th century saw huge increases in demand for natural resources as industrialization and urbanization spread around the world. While current patterns of resource exploitation already exceed the Earth’s biological capacity, it is expected that, by 2050, humanity could consume approximately 140 million tonnes of minerals, ores, fossil fuels and biomass each year – three times the current level—thus risking to jeopardize the fundamental economic, social and environmental systems on which our livelihoods and development rely.

With population expected to reach 9 billion by 2050, 1.2 billion people in the world still living in extreme poverty and a growing number of extreme weather events, the challenges for humanity are mounting. In the 21st century more and more people are expected to move off the land and into cities, with some three-quarters of the world’s population expected to be urbanized by 2050.

According to the projections offered by the International Resource Panel (IRP), it is estimated that 60 percent of the infrastructure necessary to meet the need of city dwellers is yet to be built, and that urban population will consume 75 percent of global energy, 75 percent of extracted natural resources, and will be responsible for about 75 percent of global CO2 emissions and global waste generation.

Generating more sustainable patterns of consumption and production, and better managing the planet’s natural resources are measures that cannot be further procrastinated.

Implementing innovative measures to “decouple” natural resource use from economic growth is paramount, and one way to do so is adopting the circular economy model, which would guide our societies in the shift from a “take, make, dispose” to a “reduce, re-use, recycle” approach.

Making cities as building blocks for sustainable development

UNEP’s Global Initiative for Resource-Efficient Cities (GI-REC) recognizes the significant contribution of local government and city-level
action to bringing about the kind of radical change that will be needed to switch to a circular economy. GI-REC supports cities in reducing their environmental impact on the production and consumption of goods and services, from raw material extraction to final use and disposal, based upon a circular economy model. In the building sector, for instance, this means considering the whole life cycle of a product or service, including design, materials production, transport, construction, use and maintenance, renovation, deconstruction, recycling and re-using.

The closed-loop concept

Promoted by UNEP, it is already being demonstrated in Linköping, Sweden, where the bus system runs on biogas obtained from wastewater treatment plants, landfills and a biogas production facility that uses agricultural crop residues and manure. Some 100,000 tonnes of waste is treated each year, 4.7 million tonnes of upgraded biogas is produced, and 9000 tonnes of carbon dioxide emission are saved.

To make the transition to a circular economy cities will need to set specific targets on efficient resource use, formulate plans to reach those targets, and be supported in the development of an enabling framework to encourage innovation at local level.

At UNEP we are also contributing to this process by means of a variety of complementary and mutually-reinforcing initiatives and instruments, including the District Energy in Cities Initiative, the Life-Cycle Assessment and the 10-Year Framework of Programmes (10YFP) on Sustainable Consumption and Production.

The 10YFP is a grouping of programmes, hosted by UNEP, which by working with governments, policy-makers, industry associations, citizens and other groups, aims to accelerate the transition to global sustainable consumption and production patterns.

At the moment, we have programmes that aim to find sustainable ways forward on consumer information, lifestyles and education, public procurement, buildings and construction, tourism and eco-tourism, and, by the end of the year, on food systems.

Reflecting the central role that waste minimization has in the circular economy, UNEP will release in September, the “Global Waste Management Outlook,” a landmark report that is the first comprehensive, impartial and in-depth assessment of global waste management. It reflects the collective body of recent scientific knowledge, drawing on the work of leading experts and the vast body of research undertaken within and beyond the United Nations system.

The time has come to recognize that the environment is a vital base on which all economic activities depend. New and better ways of managing our natural resources are necessary. The resources offered by our planet are much too valuable to discard: they should be used, not abused - and never left to waste.

Dr Ligia Noronha is Director of the United Nations Environment Programme’s Division of Technology, Industry and Economics.

"Individuals should be called upon to make better, more sustainable choices as consumers. To live better, we will need to produce and consume better. Strong policies, based on sound science, and conceived in a spirit of innovation will be needed."

As the European Commission is about to propose its long awaited Circular Economy Package which will include a revision of the EU’s directives on waste, Piotr Barczak from the European Environmental Bureau explains why ambitious waste targets and product design requirements are necessary to trigger systemic change that brings about a circular economy in Europe.

The need to move to a circular economy is a no-brainer. Our model of production and consumption in Europe is unsustainable. Too many of our products end up as waste, the materials they contain are being landfilled or destroyed in incinerators at an ever faster rate. The world can not afford to continue wasting so many of its resources. Especially not resource-poor and import-dependent Europe.

So what should we do about it?

First, we need to change our mindset about waste. Waste means resources, which in turn have economic value. Today Europe sends over 50 per cent of its waste to landfill and incinerators, which is an economic folly as well as an environmental one.

Dr Ligia Noronha is Director of the United Nations Environment Programme’s Division of Technology, Industry and Economics.
Waste prevention and recycling can become drivers of the European economy and its industries

They should not be seen as obstacles to growth or a burden on businesses, as they often are. A European Environmental Bureau study showed that if the EU adopted higher recycling targets and reuse targets for products among other things, it could create as many as 860,000 new jobs (1). The ‘three Rs’ - reduction, reuse and recycling - can shift the focus of decision makers from waste generation to waste prevention. They can also help secure Europe’s access to a plentiful pool of secondary materials which will make our economies more resilient to resource shortages and price hikes.

Secondly, how our products are designed strongly influences if and when these products become waste. By setting requirements that get manufacturers to design their products to be more repairable and easier to re-manufacture, we can cut down on a lot of unnecessary waste and at the same time make it easier for affordable repair services to become mainstream.

The EU’s Ecodesign Directive can help here. It already helps deliver energy savings on electrical and electronic products and could also deliver resource savings. Better product design and ambitious waste targets must go hand-in-hand to unlock the potential of a circular economy. In that kind of economy, nothing is lost but so much is gained.

Thirdly, we have to overcome legislative paralysis. The argument goes that because the situation across the EU is heterogeneous, there can not be one set of rules for the continent. True, some countries are more advanced than others. Flanders already recycles 70% of its municipal waste while Romania still landfills almost all of its waste. But the EU must aim high to improve the situation everywhere.

Every member state stands to gain from higher recycling or re-use of products, from lower environmental costs associated with closing landfills and incinerators to the economic and social benefits of job creation through increased recycling and re-use.

Our policymakers have to start thinking beyond ‘linear economics’, in which a product is made, sold and then discarded, and embrace the circular approach, where we re-use products and recycle and, above all, prevent unnecessary waste.

The Circular Economy Package, when it is released later this year, must provide a comprehensive and ambitious regulatory framework which allows new business models like repair services and product leasing schemes to enter the mainstream. The European Parliament issued a report in July where it called for the Commission to integrate high recycling targets in its proposal and make use of the EU’s product policies to ensure Europe becomes more resource-efficient.

Forward-thinking companies, organizations and citizens are signing up to the circular economy and creating ever more innovative schemes and services. The value that is locked up in a more resource-efficient economic model is of the tune of $600 billion (2) with over 2 million jobs (3). We want the European Commission to think circular and help deliver these benefits.

Piotr Barczak works as a Waste Policy Officer at the European Environmental Bureau, chairing its working group on waste. The group consists of experts on waste from EU member states.

The European Environmental Bureau launched the Make Resources Count campaign earlier this year to encourage the EU to be bold when it launches the Circular Economy Package.

The European Environmental Bureau is Europe’s largest federation of environmental organisations with more than 140 members who gain their membership from the general public. Because of this, we are guided by the voices of 15 million European citizens, and act as the ears and voice of its members towards EU decision makers.

References:
Professional Certificate in Strategic Climate Change Adaptation

23rd - 26th November 2015
London, UK

For more information, please visit: www.environment.parlicentre.org
Phone: +44 (0) 20 3137 8640, Email: info@parlicentre.org
The Addis Ababa outcome: Paving the way for the implementation of the post-2015 development agenda

As an author of the European Parliament’s report on the EU’s position on development aid, Pedro Silva Pereira, European Parliament’s Rapporteur on Financing for Development makes a checklist of some of the new policy deliverables and some disappointing facts in the agenda featured at the Financing Conference.

The Addis Ababa Conference on Financing for Development (13-16 July 2015) was the kick off to a critical year for sustainable development, leading up to the adoption of the post-2015 agenda in September and of a new climate change agreement in December. The conference’s outcome document – known as the Addis Ababa Action Agenda (AAAA) and representing the world’s plan to support implementation of the development agenda after 2015 – is not everything we wished for, but it still sets a positive framework for the global change we need towards a fairer and more sustainable future. The European Union and its Member States were key in building the Addis Agenda and must remain committed to its leading role in mobilising resources for sustainable development, with a particular focus on least developed countries (LDCs).

Last May, the European Parliament approved a report on Financing for Development which called for responsibility and commitment from all actors, as well as strong means of implementation of the Sustainable Development Goals (SDGs).

As the Parliament’s rapporteur for development, I participated in the Addis conference and was pleased to see that many of our progressive recommendations were included in the outcome.

However, I have to regret the lack of concrete financial commitments by almost all major donors, which presents a real danger to the crucial goals we need to achieve. Therefore we must continue our political work to ensure that the values of solidarity, equality and justice are carried through the new agenda.

According to the United Nations (UN) Secretary General Ban Ki-moon, the results in Addis gave us the foundation for a new global partnership for sustainable development. But this is no more than a first step. The strength of
the Addis Agenda lies in its comprehensiveness: the agreed package with over 100 measures draws upon all sources of finance, technology, innovation, trade and data to support the implementation of all three dimensions of sustainable development (economic, social and environmental).

The AAAA provides direction and recognises the areas where action is essential to support the development agenda for the next 15 years – domestic public resources; domestic and international private business and finance; international development cooperation; international trade; debt sustainability; systemic issues; science, technology, innovation and capacity building; as well as data, monitoring and follow-up.

Among the main points and new policy deliverables featured in the Addis Agenda are:

- A new social compact to provide social protection and basic public services like health, education, energy, water and sanitation;
- A global infrastructure forum to bridge the infrastructure gap and find funds to boost energy access, build roads and telecommunications infrastructure in developing countries;
- A package to support the world's poorest countries as the share of official development assistance (ODA) allocated to LDCs has fallen by 16% in recent years. Developed countries were encouraged to spend 0.2% of gross national income (GNI) on aid to the poorest countries, with the EU promising to do so by 2030;
- The establishment of a technology facilitation mechanism to help facilitate development, transfer and dissemination of technologies to achieve sustainable development;
- Enhanced international tax cooperation to assist in raising resources domestically as well as general commitments to collect more taxes, fight tax evasion and tackle illicit financial flows;
- Mainstreaming women's empowerment into financing for development with governments pledging to undertake legislation and administrative reforms on gender equality and investment in women and girls.

Countries also committed to develop by 2020 a global strategy for youth employment and the document highlights the importance of ecosystem conservation, besides envisaging a dedicated review process and an annual forum under the UN Economic and Social Council to help track progress on development financing.

Despite the good intentions of the outcome document to implement and finance the post-2015 agenda, the AAAA fell short on concrete decisions.

**Disappointing facts in the Addis Agenda**

Particularly disappointing was the fact that there was no new financial commitments, but only a reaffirmation of existing aid targets (0.7 percent of ODA/GNI and 0.15 to 0.20 percent of ODA/GNI to LDCs) which are not being met by many donor countries; the absence of a real UN intergovernmental tax body which would have given developing countries - that lose billions of euros a year to tax dodging - a seat at the decision-making table on global tax standards; the lack of ambition regarding a new multilateral framework for debt restructuring; and finally, the weakness of the private sector's commitments to human rights, transparency and business accountability.

Although the Addis Agenda is certainly not, in some respects, as strong and concrete as the European Parliament and many others would have preferred, this is not the end of the road. The measure of Addis' success will be in its implementation, so now real policy change must follow to bring the ambitious SDGs to life.

The path is made walking and our work is far from over.

Financing global development and the implementation of the post-2015 agenda will keep us all busy between now and 2030.
New development goals lack the required resources

PUBLIC-PRIVATE FINANCING PARTNERSHIPS WAS THE BUZZWORD AT THE FINANCING FOR DEVELOPMENT CONFERENCE IN ADDIS ABABA. WILL PUBLIC SECTOR MONEY BE SUFFICIENT TO TRANSFORM DEVELOPMENT? HEIDI HAUTALA, EUROPEAN PARLIAMENT’S GREENS/EFA GROUP SHADOW RAPPORTEUR ON FINANCING FOR DEVELOPMENT DISCUSSES THE OUTCOME RHETORIC ON PRIVATE SECTOR MONEY

Year 2015 is crucial not only for tackling climate change, but also for sustainable development. Progress has been made in reducing poverty, getting children to school and providing access to clean water, but much more needs to be done in supporting developing countries. To achieve that, the new sustainable development goals (SDGs) will be officially approved at the UN General Assembly in September. The goals themselves are an improvement compared to the present Millennium Development Goals. However, there is a huge gap between goals and concrete actions.

In the Addis Ababa conference on Financing for Development in mid-July, high hopes for redirecting the global economy and making robust commitments to finance the SDGs were lost.

One of the worst failures was the de facto postponement of 0.7 percent of GNI to development aid target with 15 years. This happens during the year when the target should be already met. The European Union failed to show leadership, as before the conference, the Council decided to support 0.7 only “within the timeframe of post 2015-agenda”. The European Parliament required more ambition and the commitment fulfilled by 2020. Now would be the time to be more ambitious, not less! Sadly, some countries made no concrete commitments at all.

The poorest and most vulnerable need the most support

The European Parliament wanted the EU to direct half of its official development aid to the least developed countries (LDCs). The Council was less ambitious endorsing 0.15-0.2 percent of GNI to LDCs as a target. This became also the call of the Addis Ababa conference, which is important as the trend shows decline in aid for the poorest. The EU should also recommit to guide our aid especially to Africa.

The life of a poor rural young African boy or girl will not be changed just by public development aid. Contribution of the private sector is important, but not without conditions. If self-guiding private sector would be the sole answer, all millennium development goals would already be achieved.

The outcome of Addis Ababa seems optimistic about the role of private sector. We need more clear criteria for private investments, such as foreign direct investments, public-private partnerships and blending of aid and loans. A legally binding framework to guarantee that human rights and environment are respected in the UN framework is needed. Victims of human rights violations committed by companies need remedy. Investments need to support local business. Voluntary corporate social responsibility is not efficient. The Parliament showed again more ambitious than the Council.

One example of the consequences of the Addis Ababa outcome rhetoric on private sector is the decision of the new Finnish government on development aid budget. Finland is going to cut 38 percent of its development aid to balance the budget. This is shameful now when donor countries should show more commitment to implement the SDGs.

At the same time when 42 percent of the funding of development CSOs (Civil Society Organisations) is cut, the annual funding for concessional loans for businesses operating in developing countries will be 13 times higher.
than before. It is not clear whether the focus is in promotion of the Finnish firms or business in developing countries.

There is a need to increase support to the private sector in developing countries, but this should not be done at the expense of other aid. The business sector needs public support services, access to finance, skilled work force, well-functioning regulatory framework and rule of law. This can be promoted by “traditional” aid. The Finnish government, in shifting its financial support from CSOs to companies ignores the important role of civil society in creating a better business environment.

Unfortunately, the Addis Ababa outcome did not deal with the bigger systemic issues concretely enough. All policies should aim to combat poverty. The resources are there, but they need to be used to tackle poverty and other global challenges. E.g. trade and financial policy should aim at reducing inequalities. There is a need for legal framework for restructuring debt. Unfortunately this was left vague in the outcome.

The importance of domestic resource mobilisation in developing countries was acknowledged in the conference. However there is a need to show clearer commitments. Illicit financial flows are a major reason for leaking resources from development. At least a group of countries promised to direct more aid to support tax administrations. Apparently, the EU did not support the establishment of a robust UN tax committee. It is a big disappointment that the majority of countries convened in Ethiopia followed the EU’s footsteps in this regard.

The EU should also place human rights, especially women’s rights, sexual and reproductive health and rights, and quality and transparency of aid in the core of implementation of the SDGs.

“Much remains to be done in order to ensure the means of implementation for real transformative change that would save the people and the planet. It is unclear how the planetary boundaries will be respected.”

europe is by far the biggest development aid provider in the world. But this is a big secret to many people. Most of the developing country presidents and ministers I meet believe that the United States or China provides most development aid. China and the US have often better access and gain more political capital in developing countries even though Europe is the biggest aid provider, trading partner and foreign direct investor.

European voters do not know about the great successes of European development co-operation. Many wrongly believe aid is decreasing. This is wrong and should be corrected. The truth is that global aid remains at record high $135 billion per year and many EU countries are increasing development assistance.

The United Kingdom, now the second biggest donor in the world, recently reached the target of 0.7 percent of national income for aid and is the only G20 country to do so. Germany increased aid more than anyone in dollar terms last year. Luxembourg and Sweden...
continued to give at least 1 percent of national income to development assistance. Hungary increased aid by a quarter, while Estonia increased by 20 percent. True, there are also European governments who don’t really live up to expectations. But why always dwell with the losers? The European Union should do more to share and scale up its success stories.

Domestic resource mobilization through taxation is the biggest source of finances for schools, healthcare and conditional cash disbursement schemes for the poor. Around 99 percent of all the money spent on education in developing countries comes from domestic resources. European countries generate over a third of their national economies in taxes while developing countries only achieve half of that. Using aid to help developing countries mobilize domestic resources has proven highly effective.

The OECD and UNDP recently launched Tax Inspectors without Borders

Many donors have committed to increase spending on tax for development. A pilot project in Kenya returned $1,290 in increased tax revenues for every dollar spent on reducing tax avoidance by multinational companies.

European countries have some of the most effective tax systems in the world and are associated with fair taxation and good public services. The European Union is well placed to take an international leadership role to make tax policies work better for developing countries.

Foreign direct investments are five times greater than aid and European Union companies and investors are the biggest source of foreign investments in the world. Much more private investments are needed to build green energy, railroads and manufacturing plants in developing countries. Development assistance can help by reducing risk to mobilize more private investment.

By blending public and private investments, the EU used $2billion in aid to mobilize around $40 billion for things like constructing electricity networks, financing major road projects and building water and sanitation infrastructure in recipient countries. European voters do not know about the great successes of European development co-operation. Many wrongly believe aid is decreasing.

“By blending public and private investments, the EU used $2billion in aid to mobilize around $40 billion for things like constructing electricity networks, financing major road projects and building water and sanitation infrastructure in recipient countries. European voters do not know about the great successes of European development co-operation. Many wrongly believe aid is decreasing.”

much more can be done and European companies and governments can lead the way. Europe is also a global environmental force for good. European leadership is crucial now that the world is bringing environment and development together into 17 new sustainable development goals. European governments are pushing global climate negotiations forward. European environmental policies are some of the best in the world.

A quarter of all energy used in the European Union is now green. European companies are also at the forefront of the shift to a green economy. Unilever have introduced sustainability tests for its entire supply chain and is a driving force behind conservation of the rainforests. They have pledged to eliminate deforestation from its supply chains by 2020 and encouraged and pressurized other to follow.

Over the past eighteen months, the share of global trade in palm oil by companies committed to zero deforestation commitments has grown from 5 percent to around 90 percent! Europe is home to some of the largest companies in the world and similar coalitions for action can be initiated in any industry. These are just some examples of the success of European leadership in development cooperation and environmental protection. More should be done to share the successes and inspire more.

Doing more of what works and scale up European efforts for domestic resource mobilization in developing countries, private sector involvement to and environmental leadership is one way to increase the visibility and impact of European Union development assistance.
Towards a sustainable culture for urban mobility

Development of sustainable urban transport requires a conceptual leap. Keith Taylor, Member of European Parliament highlights actions that can change current mobility patterns towards sustainability.

It is indeed a watershed year for our path to a more sustainable future. In September, the Sustainable Development Goals, a universal set of goals relating to international development, are to be agreed at the UN Sustainable Development Summit in New York, giving global leaders the chance to finally put environmental sustainability and climate action at the core of the new agenda.

Later this year, 196 countries will meet at the COP21 in Paris to sign a new climate change agreement. A lot is riding on this summit with the objective to achieve, for the first time in over 20 years of UN negotiations, a universal, legally binding agreement on climate, from all the nations of the world. While Paris is an important stepping stone, what happens after is just as important.

Bold policies and stringent implementations are the need of the hour.

This time, empty promises won’t do and any agreement needs to be followed up by bold policies and stringent implementation of measures to reduce GHG emissions. When President Obama unveiled his Clean Power Plan, the single most ambitious policy the US has ever enacted to address climate change, he reminded the world that time is running out to tackle global warming.

Transport plays an important role in this picture. As a member of both the European Parliament’s Transport and Environment committees, I am confronted on a daily basis with the discrepancy between the current approach to ensure mobility across Europe and the pressure this puts on Europe’s resources and the planet’s climate. Transport is the only sector that has failed to reduce its CO2 emissions since 1990 and now accounts for almost 30% of emissions in the EU.

Furthermore, it is responsible for 70% of the EU’s oil consumption, largely due to the explosive growth in road and air transport. It is clear that the EU’s transport sector is on an unsustainable path that puts at stake our climate, public health and life quality.

Crucial changes in Europe’s mobility

Without changes in mobility, we will not only fail to halt climate change, but also increase Europe’s dependency on imported oil and risk a future energy supply crisis.

According to the World Health Organisation, transport is a major source of air pollution, associated with a number of serious health effects such as cardiovascular and respiratory diseases. It has been found that poor air quality causes nearly half a million premature deaths in Europe each year.

Unsurprisingly, poor air quality is most prevalent in urban areas, with pollutants from motor vehicles, especially the increased use of diesel transport, as one of the main causes of high particulate concentration in EU cities. Brussels and London for example, two cities between which I regularly travel, are proven to be among the most polluted and congested cities in Europe. Not only does congestion worsen air quality, but in the UK alone, the cumulative cost of congestion between 2013 and 2030 is an estimated £307 billion.

The fact that up to 80% of EU citizens will soon live in urban areas and that urban mobility accounts for 70% of pollutants from transport and 40% of road transport CO2 emissions, shows how urgently a shift to more sustainable transport modes is needed.

On a positive note, I am also convinced that urban transport systems offer the best chances for low carbon transport and the reduction of pollutant emissions. 60% of urban trips are less than 6km. This should be a clear inducement to prioritise non-motorised mobility such as walking and cycling.

“On a positive note, I am also convinced that urban transport systems offer the best chances for low carbon transport and the reduction of pollutant emissions. 60% of urban trips are less than 6km. This should be a clear inducement to prioritise non-motorised mobility such as walking and cycling.”
networks, therefore tackling congestion and bottlenecks.

Electric mobility can be a part of the solution towards a sustainable transport and power system. However, to this end, it should mainly focus on e-bikes, trains, trams, cable cars, buses and shared cars. Moreover, a holistic approach is needed which ensures that the energy consumed is sustainably produced and electric vehicles are assessed throughout their lifecycle, including recycling and reusing of batteries.

As an overarching factor, we urgently need compatibility between different European, urban and regional systems, so-called interoperability, for information, charging points and intermodal ticketing in order to make public transport more attractive. Furthermore, I believe that additional efforts should be made in networking and coordinating EU pilot projects, as for example the CIVITAS, Polis and Eltis initiatives, as well as integrating cities as proper actors in the discussions regarding the implementation of new mobility policies.

My hometown of Brighton and Hove won a Civitas award last year in the category ‘City of the Year’ due to the sustainable mobility measures it implemented. These featured policies to promote cycling and bus travel, including improved cycle infrastructure, electronic real-time boards at bus stops to predict the exact arrival time of buses, smartphone ticketing, and a floating bus stop concept, which keeps the cycle path and bus lane separate.

This is just one of many positive examples out there to achieve cleaner, better transport. It is evident that every city faces different challenges and opportunities, and local stakeholders have to adapt policies to their respective circumstances, but it can be done and in the face of our commitments to reduce carbon emissions there is no more time to waste.

SUSTAINABLE TRANSPORT: Why does it matter and what can we do?

As a former minister for transport in Finland, I am in love with transport. Yes, transport. The infrastructure that makes our societies and cities run smoothly. The backbone of integrity and competitiveness in Europe. I love the nitty-gritty of transport regulation, but even more I love the opportunities transport offers: access to education, participation in society, social interaction, imports and exports. Transport is in my opinion a crucial lubricant for the employment and value creation of economy. It is also one of the most important services for European citizens. Therefore the transport policy implemented in EU, national, regional and local level really makes the difference.

At the EU level, both the Commission and the Parliament are working with long-term transport policy guidelines for Europe, evaluating and re-thinking Transport White Paper 2011. The European Parliament is currently also drafting its position on sustainable urban mobility.

The update and facelift of transport policy are now needed. The transport sector and the world around us have really changed in the last few years. A dramatically different view is now required, especially in terms of environmental and climate issues, but also in terms of digitalization and the boom of sharing economy.

Emissions must be cut

The need to reduce the emissions of transport system is by far the biggest challenge for European transport policy. There is an undeniable need to drastically cut emissions both in logistics and in passenger transport. Today more people are killed by harmful effects of transport emissions than by traffic accidents.

The White Paper of Transport 2011 already set ambitious targets for decarbonization of transport. Unfortunately, there has been more talk than action. New bold and ambitious steps forward are needed especially in urban transport. It is worth noticing that smart and sustainable urban mobility is definitely not of interest only to the big cities or metropolises in Europe.

Instead, in many cases, it is exactly the smaller cities and towns which have a privilege of shorter distances and thus easier promotion of sustainable solutions based on local conditions.

Digitalisation offers its helping hand

The ever-increasing digitalization in transport is not the enemy but a friend. It’s an influential way to improve (the terribly low) productivity...
of transport system. Our beloved cars, for example, are used for less than 5 percent of their lifetime. The “default settings” based on private ownership of cars as the backbone of everyday transportation should be questioned.

Shared transport (car sharing, ride sharing etc.) is also a trend that has made a strong entry to transport. If we take advantage of these new modes of transport, the number of cars in urban areas could be reduced by 90%! This would mean more space for green areas, new cycling lanes or fantastic new playgrounds for us all.

**New kind of transport services**

I am convinced that the transport markets will be transformed, and the change is already happening.

The boom of new transport services is bubbling under, eager to make the European transport system more efficient and provide new tailor-made services to customers. I am also pretty sure that there are many much-needed new jobs and new businesses just waiting for an opportunity in the transport sector.

This is challenging in terms of existing legislation. Regulators have to make their choice now: whether to protect the current, traditional market structure and the traditional way of provision of transport services, or whether to give some space for the new forms of transportation, shared transport and services of the digital era.

The underestimation of indisputable demand is the underestimation of the voice of customers: in Europe alone there are already more than twenty million people using some kind of new services.

The speed of technological evolution and development is of course extremely rapid and it is almost impossible for regulators to follow. Therefore it might be more useful to keep an open mind: we should think about transport differently, and also take bold steps towards a more enabling regulative environment which is now needed.

Regulative focus has to shift to consumer protection and to ensuring a level playing field for market actors.

More attention should also be paid to ease market access and to enable true competition between different transport modes by harmonizing the regulatory framework in different transport modes. However, we must not sacrifice our high standards of working conditions, the fair taxation and the respect for environment in the process - these are the golden values that contribute to a European success story, not something that we should let go.

**European model for transport?**

European transport policy is all too often arguments about funding, core networks or investments in infrastructure. All this is also important, but I find it sad that in the 21st century we still find it easier to build a tunnel through a mountain than make an enabling regulative framework for new transportation services.

We could use less money and more brains.

Whilst improving energy efficiency should be one of the top priorities of European transport policy, we should also be aware that the problems of harmful environmental effects or congestion will not disappear through the introduction of cleaner engines and fuels alone.

Instead, there is an acute need to improve the efficiency of transport system as a whole. We need to use the existing capacity more efficiently and improve the utilization rate of vehicles. We must also ensure that the public financing is allocated to measures with highest impacts both on national and EU level.

The need of the hour is a new European model for transport. I would be very eager to see Europe as a trend-setter for high-quality, customer-orientated and efficient sustainable transport system for the entire world. There is huge potential to create a new green economy and new jobs, and the market potential is not only in Europe.

There are already many interesting visions of how this all can be done, “The Mobility as a Service” concept (developed in Finland!) being one of the most promising. The momentum of making these visions into reality is now
Why should Europe embrace multimodality?

RISING GREENHOUSE GAS EMISSIONS AND GLOBAL TEMPERATURES HIGHLIGHT THE IMMINENCE OF DEVELOPING A SUSTAINABLE CULTURE TOWARDS MOBILITY. YET, WHICH ROAD SHOULD WE TAKE TO INITIATE SUCH A CULTURE IN A SOCIETY THAT IS PREDOMINANTLY URBAN? IN AN EXCLUSIVE INTERVIEW WITH JANANI KRISHNASWAMY, COMMISSIONING EDITOR OF GOVERNMENT GAZETTE, VIOLETA BULC, EUROPEAN COMMISSIONER FOR TRANSPORT, SHARES HER VISION FOR A SUSTAINABLE TRANSPORT NETWORK AND EXPLAINS HOW MULTIMODALITY CAN BE AN COMPPELLING APPROACH TOWARDS A RESOURCE-EFFICIENT TRANSPORT SYSTEM.
Transport systems worldwide are facing innumerable challenges. Urbanisation, globalisation and climate change are three such challenges which have a profound impact on infrastructure and transport. Expanding highways, rising demand for road space and limited parking availability have become major challenges for the passer-by, the passenger or the commercial driver in urban jungles.

Most European countries have experienced speedy urban expansion and greater than before use of motor vehicles. According to the UN World Urbanization Prospects, 2011, nearly 74 percent of Europe’s population lives and works in cities and towns, and by 2050 some 82 percent of the continent’s population will be concentrated in urban areas. Moreover, road transport contributes to nearly one-fifth of EU’s total emissions of carbon dioxide. While urban transport is an important starting place for greenhouse gas emissions, recent evidence from the European Society of Cardiology suggests that vehicular air pollution is the leading cause of heart diseases. The traffic jamming caused by resource-inefficient transportation systems has reportedly caused deaths of more than 10,000 people every day in Europe. With the degree of car reliance undeniably growing, the day is not too far when all trips taken by millions and millions of city residents and visitors will be by car. With cities and towns across Europe already facing the same kind of problems caused by transport and traffic, congestion, accidents and pollution, findings of a few recent studies are highly disturbing and imply that urban mobility calls for a total re-think.

Back in 2012, when the UN Secretary-General launched his five-year agenda, he identified sustainable transportation as an important means to a sustainable society. He insisted on the pressing need for imperative action on developing sustainable modes of transport to minimize the negative impacts on the environment.

Unfortunately, there is no single solution to solve all these major transportation challenges. It takes an objective grouping of incremental strategies to design and build a safe, resource-efficient, multimodal network that is incorporated within these urban jungles.

Re-inventing the wheel
Creating a roadmap towards a competitive and resource efficient transport system, the European Commission adopted 40 concrete initiatives to build a competitive transport system that will increase mobility, remove major barriers in key areas and fuel growth and employment.

Several European cities and towns are increasingly becoming convinced of shifting towards more sustainable modes of transport such as public transport, cycling and walking.

In fact, intermodality and its corollary multimodality have become synonymous to sustainable urban mobility.

The European Commission’s key goals of phasing out conventionally-fuelled cars in cities, promoting the development of intelligent systems for interoperable ticketing and embracing multimodality might soon become a reality.

In an exclusive interview with Janani Krishnaswamy, European Commissioner for Transport, Violeta Bulc discusses the key mandates of the European Commission in achieving sustainable mobility.

As Europe gears up to host the EUROPEAN MOBILITY WEEK in over 2,000 towns and cities across Europe, what does the European Commission want to achieve in terms of sustainable transport?

We want to address the challenges generated by urban traffic: congestion, air quality, CO2 emissions, road safety, and noise. The Commission’s White Paper on Transport, adopted in 2011, listed ambitious objectives such as the reduction by half of the use of ‘conventionally-fuelled’ cars in urban transport by 2030. We must continue to work towards these goals. This requires a close cooperation with the national and local authorities, which can best address urban planning.

Back in 2013, we also proposed an Urban Mobility Package which established procedures and EU financial support for the development of local “Sustainable Urban Mobility Plans.”

It recommended coordinated action specifically in urban logistics, urban access regulations, Intelligent Transportation Systems (ITS) deployment in urban areas and urban road safety. We are currently developing many additional guidelines and tools and urban mobility will definitely remain high on our agenda in the coming years.

In achieving sustainable urban transport, what is at stake at the moment? What will be the main challenges ahead in your mandate?

The first challenge is the decarbonisation of urban transport, in line with the objectives set in the Transport White Paper. To do so, it is urgent to develop alternative-fuelled vehicles and their recharging and refuelling infrastructure. Last October, the EU adopted a Directive, which foresees the deployment of electric charging points and alternative fuels filling-stations in urban and suburban areas all across Europe.

We now have to ensure that it is correctly implemented. Decarbonisation also requires a shift from private motorized transport to public transport, cycling and even walking for the shortest distances. Intelligent Transport Systems can contribute to it. Finally, road safety is a never-ending challenge, which I will continue to tackle.

What are some key issues the European Commission hopes to address in the near future? Essentially, what’s Commissioner Bulc’s vision for EU transport?

My vision is of a seamless, competitive and sustainable transport. To implement it during my mandate, I will focus on the digitalisation of transport, on decarbonisation through the use of alternative fuels, on electrification based on alternative fuels and on the internationalisation of European transport. I will also build on the work of my predecessor to remove all technical and administrative barriers in the transport sector.

In the near future, my action will also focus on aviation. The sector is facing a number of challenges, which we need to address. In December I will propose a new aviation
strategy. Its objective will be to make the EU’s aviation sector more competitive internationally; while maintaining the highest level of safety worldwide.

How can multimodal transport be an effective way towards a competitive and resource efficient transport system? What are the commitments of the European Commission in improving multimodality?

Cars still represent 72% of all passenger transport. While cars provide an available door-to-door transport mode, they are rarely the optimal mode to use from an energy efficiency and sustainability perspective. Multimodality is a preferable alternative as it involves at least a partial use of more efficient modes, such as urban public transport, coach or rail.

To encourage a change of habits, citizens need to be given the right incentives: multimodality will only work if it is easy and reliable.

In particular, through-tickets and multimodal journey planners are prerequisites. This requires a high degree of integration across the modes: information, management and payment systems must be interoperable. The ITS Directive provides a good basis for further progress.

An impact assessment is currently ongoing in view of an initiative for fair and equal access to multimodal travel and traffic data.

Another important aspect is to guarantee the protection of passenger rights during multimodal journeys. Currently, these are not covered by EU legislation, which risks acting as another deterrent. Following an impact assessment, the Commission may come up with a legislative proposal by 2017.
Europe’s sustainable mobility revolution

When European cities dedicated large amounts of urban space to vehicles made of glass and steel and fuelled by a liquid buried deep within the Earth, it was done in the name of modernity. Cities were remodelled to fit the needs of private vehicles, with streets that were once public spaces cordoned off for car-owners. Pedestrians were banished to footpaths, and cyclists were largely forgotten altogether, stuck in a limbo between both.

The story of urban development in the 20th Century is inextricably linked with the rise of the automobile, and many of our cities, with great black tracks of asphalt taking up the majority of limited urban space, poor air quality rates, frequent accidents at times resulting in death, are a testament to this. Even our historic building stock suffers, as cars subject them to constant vibrations, while emissions speed up their decay.

As populations continue to rise and previously rurally-based inhabitants migrate to cities, the number of journeys into and out of city centres is expected to rise. As such, relying on cars as our primary mode of transport is problematic. With an increasing number of cars on the roads, we are destined to experience more severe grid-lock, greater infrastructural strain, and more drastic health problems, both in terms of respiratory complications brought on by exposure to air pollution such as PM-10s and NOx (fumes released by cars) and through a lack of physical exercise prompted by car use. Rising oil prices and greater noise pollution further exacerbate the situation.

All of the evidence points towards one conclusion – the way we currently get from A to B is not sustainable. A long-term change is needed.

To prevent traffic chaos and to meet EU laws on air quality, many members of the city network ICLEI – Local Governments for Sustainability are embracing new ways to travel, putting sustainability at the centre of their travel plans. Whether its Copenhagen’s revolutionary work on enhancing cycling in their city or Barcelona’s decision to adopt a Sustainable Urban Mobility Plan that offers greater support for soft modes of transport (which additionally aims to reduce the number of deaths on the city’s roads by 30 percent), cities and towns are developing new mobility paradigms that put people first, using a mixture of political will, intelligent planning and stakeholder cooperation to make sustainable transport the norm.

Brussels recently made the decision to devote large swathes of its centre to pedestrians.

Today it has the largest pedestrian zone of any European capital. “It’s a revolution,” said Mayor Yvan Mayeur, speaking at the launch of the zone. “The appearance and atmosphere of Brussels [has] changed. We’re going to live in a calmer city more suited to its inhabitants and no longer to cars.”

Dublin City Council and Ireland’s National Transport Authority have similarly released...
plans that will see vehicle access to the city centre restricted, with streets reserved for walking, cycling and public transport use. Through the measures, the Irish capital aims to make the city centre more attractive as a place to visit, shop and do business in.

It’s not just larger cities that are transforming how we move in urban spaces

By making soft mobility modes more attractive, the Swedish city of Malmö has created what is reportedly the most sustainable transport system in the country. Discussing the city’s progress, Milan Obradovic, Chairman of Malmö’s Works Committee, said: “In Malmö, children are the central motivation for us to create a better city. For their safety and future, it is clear that we must strive for cycling, walking and public transport to be the obvious choice for getting around.”

In Southern Europe, Vitoria-Gasteiz was recently crowned Spain’s cycling capital, drawing praise both domestically and internationally. MEP Michael Cramer, Chair of the European Parliament’s Committee on Transport and Tourism, congratulated the city for its achievement, saying: “Vitoria-Gasteiz shows that political commitment at the top, a dedicated administration and a participative approach can quickly and considerably increase the share of cyclists in cities outside the established European cycling nations.”

To help cities across Europe follow these impressive examples, ICLEI is engaged in a number of EU-funded projects focused on enhancing sustainable urban mobility. The Eltis portal provides a wealth of information, showcasing best practice in urban mobility and providing valuable tools and resources.

The CIVITAS initiative works with local leaders across Europe to implement ambitious, clean urban transport strategies, while the Clean-Fleets project aids public procurers, helping them to purchase clean and energy-efficient vehicles. The SOLUTIONS project takes a more global view, making it easier for cities in Europe, Asia and Latin America to exchange and learn from one another on innovative and green transport measures.

While it is local governments that implement practical changes, the support of the public is required

One way to increase support for sustainable urban mobility is to show how the future might look. In October 2015, Johannesburg, South Africa will host the second EcoMobility World Festival. A month-long celebration of sustainable mobility options, the Festival features workshops, dialogues and an exhibition. Most excitingly, the Sandton Central Business District will be closed to private automobiles for the duration of the festival.

For one month, residents of and visitors to Sandton will be encouraged to get around by public transport, by bike, on foot, and with other EcoMobile transport options that will be provided during the event. The entire space of the Sandton CBD will be transformed. The streets – usually full of cars – will instead become available for walking and cycling, for leisure, for sport, for contemplation – for whatever residents, workers, and visitors choose to do.

The EcoMobility World Festival 2015 will show what is possible for European cities and for cities around the world. ICLEI has made it a strategic priority to help cities embrace sustainable mobility, and the Festival will help us visualize our target. Many European cities are already well on the way to the kind of sustainable urban future Johannesburg will portray.

Through local leaders’ work and perseverance the future of European transport will be healthier, safer and more pleasant. In short, our transport will reflect the type of cities we want to live in.

Promoting a multimodal lifestyle

**Choose. Change. Combine.** These are the catchwords behind the European Mobility Week’s theme this year -- multimodality. **Juan Caballero** from **EUROCITIES** gives a low-down on what Europe should expect

In an initiative to tackle the negative impact of local transport on economic development, air quality, energy consumption, CO2 emissions and quality of life, several cities and towns across Europe have opted for a multimodal lifestyle and have undertaken some inspirational measures to improve walking, cycling, the use of public transport and responsible use of cars.

Several cities plan to provide high-standard bicycle paths and single car-sharing systems to give public spaces back to their citizens, as part of this year’s European Mobility Week (Sept 16-22), which aims to get the European society reflect on multimodality and present a chance to explore newer parts of Europe. One of the most fascinating aspects of this year’s theme is how it tries to lead the general public to rethink about urban-transport as a way to enrich journeys.

The week aims to make people choose, change and combine their transport services to fit their needs.

The week will finish with the traditional celebration of car-free day. One or several areas in participating cities will be closed to motorised traffic. Capital cities of Hungary, Portugal, Slovenia, and Sweden have all planned for a car-free day, providing an opportunity to set up environmental and pedestrian zones for the day.

The campaign supports the promotion of EU policies in the areas of transport, climate change, energy efficiency and sustainable urban development. Its message reaches approximately 170 million people in Europe and beyond.

It is financially supported by the Directorate-General for Mobility and Transport of the European Commission and managed by a consortium including three city networks, led by **EUROCITIES**.
The work undertaken over the last fifteen years by the global community to implement the Millennium Development Goals (MDGs), the Kyoto Protocol and the Rio Conventions, the Hyogo Framework for Action on Disaster Risk Reduction (DRR) and other international accords on climate has established the basic equation according to which integrating climate action in development planning can deliver resilient results for sustainable development. Hence the “Sustainable Development Goals” as the engine of the Post-2015 Agenda.

In September, during the 70th session of UN General Assembly, governments will meet to adopt these Goals, the SDGs replacing the MDGs. What varies is much more than one letter in the acronym. The SDGs include a standalone goal on climate change, as well as the integration of climate change in the other sectoral goals including on food security and poverty reduction. In December, governments will meet in Paris to finalize a new climate change agreement that will ensure all countries take action to counter climate change and can adapt to the impacts. It is essential that we maintain our ambition well below 2°C, and abandon a trajectory towards climate chaos.

Science shows the pressing need to integrate climate change in development. It is the poorest and the most vulnerable who suffer from dangerous climate change. The term climate refugee has become common currency in the humanitarian literature. Poor people and poor countries are hit the hardest – take the Small Island Developing States for instance. To safeguard development gains made under the MDGs, action on adaptation is needed and mitigation is essential if we want to remain at 1.5 degrees of warming. Magdy Martinez-Soliman, UNDP Assistant Administrator and Director of Bureau for Policy and Programme Support, presents the main lines of actions.

**Post-2015 Development Agenda:** Opportunities for action on climate change

**Magdy Martinez-Soliman, UNDP Assistant Administrator and Director of Bureau for Policy and Programme Support, presents the main lines of actions.**
is needed to build resilient nations and communities, and mitigation is essential if we want to remain at 1.5 degrees of warming. Four lines of action are needed.

**Capitalizing on existing successes**

We need to combine innovative solutions to development challenges and building on successes of the recent past. UNDP’s last decade of work with governments has shown for example, that the development of national climate policies in countries such as Kenya and Fiji have helped mainstream climate change concerns into all sectors of development planning – the famous “whole of government approach” - enabling policies and incentives that facilitate climate resilient growth.

**Ensuring coherence in implementing climate action in 2015 agreements**

The post-2015 development package – the Goals, a Paris Agreement, Financing for Development (FfD) and the Sendai Framework for DRR – needs synergetic implementation. This includes for example how action on climate change through the SDGs to build resilience to the impacts of climate change can contribute to increasing ambition on adaptation under a COP 21 Paris agreement, or the synergies between an energy SDG and countries’ emission reduction commitments under Paris.

**Guaranteeing Adequate and sustained financing**

Tackling climate change is undeniably a cost-effective investment, one that allows governments and communities to pursue development that is long-term and resilient. While the evidence of success and the capacity exists, a lingering but significant concern remains on the financing and support that will be required for post-2015 implementation.

High level political agreements have to be complemented with adequate, stable and dedicated climate and development finance. Transitioning energy systems, building infrastructure for and between new and better planned cities, and supporting local farmers to adapt to climate change will all require funding, including leveraging private funds. Simply relying on overseas development assistance will not be sufficient. Increased bilateral and multilateral aid will be essential, as will commitments from the private sector and from developing countries themselves to dedicate domestic resources. Fortunately, poor countries already devote most of their budget to their own development, but more is needed.

Learning lessons and innovating, building strong partnerships, ensuring policy coherence and synergy, and mobilizing finance are the four pillars of the Post-2015 architecture. The ambition of this year’s agreements must be matched by a decade and a half of determination for action at the country level.

Magdy Martinez-Soliman is also Assistant Administrator of the U.N. Development Program, where he leads the Bureau for Policy and Program
Eradicating poverty and securing sustainable development

Over the last few months the European institutions have been playing a very active role in shaping the global discussion on poverty and sustainable development, says Neven Mimica, EU Commissioner for International Cooperation and Development.

In September 2015 the international community will come together in New York to agree a new framework for sustainable development. The Millennium Development Goals (MDGs), agreed in 2000 and which are set to expire in 2015, were a group of eight time-bound and quantifiable objectives addressing extreme poverty. They have been extremely important in guiding development efforts made by developing countries themselves, as well as donor governments. The MDGs have helped to focus attention and mobilise support; they have helped lift many millions out of extreme hardship.

As the world’s largest trading partner for developing countries – the EU institutions and member states have driven some of this progress in partnership with developing countries themselves and should be proud of their achievements. The EU has helped, for example, to enrol 13.7 million new pupils in primary education, ensure that over 7.5 million births were attended by skilled health personnel and that more than 70 million people were connected to improved drinking water. But work remains unfinished; around one billion people still live in extreme poverty. And major environmental challenges remain – two-thirds of the resources provided by nature, including fertile land, oceans, drinking water and clean air, are in decline. Climate change and biodiversity loss have almost reached the limits beyond which there will be irreversible effects on human society and the natural environment.

This is why the EU is working with others in the international community to create a new set of Sustainable Development Goals. UN insiders describe this as the Post-2015 Development Agenda. As European Commissioner for International Cooperation and Development, achieving an ambitious and universal post-2015 development agenda, backed up with credible and proportionate means of implementation, is one of my top priorities for the coming months. I want to ensure that the EU remains at the forefront of the fight to eradicate poverty and to achieve sustainable development. The Summit in New York in September should approve a single overarching agenda addressing both poverty eradication and sustainable development. This is an unparalleled opportunity that we cannot afford to miss.

An important innovation being discussed is the principle of ‘universalism’ – the idea that the new agenda will apply to every country. All will need to make some changes to put the new framework to work. These would be adapted to each country’s individual context, but pursued with a collective sense of the global common good. This is one of the ways in which the new framework will take into account the shifts in the balance of political and economic power between countries over the last fifteen years.

In addition to agreeing the agenda, we need to ensure that it is backed with appropriate financing and policies that will allow us to implement the goals we agree upon. Implementation of the post-2015 agenda will need to be underpinned by a new and stronger global partnership, with all actors – public and private, from all countries – playing their role, and contributing their fair share to domestic and global progress.

The European Commission has recently set out its views on the new global partnership that is needed to deliver the Sustainable Development Goals in a new Communication (‘A Global Partnership for Poverty Eradication and Sustainable Development after 2015.’) We outlined a series of policy measures to be pursued by all countries, according to their respective capabilities, set out ambitious proposals on how the EU could contribute to such a partnership and suggested principles for a solid and credible review and monitoring mechanism at national, regional and global levels.

The post 2015 agenda is ambitious, universal and far-reaching. At the European Union we have chosen to designate 2015 as the European Year for Development. It is a major opportunity to make a difference in the lives of millions of people in some of the world’s poorest countries, to ensure their future wellbeing, as well as to contribute to the future wellbeing of our planet.
Will 2015 go down as the year global leaders took decisive action to secure a sustainable future for our planet? That is the crucial question as the UN steps up negotiations on replacement targets for the Millennium Development Goals (MDGs) at the General Assembly in September in New York. Draft documents propose new Sustainable Development Goals (SDGs), applicable to all countries. Then just two months later in Paris, global leaders will come together again to seek a deal on combating climate change.

The year 2015 has also been designated the European Year for Development and as we mark this year perhaps lesson number one is that development policy works. The MDGs have helped cut extreme poverty in half. Millions have been lifted out of poverty, millions more children have gone to school, been protected from malaria and over 2 billion people have been given access to clean water and sanitation.

But unless upcoming global talks in 2015 are successful, and matched by spending commitments and the right policies, our objective of eradicating extreme poverty by 2030 and progress could be lost. This was why the European Parliament is calling on the EU to play a leading role in these processes to make sure the goals are ambitious and have at their heart the eradication of extreme poverty, human rights, good governance, reducing inequalities and empowering women and girls.

Securing funds to deliver on these policy goals is now a priority. The European Commission has just published a paper calling on the EU to re-commit to the target of spending 0.7 percent of their national income on development aid, a move I applaud as essential to getting all global players on board.

Coming quickly on the heels of New York are the climate talks in Paris in December. For the world’s poorest peoples global warming is not a future problem but a real and present danger. We need a renewed sense of urgency and serious emission reduction targets backed up by policies to deliver them if we are to stabilise global temperatures. Poverty will never be history unless we tackle climate change.

I believe the EU should prioritise delivering results in these processes, using its important position in the world as the world’s largest aid donor and as a region that has pushed forward with binding legislation to tackle climate change. Our aim should be to achieve genuine improvements in people’s livelihoods and encourage policies for better stewardship of the world’s natural resources.

If the EU can achieve this in 2015, backing up words with concrete actions, it will do much to enhance its role in the global community. My colleagues and I on the Development Committee are ready to help meet this challenge.

**THE MDGS HAVE HELPED CUT EXTREME POVERTY IN HALF. LINDA McAVALAN MEMBER OF EUROPEAN PARLIAMENT AND CHAIR OF PARLIAMENT’S COMMITTEE FOR INTERNATIONAL DEVELOPMENT (DEVE) SAYS MILLIONS HAVE BEEN LIFTED OUT OF POVERTY, MILLIONS MORE CHILDREN HAVE GONE TO SCHOOL, BEEN PROTECTED FROM MALARIA AND OVER 2 BILLION PEOPLE HAVE BEEN GIVEN ACCESS TO CLEAN WATER AND SANITATION**

Poverty will never be history unless we tackle climate change

“*I believe the EU should prioritise delivering results in these processes, using its important position in the world as the world’s largest aid donor and as a region that has pushed forward with binding legislation to tackle climate change.*”

© Nana B Agyel, Flickr
At IUCN, we aim to influence, encourage and assist societies throughout the world to value and conserve nature, to ensure its effective, sustainable and equitable governance, and to deploy nature-based solutions to challenges including climate change, food-security and equal development.

The year 2015 provides a number of unique opportunities for our Union to be involved in international negotiations that – we hope – will bring the world a step closer to our vision of ‘a just world that values and conserves nature’. One of these opportunities is the current discussions on the Post-2015 Development Agenda - a UN-led process to define the future global development framework to succeed the Millennium Development Goals (MDGs).

This will culminate in the adoption of the Agenda at the United Nations Summit in September, and include a set of Sustainable Development Goals (SDGs), which are to be universal, i.e. applicable to both developed and developing countries, and transformative. The SDGs will aim at guiding sustainable development over the next fifteen years (2015-2030), so this year’s negotiations are of key importance.

Sustainable development is widely considered to be based on three dimensions: economic, social and environmental, and they need to be reflected in an interconnected manner in the SDGs. IUCN advocates that environmental protection should be understood and considered as the foundation on which social and economic development can thrive, rather than only a stand-alone ambition. In particular, IUCN promotes the use of nature-based solutions and the effective governance of natural resources to ensure that the SDGs truly embrace a strong environmental dimension.

Environmental protection is the foundation of social and economic development

The EU is strongly committed to the SDGs and has taken on the role of one of the “driving forces behind mobilizing action internally and worldwide”. IUCN welcomes the EU Council Conclusions on a Transformative Post-2015 Agenda (December 2014), which reflect many of IUCN’s own priorities, especially the acknowledgment that environmental sustainability is the backbone of prosperity and well-being for societies throughout the world.

We also support the EU Council’s view that GDP is a flawed measure of progress – indeed, agreed indicators will have to include social, human and natural capital to ensure that human well-being and sustainable livelihoods are captured in the way we measure ‘growth’.

However, despite the EU Council’s recent announcement to collectively pledge 0.7 per cent of its GNI to official development assistance by 2015, we are concerned about the EU’s and its Member States’ actual implementation of these commitments.

On 5 February, the European Commission published a Communication entitled ‘Global Partnership for Poverty Eradication and Sustainable Development after 2015’. This document sets out principles and main components required for the implementation of the Post-2015 Agenda – both financial and non-financial. It emphasizes the EU’s willingness to positively engage in the global debate on the ‘means of implementation’ for the future SDGs and will provide the basis for an EU common position in the intergovernmental negotiations. It is clear that if we are to achieve genuine sustainable development all around the world, all available resources – public and private, domestic and international – must be mobilized and used complementarily.

IUCN welcomes this Communication, and we hope that the EU Council Conclusions (to be adopted in the spring) will be as ambitious as the EU’s position we have seen so far. We believe that the EU has the potential to be a leader of transformation in this crucial year and wish that it will maintain its high level of ambition.

The IUCN was founded in 1948 as the world’s first global environmental organization.
People and planet first – a new sustainable development framework

The new sustainable development framework for the forthcoming period must be a single framework which builds on the objectives of the MDGs. Sally Nicholson, co-chair of the CONCORD-Beyond 2015 European Task Force suggests that it should encompass all new challenges and tackles the root causes of poverty and inequality.

At the turn of the millennium the world agreed on a set of goals for reducing poverty by 2015: the Millennium Development Goals (MDGs).

Thanks to the MDGs, huge progress has been made in tackling poverty, and in areas such as healthcare, education and access to drinking water but the world is a very different place today than it was when the MDGs were designed. Inequality has taken deeper root, financial and economic crises have rocked the world, environmental degradation continues apace and global challenges such as climate change have demonstrated the very real impacts that will be experienced by us all as a result of rising temperatures.

The new sustainable development framework for the forthcoming period must be a single framework which builds on the objectives of the MDGs, encompasses new challenges and tackles some of the root causes of poverty and inequality.

Therefore it must take an approach which addresses governance issues as well as integrating in a balanced manner all three dimensions of sustainable development. In a complex and inter-linked world, no subject can be treated in isolation.

The idea for sustainable development goals came out of the UN Rio + 20 Conference in 2012 when governments agreed to establish an intergovernmental Open Working Group to make a proposal for a set of goals which were action-orientated, aspirational, global in nature and universally applicable to all countries.

The UN General Assembly in 2013 agreed that the follow-up to the MDGs and the discussions on SDGs should be brought together with a view to adopting a single overarching framework of goals and targets in 2015. According to Secretary-General Ban Ki-moon: “We need a new and universal compact that is people-centred and planet-sensitive. It must encompass the fight against poverty and inequality and against gender-based discrimination; it must include those who do not enjoy full participation in society; and it must be based on safe and peaceful societies and strong institutions led by women and men from all backgrounds.’

Given the nature and scale of the challenges the world is facing, it is no longer possible to imagine a framework which is designed predominantly for implementation by developing countries. This time around the agreement will be on goals and targets that apply to all countries and for which all countries will take responsibility. The concept of universality is central and there will no longer be a ‘them and us’ or a ‘north versus south’ narrative.

The EU will have to look at how to implement each and every goal to promote equality, justice and sustainable development in the EU while considering how its domestic and external policies impact sustainable development in the rest of the world. Even within Europe, 24.8% of the population are considered at risk of poverty or social exclusion and women still earn on average 16% less than men. Meanwhile Europe is consuming more than its fair share of the earth’s natural resources in order to feed its growth.

NGOs are calling for a just, equitable and sustainable world in which every person can realise their human rights, fulfil their potential and live free from poverty, and where political and economic systems deliver wellbeing for all people within the limits of our planet’s resources.

An enabling environment must be created for all people to be able to hold their government to account for the policies which impact their lives – which in itself implies the realisation of civil and political rights such as freedom of expression, association and information. The EU has itself described the post 2015 sustainable development agenda as ‘transformative’, providing a great opportunity to address some of the key global issues facing the world today (Council Conclusions December 2014). It has emphasised the need for integration of all three dimensions of sustainable development, the importance of governance and a human-rights based approach with a particular emphasis on gender equality and the prosperity and wellbeing of all people within planetary boundaries.

Now the spotlight turns on the international negotiations in New York. Here the EU must maintain its strong position and foster the international political will to ensure that the post 2015 sustainable development framework is transformative.

CONCord is the European NGO confederation for relief and development. Sally Nicholson is Head of Development Policy and Finance at WWF European Policy Office.
Media and political rhetoric in recent months have focussed on the arrival of thousands of migrants and refugees fleeing conflict and oppression to Europe. Mismanagement has diverted attention from the reality that human trafficking has exploited the vulnerable and critically contributed to the consequential humanitarian crises by facilitating life threatening transit. There is an urgent need to re-evaluate current infrastructure designed to tackle human trafficking, both in terms of preventative, proactive and retrospective policy.

Human trafficking claims, at a conservative estimate, 2.5 million victims at any one time, generating around $150 billion for vast criminal enterprises in illegal annual profits – approximately $99 billion of which from commercial sexual exploitation. Human trafficking has flourished under vast criminal networks exploiting poor governance structures, often seeing the enterprise as a less risky alternative to other crime. Current infrastructure however is neither comprehensive nor well-resourced enough to incite real change at the pace needed.

The UN dominates the anti-trafficking arena, its two primary Protocols adopted in 2000 and 2003/4, followed by its enforcement agency, United Nations Global Initiative to Fight Human Trafficking (UNGIFT) in 2007. Currently 166 nations have ratified the UN’s primary protocol. Preceding and complementing these measures lies the International Labour Organisation (ILO), envisaging principles and providing technical assistance to states.

A number of regional and national mechanisms have followed, a positive example being the EU Directive 2011/36/EU. However, many of these contain exclusive aspects that reduce their potential effectiveness.

The Missing Links

There are numerous instances where political indifference, misunderstanding or lack of knowledge amongst officials in charge, have made even sound policy ineffective. Additionally, there are several global misperceptions, that human trafficking predominantly relate to women and children whereas in reality, forced labour affects a larger number of men. These complexities are often missed.

Lack of resources, training and updated toolkits for public sector officials often result in ineffective controls, misinterpretation of victims, rising dangers for those at risk. A critical issue resulting from this is failures in victim support: lack of language skills and trauma awareness, resulting in traumatic interviews for victims that fail to produce prosecutions and often lands victims either in jail or back in the hands of traffickers. This demonstrates a failure to adopt the necessary holistic approach, compounding policy towards law enforcement without tackling the underlying structural issues that allow traffickers to operate so freely.

Although 90 percent of the world’s countries have now criminalised human trafficking, according to the UN ‘fifteen countries had no cases adjudicated in the period from 2010 to 2013, while 25 countries had only one to ten cases adjudicated during the same period.’ This compounds the perception that human trafficking is a low risk crime compared to other criminal activities, such as money laundering which is being clamped down more successfully.

Despite this, the growing trend of automatic securitization is a potential threat, states failing to recognise the importance of more holistic measures, given that securitised efforts often garner more attention for governments. Law and order is certainly an important aspect, be it border security, intelligence work or prosecution. However, this approach cannot sufficiently cater to the underlying causes of trafficking and the vulnerabilities of traumatised victims.

The global misinterpretation that human trafficking is a problem that arises purely from conflict and that it has not developed into an issue of its own right further adds to the lack of effectiveness. On the national level, police forces and social services have only recently begun to view and deal with the issue as a domestic problem, as well as a global one. There is a need both nationally and internationally to understand that human trafficking arises from a number of phenomenons, such as lack of law enforcement, civil unrest, large-scale poverty, or illiteracy.

What can be done? There is a lack of accurate data to inform critical policy decisions - agencies must pull national governments...
Squaring the circle

The SDGs are too important to become just another international treaty whose usefulness never goes beyond decorating the walls of the UN. Gonzalo Fanjul, Policy Director, Barcelona Institute for Global Health discusses how to preserve the relevance of its overambitious agenda

Over the coming months, the negotiators working to define the new global development framework that will replace the Millennium Development Goals (MDGs) will have to square the circle if they are to preserve the relevance of the agenda negotiated to date (and particularly the focus on equity and sustainability—core values around which all the other issues revolve) while reducing the overall number of goals so as to achieve a credible proposal that will ensure the commitment of all the parties involved.

We do not have many reasons for optimism. A laconic observer close to the process recently remarked that governments, and institutions have turned the Sustainable Development Goals (SDGs) into “a letter to Santa Claus”, a document in which absolutely everything can be included. Whatever your hobby horse in the sphere of poverty or sustainable development, if you look hard enough you will surely find it among the 17 goals and 169 targets included in the document proposed by the Open Working Group.

The ambitious scope of the proposal is also at odds with the recent behaviour of the negotiators. The same governments adding goals to the list of SDGs have revealed the true extent of their commitment to sustainable development in the course of the unsuccessful climate talks: a succession of increasingly funereal meetings at which official spokespersons from Europe, the United States and the emerging economies have to bend over backwards to justify the lukewarm commitment of their leaders. Nor are we seeing any tangible progress on development financing—a topic that will have its moment in the spotlight this summer in Ethiopia.

While cooperation programmes are increasingly bogged down by conditionalities, donor and recipient governments—in interminable debates about the effectiveness of aid—have reduced to mere footnotes the promises made by the G20 in 2008 with respect to tax avoidance and the responsibility of elites to the citizens of their own countries.

But none of this detracts one whit from the importance of the new framework. Despite their indisputable contribution to the welfare of millions of people, the MDGs were handicapped by the fact that they were wholly target-oriented. The objectives currently under discussion attack the very roots of the problem.

Equally important is the fact that this process comes at a time when the international community is more than ever aware of how their destinies are intertwined. The fight against global warming is being waged in Spain and the United States as well as in Mozambique and Thailand.

The forced displacement of millions of people towards southern Europe reflects a collective failure to ensure peace and security in entire regions of the planet, such as the Horn of Africa.

In the coming weeks, all the actors should agree on a calendar for implementing the actions and put in place the means to carry them out. The developed countries should be bound by commitments to reduce poverty consistent with their responsibilities and capabilities. It will not be easy, but there is still time to achieve it.

The outstanding virtue of the MDGs was that they demonstrated how, within 15 years and with a clear roadmap and adequate resources, it was possible to achieve such feats.

Together to create comprehensive, detailed and accurate mechanisms that can monitor human trafficking more effectively. Without more universal mechanisms, policymakers will fail to create effective policies that can deal with the reality on the ground.

Human trafficking is not an isolated issue

It perpetuates other crime such as arms proliferation, as well as conflict and social tension. More holistic approaches will contribute to strengthened legal measures and prosecutions, better protection for those at risk and, in the longer term, closing the space open to human trafficking. By closing this space, policy makers can also make inroads into other criminal activities, as the interlinked nature means they cannot be tackled in isolation.

Part of this initiative must involve the private sector through increasing awareness of the link between trafficking for labour purposes and the demand for very low cost workers, as well as increasing detection and prosecution of businesses ignoring the laws.

Sustained international focus on human trafficking is critical and cannot be foregone. However, international co-operation and campaigns must be supplemented by local initiatives. Human trafficking takes varying forms and to use a blanket mechanism for all would be foolish. Instead, policymakers must be aware of their specific local and regional vulnerabilities, rather than make assumptions based on global norms, ensuring local officials are equipped with specific toolkits needed to tackle the situation preventatively on a daily basis. To complement this, there is considerable need for community driven, bottom up programmes to help victims escape traffickers and rebuild their lives. By educating local communities in vulnerable areas on the dangers, signs and consequences of human trafficking, more comprehensive and locally owned directives could help prevent further escalation.

The outstanding virtue of the MDGs was that they demonstrated how, within 15 years and with a clear roadmap and adequate resources, it was possible to achieve such feats.

The article was previously published at http://www.hscentre.org/policy-unit/human-trafficking-modern-trends-slavery-enterprise-missing-links/
Professional Certificate in Human Trafficking

14th - 18th March 2016
London, UK

For more information, please visit: www.humantrafficking.parlicentre.org
Phone: +44 (0) 20 3137 8640 Email: info@parlicentre.org
Politics behind the sustainable development

DO THE SDGS REPRESENT AN INSUFFICIENT FRAMEWORK FOR ACHIEVING GENUINELY SUSTAINABLE DEVELOPMENT ACROSS THE WORLD? OLIVIA ARIGHO STILES TAKES A LOOK AT THE CONSPICIOUS OMISSIONS

Sustainable development is universally recognised as a defining policy objective of the 21st century. The field of development studies has mushroomed since the 1970s while NGOs and corporate bodies dedicated to advancing the development agenda have likewise proliferated. Starting from the premise that the needs of today must be met without compromising those of the future, ‘sustainable development’ broadly covers a myriad of themes from anti-poverty, economic growth in the global south to climate change. Yet it has been a policy area sufficiently elastic as to encompass a diverse and frequently contradictory assortment of ideological currents and international actors.

This has obfuscated the ideology implied by ‘development’ and has led to the appropriation of sustainability logic by forces whose interests are actually inimical to it. This obscures the degree to which ‘development’ at its most meaningful, represents a site of political contestation between neoliberal tendencies on the one hand, and transformatory socio-political movements on the other. The Sustainable Development Goals are a clear indication of this.

In 2000, world leaders committed to eight Millennium Development Goals (MDGs) as part of a drive to alleviate global poverty. These MDGs expire in September 2015 and a new set of Sustainable Development Goals (SDGs) will be adopted at the UN general assembly. These SDGs are a collection of 17 broad aims agreed by UN member states, bringing together governments, multilateral organisations and NGOs in an effort to tackle global poverty, gender equality and climate change.

The SDGs encompass impossibly broad policy areas, including anti-corruption, providing secondary level education to children, investing in rural infrastructure and affordable housing, and awarding women equal inheritance rights. Under its umbrella there is very little in the realm of development that is not alluded to.

On one level this represents an encouraging recognition of the necessity of a holistic and integrated approach in advancing sustainable development. As a rhetorical affirmation of intent, this is progress. Yet the SDG’s vast scope exposes the frailty of political leaders’ commitment, and their lack of any legally binding mechanisms mean they afford countries considerable manoeuvrability when it comes to realising these goals.

Another omission is apparent in one of the goals vis-à-vis reducing inequality, which states that countries should ‘adopt policies especially fiscal, wage, and social protection policies and progressively achieve greater equality’. This is so vague as to be rendered meaningless. A more exacting method of achieving this aim might be to mandate national governments to legislate for a minimum wage, or even a citizen’s income as way of lifting the poorest out of poverty and move to an equitable distribution of wealth in developed and developing countries alike.

Yet more fundamentally, the SDGs fail to offer any robust solution to the rising levels of inequality in the world. In recent years, the wealth ratio between the richest and poorest countries has increased exponentially; in 1973 the gap was around 44:1 but today it’s nearly 80:1. In January 2015 Oxfam published a report showing that the richest 1% have seen their share of global wealth increase from 44% in 2009 to 48% in 2014.

Similarly, although ostensibly broad based and non-partisan by design, the SDGs fail to offer support for the empowerment of trade unions and other non-governmental actors which play an integral role in social development. They therefore serve a political function in erasing the role of unions from the development agenda. In countries such as Colombia, which is the world’s most dangerous country to be a trade unionist, the labour movement is an important but marginalised actor in protecting workers in the formal and informal economy.

The SDGs reveal a bias in favour of corporate power

Failure to adequately challenge the role of multinationals in environmental degradation is evident in the proposal to ‘encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.’ Yet there is no reference to any quantifiable targets or legal parameters through which to enact this.

Ultimately the SDGs represent an insufficient framework for achieving genuinely sustainable development across the world. As a statement of intent they are useful in placing issues such as gender equality, environmental degradation and social aid at the heart of UN discourse. But in offering a strategy which will lead to tangible, quantifiable improvement in these areas, the SDGs are simply an empty vessel.

More deeply still, they reflect the persistent fallacy that meaningful action against climate change and in favour of social equality can be taken within the same economic power structures which have permitted these problems to arise in the first place.
This year, a number of high-level decisions on sustainable development will be made – decisions that will steer our future. The anticipated climate agreement of the 21st Conference of the Parties (COP 21) to the UN Framework Convention on Climate Change (UNFCCC) in Paris in December is one such milestone.

The role of water in sustainability and the link between water management and climate both seem to be well understood by many local and national stakeholders. The private sector is also showing significantly greater appreciation for the vital role of water. However, there attitudes have not yet been given its due importance.

The anticipated climate agreement of the 21st Conference of the Parties (COP 21) to the UN Framework Convention on Climate Change (UNFCCC) in Paris in December is one such milestone.

As hydropower and biofuels, such a dehydrated global climate agreement will increase our dependence on water-intensive energy sources. At the same time, we need to buffer communities, agriculture, and ecosystems from climate impacts — which will increase water demand.

Many regions are already seeing competition between climate mitigation and climate adaptation, such as corn as a fuel versus basic food source in North America. Without careful thought, we risk tensions between our ability to cope with impacts now – even as we are trying to define commitments to slow future climate change. Clearly, both goals must be met. Nevertheless, there is little coherence in how we set goals and define current and future needs around water for mitigation and adaptation.

“Investment policies that are not resilient may make economies less stable, and more vulnerable to water shocks and conflict. We normally manage water through expensive, large investments in energy, irrigation, water treatment and supply that are hard to build and difficult to modify – especially if water conditions or economic needs change.”
However, in many regions, design and operations of these investments may not match emerging climate conditions. Policies that are not resilient might make economies less stable and vulnerable to water shocks.

**Water shocks can have enduring, even escalating impacts, with limited ability to respond**

Severe droughts have shut down navigation networks in the Danube and Mississippi rivers, and recent flooding crippled electronics production in Thailand. A new hydropower facility can require a decade of planning and construction, consume more than a billion euros in financing before any power is actually generated, and remain in operation for several centuries.

Our ability to design water management facilities that are robust to 10 or 20 years of climate change - let alone a century or more - remains very limited. At a minimum, economic development policies will likely need a lot of climate adaptation just to keep these investments productive and viable, not the least those designed to promote climate mitigation.

In both cases, without careful planning and coordination, a dehydrated global climate agreement will increase our dependence and vulnerability to future water shocks, promote development conflicts between energy, food, and urban security, and ultimately endanger our ability to meet climate mitigation goals as countries respond to crises by favouring climate adaptation.

**Water connects all things**

Beyond being a key consideration in any implementation strategy, water has the potential to act as a connector between mitigation and adaptation policy areas, economic sectors, and nations with shared water resources. It is also closely linked to several risks including food crises, interstate conflict, profound social instability, extreme weather events and failure of climate-change adaptation and urban planning.

While the link that water makes between climate change mitigation and adaptation is generally recognized, it has also not translated to the negotiations. Mitigation and adaptation are in fact, dealt within separate negotiation tracks. While this division has historical reasons and may make sense from a technical perspective, it fails to take into account the many linkages between the two issues - notably, water.

By separating these policy areas, we are potentially missing major opportunities to both slow or even reverse effects of climate change and help economies and communities adjust to climate impacts – all while growing sustainably.

If they continue to be handled separately however, a new global agreement could potentially create competing incentives and even seed future conflicts. For example, should India irrigate fields or generate electricity? Should Brazil grow more biofuels or slake the thirst of its growing cities?

**Ultimately, the agreement is not just about exploring (and avoiding future) problems associated with the impact of climate change**

Any lasting and successful outcome must be about making plans for the future that support national, sustainable development goals.

During the National Adaptation Plan (NAP) process, coordinated at UNFCCC level, countries will be able to develop medium to long-term adaptation plans that integrate various sectors. They should not treat water as a sector, and several have in fact, had the vision to implement fully “hydrated” NAPs.

Water is a finite resource. It has competing uses that must be managed sustainably. During this process, countries need to make smart decisions about action on adaptation and prioritization of funding, and water can provide the path for this.
Solving the sewage and sanitation crisis through innovation

Tackling present and future water-related problems certainly requires out of box ideas and unconventional thinking. UNESCO-IHE has developed a number of innovative products concerning education, technology and capacity development. Prof. Dr. Damir Brdjanovic, Professor of Sanitary Engineering at UNESCO-IHE Institute for Water Education writes about innovations in wastewater, sewage and urban sanitation.

The first innovations in urban sanitation were made by the Romans and Ancient Greeks (800 BC to 500 AD). After the “Sanitary dark ages” (450 and 1750 AD), in about 1800, a collection system appeared in many cities, and around 1900, Liernur came up with a system to collect toilet water through a vacuum sewer.

At the end of 18th century, the first sewage treatment technologies using micro-organisms, gradually began to emerge; and exactly one century ago the first activated sludge plant was built based on the invention of Ardern and Lockett. Initially, while the focus was on the removal of organic matter (C) from sewage, in the second half of the 20th century a new problem with surface water emerged: that of eutrophication, and treatment requirements were extended to nitrogen (N) and phosphorus (P). Different nitrogen removal systems were developed by Ludzack and Ettinger (1962) and Wurhmann (1964), combined by Barnard into one system in 1972.

After the accidental discovery of biological phosphorus removal by Srinath (1959), Levin and Shapiro invented a basic treatment configuration in 1965, which served as inspiration to other engineers to develop new system configurations for combined C, N and P removal. The energy crisis in the 1970s, associated with an increased demand for industrial wastewater treatment, shifted attention from aerobic to anaerobic wastewater treatment, resulting in the development of the up flow anaerobic sludge blanket reactors (UASB) by Lettinga in 1980.

Around the turn of the last century, with ever increasing treatment requirements, the need arose to upgrade and retrofit treatment plants. This has led to a range of new processes being integrated in existing treatment plants, such as SHARON, ANAMMOX and BABE processes for improved nitrogen removal, and mineral crystallization processes for phosphorus precipitation for phosphorus recovery and reuse. Recent attempts to intensify the separation process by membrane
separation of the sludge have been successful and the number of plants with this so-called MBR technology is on the rise [1].

A different type of process was invented by the group of van Loosdrecht (2005), who engineered microbial structures to allow microorganisms to form a stable, well-settling, granules instead of fluffy flocks of sludge. Sewage treatment by activated sludge is a technology that continuously evolves and allows for recycling and reuse of resources such as water, energy and chemicals. Phosphate recovery from sewage is increasingly being applied, and other options for the recuperation of valuable materials from sludge are also emerging, e.g., the production of bio-polymers and bio-plastic and the recovery of cellulose fibres [1].

With an increasing global population demanding more resources, new opportunities for the conversion of existing plants from classic ‘removal-type systems’ towards ‘resource-recovery systems’ and ‘energy-factories’ are becoming increasingly available. Potable water shortage and further increase in coastal population worldwide are shifting attention to the use of alternative, secondary quality water resources in urban water cycle, such as seawater for toilet flushing, which triggered development of SANI process for saline sewage treatment by the group of Chen (2009); a novel process which makes use of sulphate (S) present in seawater. In contrast to high-income industrialized countries, where coverage by sewage facilities is high and practically all wastewater is treated at an advanced level, the sewerage coverage and sewage treatment in less developed countries are overall very low. In these regions, centralized conventional activated sludge systems are competing with decentralized approaches. The solutions for less developed regions may be the construction of smaller and simpler, decentralized systems that are community-managed, thus minimizing costs or enhancing resource recovery [1].

The example of Windhoek Goreangab in Namibia confirms that advanced treatment technology, combined with proper governance, can be successfully applied in the less developed world. Widespread adoption of modern technology, e.g. mobile telephony, and the fact that most currently less developed regions now have an economic and technical level well above those in Europe and the United States a century ago (when the latter started developing their sanitation systems), are encouraging.

Enormous pressure on sanitation experts

It is also the fact that the sanitation needs of 2.7 billion people worldwide are served by onsite sanitation technologies, and that number is expected to grow to 5 billion by 2030 [2]. This places enormous pressure on sanitation professionals to come up with “out of the box” thinking, business as unusual approaches, a change of paradigms, and inventive and unconventional solutions. These in turn lead to the translation of inventions into innovative products, services, processes and new activities that are introduced to the real world [3].

Stimulating innovation

The recent boost of innovations for pro-poor sanitation is partially the result of the Bill & Melinda Gates Foundation’s Water Sanitation and Hygiene programme, which has emphasized the strategic importance of improving faecal sludge management globally, by supporting institutions and facilitating application of inventions in the field.

Undoubtedly, there is a wealth of innovations at different stages of implementation readiness, rapidly becoming available concerning centralized sewage treatment and in particular in situ faecal sludge management. For a new generation of young scientists, engineers and other professionals entering the sanitation field, the quantity, complexity and diversity of these new developments can be overwhelming, particularly in less developed countries, where access to courses and training materials is not readily available [4].

Therefore the development and implementation of innovative, trans-disciplinary and holistic educational and training approaches, including distance, student-centered, problem-based learning and state-of-the art training materials, are essential, so the issues can be embraced with deeper insight, advanced knowledge and greater confidence. [5]

References
Coping with prostate cancer
Europe has breast cancer units – so why not PCa units?

The time has come to consider this problematic issue and promote establishment of PCUs in Europe, says Dr. Riccardo Valdagni, Coordinator of the European School of Oncology’s Prostate Cancer Programme and Director of the Radiotherapy

Prostate cancer is the most common cancer diagnosed in men, with 417,000 new cases every year in Europe. There is a critical need throughout Europe to provide prostate cancer patients with high quality, standardized and integrated care. This need is currently not being adequately addressed.

That is why the European School of Oncology (ESO) – the international organization dedicated to improving the skills of all health professionals supporting cancer patients – has developed and promoted the concept of Prostate Cancer Units (PCUs). Their central principle is specialist, multi-professional care.

Intense debate continues to surround the diagnosis and treatment of prostate cancer: the benefits and drawbacks of screening, the relative merits of surgery, brachytherapy and radiotherapy, the right time for active surveillance and watchful waiting, the role of new drugs and their correct sequence.

But through all the dialogue, some plain facts are acknowledged that should cast a light on all aspects of diagnosis, treatment and continuing support. First, the patient’s own preferences, personality and circumstances have a central bearing on what the “right” diagnosis, treatment and support decisions actually are. Second, specialized interdisciplinary and multi-professional cancer care streamlines patients’ access to care, rehabilitation and counseling delivered by a team of qualified experts.

It means that, through all the complexities of prostate cancer, patients are most likely to receive the highest standards of care.

PCUs, where men with prostate cancer can be cared for by experienced prostate specialists working together, offer the best organizational structure for putting this into practice.

The model is European breast cancer units. These have been widely adopted following a 2003 European Parliament policy that called on Member States to establish a network of certified multidisciplinary breast units covering the entire population. Certification was based on fulfilling a set of criteria set down by the European Society of Breast Cancer Specialists.

Many member states have now reorganized their breast cancer services in line with these requirements, and the move has been strongly influenced by breast cancer patient advocacy groups such as Europa Donna – the European Breast Cancer Coalition.

In recent years some countries have started to manage prostate cancer along these lines. For example, the German Oncology Society, Deutsche Krebsgesellschaft, has been the accrediting and certifying body of PCUs in Germany, which are responsible for the diagnosis, staging, and management of prostate cancer patients.

However, despite a few national examples, prostate cancer has not yet seen the widespread realignment witnessed in breast cancer. The European School of Oncology believes that this can change.

ESO’s Prostate Cancer Programme first developed the concept of PCUs, and in an influential article in the European Journal of Cancer in 2011 set out minimal requirements for what was involved in terms of professional education and experience.

Then, in 2012, ESO launched an initiative that moved Europe-wide PCUs towards practical implementation. ESO entered into a collaboration with the Organisation of European Cancer Institutes (a non-governmental organisation that has run an accreditation programme of cancer centres in Europe since 2008) and the German Cancer Society (which developed a certification system for prostate cancer centres in 2008). The aim was to set standards for quality care and care pathways that would form the basis of accreditation and certification of PCUs in Europe. The project was launched as the PCU Initiative in Europe.

The initiative gathered a multi-professional task force of internationally recognized opinion leaders, representatives of European scientific societies and patient advocates to carry out the work.

More than two years of detailed discussion and debate followed. The involvement of representatives from Europa Uomo – the European coalition of groups supporting prostate disease patients – meant that patient perspectives were taken into account on key issues such as the danger of specialty bias when proposing therapeutic and observational options, and the need for written and electronic information on all aspects of disease and treatment phases.

The result was 40 standards for PCUs, covering everything from general organization to case management. This July saw their publication in the journal Critical Reviews in Oncology/ Hematology. We hope this will lead to us reaching a broader consensus on the minimum criteria for defining PCUs and facilitating their organisation in European countries.

The PCU Initiative in Europe has delivered relevant and feasible core criteria that we hope will guarantee the acceptance and spread of PCUs in most European countries. We believe that the participation of scientific bodies in the initiative should win a broad support in the uro-oncologic community.

And, as patient advocacy groups increase patients’ awareness of the importance of being treated in top quality centres, the movement for PCUs throughout Europe could gain real momentum.
PCa specialist nursing workforce under threat

According to new research commissioned by Prostate Cancer UK, the prostate cancer specialist nursing workforce is currently facing an uncertain future if immediate steps are not taken for training a new workforce.

Among the 300 specialist nurses surveyed by Prostate Cancer UK, nearly 49 per cent reported that they were approaching retirement or have considered leaving nursing within the next ten years. The findings of the study are highly disturbing and imply that we might be letting down men with prostate cancer, not just in the UK, but across the European Union.

Men with prostate cancer need support from specially trained nurses to have optimal outcomes. More men are surviving prostate cancer diagnosis and treatment and living into older age. This good news story is because prostate cancer is being detected earlier and as a consequence men are living longer. Evidence shows that many cancer survivors have some unmet supportive care needs including psychological, sexual and health system and information needs and are living with the adverse effects of treatment.

Despite improvements in therapies, problems such as urinary continence and urinary frequency, sexual and bowel problems, fatigue and body changes can occur not just during treatment but for many months to years after treatment. Improving patient outcomes is not just about cure but enhancing quality of life, preventing and minimising complications and where possible promoting healthier lifestyle.

Population based studies show that men with prostate cancer have significant chronic illness and psychological ill health compared to men of a similar age group. Men with prostate cancer have more hospital admissions after cancer treatment than men of a similar age and are often less physically active and more obese than men of a similar age. The quality and provision of nursing support has a significant impact on cancer survivors’ needs and subsequent outcomes. Nurses can address many of these needs for men by providing holistic assessment, symptom management and psychological support as well as signposting men to services and support at home. In a large European study of seven countries, improved health was directly associated with receiving nursing.

The greatest areas of need in 80 per cent of men across all these European countries were the need for help with psychological health, sexual dysfunction, and access to health services and information support. These are all areas where nursing can play a significant role in addressing.

Although cancer care requires a multi-disciplinary team (MDT) approach to service delivery, nurses should be included as they are in an ideal position to lead and provide specialist prostate cancer services. A foundation for effective support for men in living with and beyond a cancer diagnosis is care. The delivery of appropriate and effective nursing management of treatment, side effects men experience not just during therapy but long term all contributes to men’s experience and satisfaction.

Training for nurses to manage men’s diagnosis, treatment, survival and advanced disease management are important to develop the level of skill in managing men’s health, symptoms and psychological needs.

In Europe training for specialist nurses is mandated in only a few countries and there is no consistent approach to advanced practice across Europe. The European Oncology Nursing Society provides core curricula for oncology nurses in general oncology practice and in specialist areas such as elderly care, lung and breast cancer and this provides an educational standard that has been adopted across many countries within Europe and beyond.

At present there is no curriculum for training nurses in prostate cancer. Education for specialist nurses is gained through study days or workshops and many nurses need support to attend these sessions. We need a standard to base future nurse competencies and job roles upon. Recognising the value of clinical leadership provided by nurses and how this enhances patient safety, quality and effectiveness is essential. Education and training help nurses provide patient centred care and improve the effectiveness of treatment as well as aid men’s recovery.

Professor Sara Faithfull is Director of Health Science Innovation and Enterprise, School of Health Sciences, Faculty of Health and Medical Sciences, University of Surrey, Stag Hill Guildford, UK.
There is a clear need to further personalize initial management approaches for men diagnosed with early prostate cancer. As newly diagnosed men can have either aggressive or indolent tumors, identifying patients with early prostate cancer to allow for more accurate stratification of patients is therefore important. Given this current state of clinical uncertainty, the Prolaris Test was developed to provide more accurate risk stratification independent of Gleason score or PSA, identifying low-risk patients who are good candidates for active surveillance and high-risk patients who may require more aggressive treatment.

In summary, Prolaris has been shown in multivariate analysis, to be the most predictive variable for predicting risk of prostate cancer progression defined by 10-yr mortality in a biopsy cohort. Prolaris can be used allowed for personalized risk stratification independent of Gleason score or PSA, identifying low-risk patients who are good candidates for active surveillance and high-risk patients who may require more aggressive treatment.

References:
- CancerOne.aspx?Cancer=29&Gender=1
- EMPATHY-P study. Myriad data on file 2015
A supplemental blood test for the detection of prostate cancer

Prostate-specific antigen (PSA) screening for prostate cancer remains contentious, regardless of indication that PSA testing substantially reduce mortality. This is in part because risk: benefit ratio has not been fully established. Even though PSA screening has facilitated earlier detection of prostate cancer, the precise mortality benefit of early detection is unclear. In the commentary below, Dr. Howard Urnovitz explores the possibility of a supplemental blood test for detection of prostate cancer.

Protein Biomarkers

A significant advancement in the early detection of prostate cancer occurred in the 1970’s. Many proteins were discovered to be associated with prostate cancer. Dr. T. Ming Chu, at RPMI, NY, USA, characterized the prostate-specific antigen (PSA) and developed a blood test for its detection. It is estimated that tens of millions of men worldwide take the PSA test.

In the last 5 years, several expert panels and medical associations have recommended that healthy men should no longer receive a PSA test to screen for prostate cancer, because its high false positive rate often leads to more tests and treatments that needlessly may cause pain, impotence and incontinence in many.

The downside of recommending lesser number of PSA tests is that fewer men will detect prostate cancer at its earliest stages. Clearly new technology is necessary to meet the challenges in early detection.

Genetic Biomarkers

First reported in 1948, a great amount of effort has taken place on establishing the clinical utility of cell-free DNA (cfDNA) in serum and plasma. The last 60 years has seen an amazing amount of information about DNA from its very double-helix structure to amplifying a single copy of DNA and to sequencing of whole genomes.

The last decade has brought us next-generation sequencing (NGS) where we have seen the process of sequencing genomes go from years and cost of billions to hours and costs of less than thousands.

Chronic Biomedical first reported in 2009 the ability to sequence entire human genomes from the cfDNA of apparently healthy individuals using NGS. These analyses require less than 10 ml of blood. We followed up in 2010 reporting how NGS could differentiate cfDNA from prostate and breast cancer patients from each other and their respective healthy controls. The time to generate the NGS sequencing results took weeks to months at a cost of tens of thousands of euros.

This year we reported on a retrospective validation study of over 400 samples from prostate cancer patients and matched controls. The study looked at serum samples from 204 patients with prostate cancer (Gleason scores 2 to 10), 207 male controls and 20 patients with benign hyperplasia or prostatitis. cfDNA was extracted from the serum and whole genome NGS was performed. Measuring the copy number imbalances of a limited number of chromosomal regions was sufficient to distinguish between prostate cancer, other prostate medical conditions and controls.

Currently, the procedure takes only days and less than a thousand euros with the cost expected to decrease with time.

Prospective study

Chronic Biomedical is planning a prospective healthcare economic study to demonstrate the cost benefits of using a PSA/supplemental test approach. The objective of the study is to test as many men with an elevated PSA so as to reach statistical significance. The study should include other supplemental tests and technology such as urine RNA, cellular and genetic analysis of first biopsies and imaging approaches.

Imaging approaches that may be considered are MRI or ultrasound directed biopsies under the local “standard of care.” Clearly, the challenge of this study will be to calculate positive and negative predictive values against a backdrop of high false positive PSA results and high false negative tissue biopsies.

The study needs to include a large proportion of individuals from high risk populations such as men of African-Caribbean family origin. Lastly, the study needs to include a protocol for long term surveillance especially of men with slow growing, indolent disease.

Government Assistance

The knowledge base of breakthroughs in technology and subsequent applications to prostate cancer screening and monitoring will need to be disseminated to the very doctors, who are on the front line making decisions about screening, diagnosis, and measuring therapeutic efficacy and follow up monitoring. Government review and recommendations of the new benefits to patients and the healthcare system would have an important leadership role on the process of early detection.
Improving prostate cancer treatment

PROSTATE CANCER’S FRIGHTENING EPIDEMIOLOGY

There is an estimated 1.1 million new cases of prostate cancer a year worldwide (~417,000 in Europe), which makes it the most common male cancer in the UK, Germany, Europe and the US. It is also the second most common cancer for men worldwide – even in a country like Germany, which has a 93% five-year survival rate, prostate cancer is the third most common male cause of death.

Barring drastic innovation in prostate cancer diagnosis and care pathways, these figures are certain to increase in a rapidly ageing society. How should we be responding?

Care Pathways and Active Surveillance regimes have to be optimised for better patient management and decision-making. The two big enablers for these changes have to be technological advances and political change in healthcare systems and reimbursement structures.

Addressing deficiencies of biopsy

As for prostate biopsy, a lot of prostate cancer diagnosis and care currently relies on the histological evaluation of prostate tissue via tissue biopsy. Prostate biopsy currently remains the most common means to achieve a final diagnosis, but it must be guided by the best possible imaging technology to increase accuracy in grading and staging.

Various biopsy techniques have improved upon one another over the decades, but they are still plagued by inaccuracies and high false-negative rates. It is a huge clinical problem for attending physicians and a huge economic inefficiency for healthcare systems that a negative biopsy (tissue biopsy shows no sign of cancer) does not necessarily mean a “no disease status” – since there is a good chance that the biopsy needle simply missed the tumour. On the other hand, a positive biopsy might still not have come from the clinically most relevant – i.e. most aggressive – tumour, leading to wrong decisions in treatment schedules.

Therefore, more and more prostate cancer specialists call the incorporation of magnetic resonance imaging (MRI) fusion into prostate biopsies the gold standard in prostate cancer imaging and diagnosis. Generally, MRI-trans rectal ultrasound (TRUS) fusion biopsy involves taking a high-resolution, preferably 3 T MRI examination and then, at a separate appointment, fusing these data with real-time ultrasound images to help guide biopsy procedures.

Fusion biopsies deliver important clinical advantages, including use in men with a rising PSA despite multiple negative biopsies. In men with a PSA of 4.0 to 10.0 ng/mL, the typical 12-core TRUS biopsy finds cancer 27% to 40% of the time, leaving around 70% of men with a negative biopsy— but not necessarily free of prostate cancer.

MRI-TRUS-fusion biopsies yield a much lower false-negative rate than random 12-core biopsies. So the impact of high-quality 1.5 and 3 T MRI is to select more patients with higher-grade and higher-volume disease for biopsies. One of the future goals is to incorporate the MRI into the screening paradigm to possibly allow some men to avoid biopsy altogether.

From outdated treatment pathways to holistic decision-making

The Gleason score is still instrumental in determining a patient’s treatment regime, as predicted patient disease outlook in prostate cancer depends on tumour stage, grade (Gleason score) and PSA level. GE healthcare’s goal is to develop an end user application where all the right type of clinical and biomarker data, combined with multiparametric MR imaging are pulled together into a risk map score for each region of the prostate.

We also plan to bring in proteomic and genomic data for precision medicine. To be successful, any imaging system must provide unprecedented image quality, be cost effective, easy to site and provide for easy and quick patient positioning.

Summary

Although MRI-TRUS-fusion biopsies are too new to be pronounced a gold standard, use of MRI in evaluating men who have had multiple repeat biopsies should ultimately be a standard of care and will completely change the paradigm by which we think of prostate cancer from one-size-fits-all to a very individualized approach.

Prof. Dr. med. Mathias Goyen is Chief Medical Officer - Oncology at GE Healthcare
A Gene Expression Test to Predict Prostate Cancer Aggressiveness

Predictive Power. Prognostic Confidence.

The first prognostic test that reveals the molecular biology of Prostate Cancer.

Myriad Genetics: Saving lives every day
Refining diagnostic and treatment protocols for prostate cancer

Prostate cancer (PCa) is the third most commonly occurring cancer in European men. The trend is not only expected to continue due to an ageing population, the rising incidence also means an even greater burden on healthcare systems.

Raising public awareness and promoting healthier lifestyles could mitigate the impact on healthcare services. In recent years, a major public concern is diagnostic screening, such as the prostate-specific antigen (PSA), which is perceived to prompt unnecessary interventions or so-called 'over treatment' while unduly affecting the patient's psychological health.

But with the well-established risk factors for PCa such as age, ethnic origin, and genetic predisposition, the need remains urgent for efficient screening and diagnostic tools. Since PCa is mainly an asymptomatic disease and with current screening methods falling short with regards prognostic accuracy, doctors face the dilemma on how to balance timely treatment with the patient's health condition and wishes.

The recent PCa roundtable organized by the International Centre for Parliamentary Studies was therefore a welcome step to address these pressing health concerns and reach consensus among key stakeholders in government, the public sector, scientific research and medical communities of all European countries.

As one of the frontline professional medical organisations, the European Association of Urology (EAU), through its network of more than 14,000 members in all European countries, established a strong collaboration with the national urological societies.

Through the European School of Urology (ESU), CMEAE-credited courses are organised and offered to the urologists in almost all European countries.

Alongside the EAU Guidelines, offering updated, evidence-based recommendations on all urological diseases, developed in collaboration with other non-urology experts like medical and radiation oncologists. Today, the EAU Guidelines is translated in 19 languages.

Despite the wide diversity in the continent’s healthcare systems, the EAU Guidelines is considered as the key urology resource across Europe and has been formally endorsed by national medical associations within and outside the region such as France, Italy, Australia, Russia, Germany, Spain, Turkey, China and Indonesia.

Key initiatives

For more than four decades, the EAU has actively funded innovative projects on prostate cancer issues.

**EAU Guidelines**

The EAU continually refines diagnostic and treatment protocols as contained in the EAU Guidelines, offering updated, evidence-based recommendations on all urological diseases, developed in collaboration with other non-urology experts like medical and radiation oncologists. Today, the EAU Guidelines is translated in 19 languages.

Despite the wide diversity in the continent’s healthcare systems, the EAU Guidelines is considered as the key urology resource across Europe and has been formally endorsed by national medical associations within and outside the region such as France, Italy, Australia, Russia, Germany, Spain, Turkey, China and Indonesia.

**EAU- Research Foundation**

To identify priorities in research, the EAU has created in 2007 the EAU Research Foundation (EAU-RF) as an independent platform tasked to promote, facilitate and stimulate clinical and basic research in European urology. Investigations into prostate cancer are a priority and various trials and registries are ongoing to examine both medical and surgical therapies for prostate diseases.

**Patient Information**

Since most prostate cancers develop slowly and disease progression depends on tumour characteristics, the patient’s age, co-morbidities and individual treatment preference, decisions can be difficult.

To help patients in the complex decision-making process, the EAU has produced printed and on-line versions of the Patient Information on Prostate Cancer, currently available on the EAU’s website at: http://patients.uroweb.org/prostate-cancer/what-is-prostate-cancer/.

Hein Van Poppel is the Chairman of the Department of Urology at the University Hospital Gasthuisberg, Katholieke Universiteit (KU) Leuven. He is Chairman of the Educational Office of the EAU and Director of the European School of Urology.
Improving outcomes of advanced prostate cancer in Europe: a call to action

Differences in early diagnosis and management of patients with high-risk localized disease can play an important role in cancer outcomes, says Christine Geffriaud-Ricouard, MD, Medical Director, Sanofi Oncology

Prostate cancer is the most frequently diagnosed cancer in men in Europe [1]. Despite screening efforts with PSA testing, its mortality remains the third highest (after lung and colon) and is only marginally decreasing [2].

Moreover, registries consistently highlight significant disparities in cancer outcomes across Europe. Eastern countries such as Bulgaria, Latvia, Poland and Slovakia showing the worst prostate cancer survival rate at 5 years [3].

This is linked to differences in access to quality care and resources allocated to it - lower mortality rates being observed in countries with the highest health care expenditure [4-5] and lack of Comprehensive National Cancer Control Plan. Differences in early diagnosis and management of patients with high-risk localized disease also play an important role in cancer outcomes. Hence, survival at 5-years appears related to an early diagnosis – at a stage it is still curable – and treatment with curative intent (radical prostatectomy or radiation therapy) of patients with high-risk disease [5].

Undertreatment of high-risk disease appears even more pronounced in senior adults (ie men aged ≥ 70 years).

This is mainly due to the fact that many physicians still consider the age of the patients rather than their health status (mainly driven by comorbidities) in their decision making process [6]. With the increasing life expectancy and an ageing population in all European countries, it is important to keep in mind the SIOG recommendations that fit and vulnerable senior adults (ie who have a chance of surviving for 10 years) diagnosed with high-risk localized prostate cancer are likely to benefit from treatment with curative intent [7].

At an advanced stage of the disease, inequities in availability and access to life-extending therapies are also an issue since survival increases with the number of such therapies received.

Hence, in randomized controlled studies, median overall survival of patients with metastatic castration-resistant prostate cancer (mCRPC) has progressively increased from 12.6 months with prednisone alone in the 1990s [8] to 18.9 months with docetaxel plus prednisone in 2004 [9] and approximately 30 months in 2010-2011 when a second life-extending therapy was prescribed after docetaxel (either cabazitaxel or an new androgen-receptor (AR)-targeted agent) [10-11]. According to a recent retrospective registry, overall survival may be even more impressive in patients receiving 2 consecutive life-extending therapies (cabazitaxel AR-targeted agent or vice versa) after docetaxel [12].

Recently, two large cooperative group studies have demonstrated that the benefit of chemotherapy on survival is even more pronounced when it is given at an earlier stage, in newly diagnosed, hormone naïve, metastatic patients [13-14]. Compared to androgen deprivation therapy alone (ADT), the combination of ADT plus docetaxel (6 cycles) prolonged survival by a median of 14 months in CHAARTED [13] and 22 months in STAMPEDE [14]. his unprecedented survival benefit was observed despite the fact that a majority of patients received life-extending therapies at progression in both arms. The rationale is that prostate cancer is highly heterogeneous with coexistence of tumor cells who respond and others who do not respond to ADT.

Adding chemotherapy to ADT allows blocking proliferation of lethal clones which do not respond to ADT resulting in a prolonged survival.

Docetaxel (6 cycles) plus ADT is now recommended as first-line treatment of metastatic, hormone-naïve disease in men fit enough for chemotherapy by European guidelines (level 1 evidence) [15]. Docetaxel is available as a generic in all European countries at a low cost. However, since these trials were conducted by cooperative groups and thus were not specifically designed to fulfill registration requirements, many Eastern Europe countries will not be able to prescribe docetaxel in this off-label setting. Moreover, multidisciplinary team (MDT) management of patients is not a standard and may slowdown the introduction of these important data in the clinic.

Management of prostate cancer is complex

Therefore involvement of all appropriate specialties in a multidisciplinary team (including but not restricted to medical, radiation, surgical oncologists, imaging experts, pathologists, psycho-oncologists, social workers, nurses, and palliative care specialists) is crucial to ensure that patients get the right treatment at the right time, in agreement with the best level of evidence and improve cancer outcomes [16].

MDT has been identified as a key element in cancer care by the European Partnership for Action Against Cancer (EPFAC), launched by the European Commission in 2009. It contributes to improve quality of disease management, from diagnosis to follow-up, making cancer care more tailored to individuals and subsequently more effective in addressing patient needs and improving outcomes [16].

In February 2014, a Bill of Rights for patients with cancer in Europe was launched at the European Parliament on World Cancer Day, in partnership with European cancer patient organizations and Members of the European Parliament Against Cancer (MEPs Against Cancer) [17].

The aim of this Bill of Rights is to enable each European citizen to receive an optimum standard of care across the cancer continuum and includes 3 key principles: (1) the right of every European citizen to receive accurate information and be involved in their own care; (2) the right of every European citizen to access specialised cancer care underpinned by research and innovation; and (3) the right of every European citizen to cost-effective health systems that ensure optimum cancer outcomes.
The Thalinn Charter signed in 2008 by member states of the WHO in the European region committed to improve health care systems in Europe and clearly stipulated that high performing health systems contribute to economic development and wealth by saving lives [18]. We do hope politicians will empower this European Cancer Patient’s Bill of Rights and make Thalinn charter commitments effectively happen to reduce cancer care inequities across Europe.

References
10. Sarto O et al. Survival benefit from first docetaxel treatment for cabazitaxel plus prednisone compared with mitotane plus prednisone in patients with metastatic castration-resistant prostate cancer (mCRPC) enrolled in the TROPIC trial. J Clin Oncol 2011; 29 (suppl): abstr 4525.
17. James N et al. Docetaxel and/or zoledronic acid for metastatic castration resistant prostate cancer: final overall survival results of the TROPIC trial. J Clin Oncol 2011; 29 (suppl); abstr 4525.
18. Fizazi K et al. Abiraterone acetate for treatment of hormone-refractory prostate cancer (mCRPC) enrolled in the TROPIC trial. J Clin Oncol 2011; 29 (suppl); abstr 4525.
Canvassing for a European semester for healthcare policy

Despite being an essential part of economic and social success, health systems in Europe are in crisis and need major reform. Change is hard to implement and health ministers face an uphill battle with insufficient political leverage to make the big changes happen.

In the meantime we have observed substantial impact of the EU on health and I believe it is only likely to increase.

Since healthcare is a national responsibility, the question is what added value can the EU provide and what help can the EU bring to its Member States in order to tackle the many challenges in the domain of health?

Health is one of the most important values in people’s lives and it is an essential part of both economic and social success. Worrying health trends, particularly increasing rates of cancer, cardiovascular disease, diabetes and obesity, despite advances in treatment, mean that this value is increasingly under threat.

We have to face the fact that EU Member States are on the brink of facing a crisis in their health systems.

Health systems need major reforms, modernisation and streamlining in order to become more efficient. But such structural changes are hard to implement and Health Ministers, not only face an uphill battle to update their health systems, but also lack of the adequate political leverage to make the big changes happen.

When we talk about a paradigm shift we should not be talking about cosmetics, but about essential changes in the way we approach health systems.

We need to switch from disease to health oriented systems. We need to become result oriented and our success should converge homogenously.

For example, one aspect of this is health promotion, which should be understood positively as the way of diminishing the inflow of new patients. In the long run, health promotion is the most cost-effective response for improving the state health.

From an ethical standpoint, a healthier society is the one that consumes “less healthcare services and products” and enjoys “healthy lifestyles”.

In times in which many Unions are being proposed, we need to start considering and including health as one of the most important human values and policy aspects. Therefore, in my views, the time has come, that the Commission considers launching the “Health Union” initiative.

Within the Health Union, I consider that health governance and health policy coordination is one of the most ambitious elements of it. I do not think Member States should transfer any of its health responsibilities to the EU, but rather the EU should help them to achieve concrete progress in their health indicators, health goals and results, without taking into account the way of achieving them.

I call this the “European Semester for Health”, similar to the economic semester for growth and jobs, which would become a yearly cycle of health policy coordination and a framework designed to give Member States an incentive to converge towards commonly established health targets independently from the approach legitimate chosen by each member state, as far as the objectives are met. The creation of such framework would be possible under broader and more ambitious interpretation of the article 168 of TFEU.

Finally, with a European commissioner for health Andriukaitis’ indication of exploring the options for expanding the role of the EU in health policy by making changes to EU treaties we should understand one thing clearly: the impact of the EU on health is only likely to increase.

Lojze Peterle is the President of the MEPs Against Cancer group and Co-Chair of the Health Working Group within the ENVI Committee.
Identifying problems within diabetes policy, Mayur Mandalia from IDF Europe and co-author of Diabetes in Europe: Policy Puzzle, creates a template for change and shares best practices for tackling the challenge

With over 32 million people living with diabetes in the EU and a total of 52 million across the wider European region (1), it is unequivocal that diabetes is an urgent EU public health priority. These numbers are projected to increase to 37.5 million and 69 million respectively by 2035.

The situation is worsened by the fact that the burden of chronic diseases is undeniably on the rise, with 86% of all deaths in the European region attributed to chronic diseases (3). It is obvious that the EU needs to make a more intensive effort towards seeking a more rational and logical strategy amongst Member States to tackle the epidemic.

While there is limited capacity on health, Article 168 of the Treaty on the Functioning of the European Union, TFEU, still allows the EU to encourage and support Member States in issues of Public Health, as well as their cooperation on the matter. This is being acted upon, as evidenced by the current Joint Action on Chronic Diseases which includes a work package specifically on diabetes, and the 2012 resolution on diabetes adopted by the European Parliament. However, such initiatives are in no way mandatory for Members States to implement. Thus, the EU should explore the use of other legal bases and mechanisms available under the Treaty to circumvent its limited health competence.

Inequalities in diabetes care – a multi-disciplinary care team

There are noticeable disparities in the quality of diabetes healthcare delivered to and received by citizens across Member States, as indicated in the Diabetes in Europe: The Policy Puzzle report (4). As reducing health inequalities is a priority, EU Institutions should have the capacity to support national health systems in managing the diabetes and chronic disease burden. In this respect, there must be a more holistic view on care, involving multi-disciplinary diabetes care teams, as diabetes is not just a hormonal condition. Lack of good management can lead to serious and costly complications such as stroke, heart disease, blindness, kidney disease, as well as damages to the whole nerve and circulatory systems.

As an important initiative to improve diabetes care, the EU should set minimum standards of training for all health professionals working in diabetes

Further, there is a lack of qualified and well trained diabetologists and endocrinologists, with their distribution often unbalanced due to the lure of urban living. Incentives should be provided to Member States to help them retain qualified health professionals, to serve their population. Specialist nurses have proven to be an invaluable part of a multi-disciplinary diabetes care team, with the patient placed at the centre of all prevention and treatment services. Currently, just about 14 countries in the EU have specific recognition for diabetes specialist nursing, despite their role being significantly increased in all aspects of diabetes care.

However, there is varying involvement of nurses in diabetes in the rest of the EU. Currently, the Foundation of European Nurses in Diabetes, FEND, conducts a program to train nurses from across Europe (5). This could be scaled up with the help of EU Institutions’ support, and would allow nurses to play a greater, more tangible role in diabetes care.

The importance of prevention

While management of diabetes is an immediate concern, one cannot shy away from investing in prevention. A 2013 European Commission report outlined that 97% percent of health expenditure goes on treatment, with the remaining on prevention (6). At a time where it is well recognised that most chronic diseases are preventable (as is the case of type 2 diabetes), it is quite a simple task to include well-defined screening tools in healthcare practices for diabetes, such as the FINDRISC questionnaire, aimed at assessing risks of type 2 diabetes.

In fact, an EU-wide screening measure would allow for a more standardized way of detecting those at high-risk, leading to interventions to reduce that risk – thereby curbing the epidemic.

Furthermore, the EU should do more on engendering physical activity for both children and adults alike. It is both a preventative (type 2 diabetes) and a better management tool (type 1 and type 2 diabetes). By combining it with health promotion in schools, it can cement the right attitudes to healthy living from a young age – avoiding or at least delaying type 2 diabetes and other chronic diseases.

Lack of data

Data gathering for diabetes is also one of the major weaknesses across the EU and wider Europe. Only 4 countries in the EU had registries for all diabetes cases, including type 1, type 2, and gestational diabetes (diabetes during pregnancy)4. Accurate data on diabetes prevalence and incidence among different population groups is necessary to monitor the epidemic, and on a policy level, registers provide vital input on planning and resource allocation.

Establishing EU-wide registries may be a stretch, but encouraging the development of national registries on diabetes would benefit the Member States enormously – allowing the availability of up-to-date epidemiological data...
as well as information on patient care pathways, and estimating future needs regarding diabetes supplies.

While most policy measures are often focused on type 2 diabetes, it is imperative not to neglect the one aspect which can be directly aimed at type 1 diabetes – research. Unpreventable, type 1 diabetes research provides the best chance at finding ways to accurately understanding what triggers the body to attack the insulin-producing beta cells in the pancreas.

Further funding must be made available for educational institutions and other research establishments in order to explore the molecular and genetic causes of type 1 diabetes. At an age where the human genome is fully sequenced, one cannot underestimate the impact of deciphering the exact causes of type 1 diabetes, and the cures it could lead to.

References
3) WHO high level consultation: http://www.euro.who.int/en/health-topics/noncommunicable-diseases/noncommunicable-diseases
4) Diabetes in Europe: The Policy Puzzle. The State We Are In. (2014) European Coalition for Diabetes, ECD.
5) Foundation of European Nurses in Diabetes (FEND): http://www.fend.org/projects/fend-endcup

POLICY PRESCRIPTIONS:
Fixing diagnosis and treatment of prostate cancer

Prostate Cancer (PCA) is one of the most urgent medical problems in adult males and is the most widespread and third deadliest cancer for men in the European Union. It is very well known that more men die with PCA than from PCA. However, from early diagnosis and screening to managing the disease, a lot remains to be done across the wider European region. In June this year, the International Centre for Parliamentary Studies (ICPS) brought together the key stakeholders in the field to address this burning health priority.

Arvind Venkataramana, Research Director at ICPS analyses some of the policy recommendations initiated at the roundtable.

Accompanying Europe in a fight to help more men survive prostate cancer and enjoy a better quality of life, the International Centre for Parliamentary Studies hosted a one-day Roundtable on Prostate Cancer on the 23rd of June this year in Brussels.

Representatives from the European Commission, members of the MEPs against Cancer (MAC) European Interest Group, Europe’s most respected clinicians in the fields of urology, oncology and radiology, patient groups came together to discuss the screening, effective treatment and care for prostate cancer within the European member states.

The objective of the meeting was to build a consensus and put forward recommendations to key policy makers and governments in the European Union. Policy aside, this meeting also addressed current operational challenges, new technologies and procedures, changes in the regulatory frameworks in different countries and other key developments.

Solving the data crisis

The discussion centred around the lack of adequate data on the number and types of cases recorded in the EU. Although individual countries and their healthcare departments have their own records of patient registrations, there is currently no EU-led registration process in place. It is worth noting that the European Commission has recognised the question of lack of data exchange between countries. It is currently working to put a system in place to tackle it. All participants stressed the importance of generating and sharing good quality data when making future policy decisions on the subject.

Mortality statistics, for example, need to be readdressed, as prostate cancer is stated as the cause of death in many cases where the deceased has suffered from it but has died from other related diseases. Sweden and other Scandinavian countries were mentioned as good examples of accurate registrations and the EU should look to roll them out across the region.
Some participants even pointed out the need for patients, and not just clinicians, to be a part of this registration process.

Another issue flagged within the roundtable was to do with linking data across different countries and the challenge it presents when mental health conditions are not explicitly stated in health reports. Again, policy makers need to put procedures in place to overcome this challenge.

Calling for a policy on screening

The discussion then shifted to the challenges of screening, detection, diagnosis and treatment. The general consensus amongst all participants was that more needs to be done to ensure that screening is available for everyone and not just high risk individuals.

As it stands, it focuses too strongly on age but it has to have a population-wide screening approach. New survey methods have also to be looked into by policy makers. The reason screening is critical is because it helps in early detection. Once the cancer has been detected, the focus can then shift to treatment. Efforts can then be directed towards containment and preventing it from causing other diseases. Policy around screening needs to be reassessed as recent studies have shown that prostate cancer leads to other potentially terminal diseases and lack of adequate screening has increased instances of this happening.

Self screening was suggested as an option for low and high risk individuals

However, it was noted that without the presence of a doctor or nurse, false-positive results could lead to unnecessary worry in the self screening method. There was a mixed response towards self screening techniques. Certain participants felt high risk patients should always consult with their General Practitioner (GP) while low risk patients should use self screening methods to start with but any anomalies should always be reported to their GPs. On the other hand, some other participants felt self screening could reduce the number of GP visits if all patients used a thorough and efficient tool. From a treatment point of view there were varying views on approaches to contain as well as eliminate cancer cells in the body. Chemotherapy was one such option. Clinicians in the room stressed that chemotherapy was the only option when tackling cancer cells that turn aggressive. They further reiterated that there should be more EU funded research projects that look into other forms of chemotherapy with fewer side effects.

Fixing treatment protocols

EU policy makers need to look into and keep up to date with important technological and clinical developments and advancements to ensure patients get the best care.

For example, Biopsies have long been the only option for accurate prostate cancer screening. However, there should be more research conducted into reducing its side effects and exploring other screening techniques that are more holistic. Some participants shared some research they were un-
dertaking across diverse population and ethnic groups in the development of new vaccines. Again, the discussion moved to the topic of funding and financing research projects. Others talked about gene therapy and its role in treating prostate cancer in advanced stages.

The controversial topic of robotics was discussed in great detail. It was acknowledged that although robotics can help attend to more patients, is an effective surgical tool and can be used for complex procedures, there are certain shortfalls that need to be addressed. These include cost of procurement and installation, increased recovery times and general distrust among patients.

E-health and telemedicine was also put forward as a means to supplement self-screening.

It has been very successful in parts of Africa and Asia among low income groups and it was suggested the EU should do more to tap into this resource. A team of multi-disciplinary experts need to help present a case to governments and clinicians on how to get the most of e-health and telemedicine. Cutting edge drugs need to be recommended by academics and physicians to the European Medical Association (EMA) for approval. This process needs to be speeded up once all testing phases and trials have shown positive results.

Other topics discussed included the role of care and care workers in helping patients recover. Interestingly, a majority felt an area that was often ignored was staff training. This includes care workers as well as staff who operated screening and other machinery. The clinicians felt staff need to be able to assure patients of the safety and reliability of these machines when they are sent to them. Nurses should also receive specialised training when dealing with patients of Prostate Cancer.

More importantly, the EU currently has a shortage of radiologists and urologists which needs to be addressed.

On a more personal level, the group discussed the mental and emotional impact of prostate cancer on patients and their families. Some in the group even shared their own personal experiences on the challenges in coping with it. Hospitals need to be better prepared to provide emotional support to patients and their families. This also means patients should be provided with all options of treatment and allowed to make the final decision. The topic of prevention was a popular one and there was general agreement that education was key.

The EU should do more to not just educate high risk individuals but also support programmes to educate schools and younger sections of the population. Homosexual, bisexual and transsexual individuals are at a higher risk of contracting prostate cancer so separate campaigns to address different demographics should be put in place.

- We should take an unbiased look at new technologies and upcoming research for detection and ultimate cure.

The roundtable was then wound up with closing comments from the chair. The parting shot came from one surgeon who said that prolonging a patient’s life isn’t the cure to prostate cancer, we have to do more to eradicate it from his/her system completely.

Participants of the roundtable included:

Chief Technology Officer, Chronix Biomedical, Chief Executive Officer/Chief Science Officer and Co-Founder, Chronix Biomedical, Director, National Cancer Control Programme (Republic of Ireland), MD, DG; European Commission / European Network of Cancer Registries (ENCRR), Head of Department of Urology, Erasmus Medical Center, Board Member, President, European Association Predictive, Prevented and Personalised Medicine, European Prostate Cancer Coalition, Member of European Parliament (Romania), Member of European Parliament (Slovakia), Member of European Parliament (United Kingdom) and MAC Vice President, President, European Medical Association, MD, DG, Joint research Centre (JRC) – Institute for Health and Consumer Protection Public Health Policy Support, European Commission, Honorary Chairman, Department of Urology and Editor, Erasmus Hospital, Chief Medical Officer Oncology, GE Healthcare, International Product Manager, Hitachi Hospital, Director General, Norwegian Cancer Society, Radiation-Oncology, Institut Jules Bordet, Chairman/Vice Chairman/Trustee, Leighton Hospital Prostate Cancer Support Ground/PCS North-West/Prostate Cancer Federation - TACKLE, Director Medical Affairs, Myriad Genetics, Director, National Cancer Control Programme (Republic of Ireland), Deputy Director General, Norwegian Cancer Society, Sana Klinikum Offenbach, Medical Director Oncology, Sanofi Oncology, Commercial Lead, Sanofi Oncology, Professor, Radiation Oncology, Chairman, The Out with Prostate Cancer Support Group, Director of Health Science Innovation and Enterprise, University of Surrey UK, Board member, University Hospital Gasthuisberg, Katholieke Universiteit (KU) Leuven / European Association of Urology (EAU), Consultant, Clinical Oncologist, University Hospital Birmingham.

The next edition of the prostate cancer roundtable will take place on January 26, 2016. If you wish to attend, please contact arvind.v@parlicentre.org
Information technology permeates almost every aspect of our lives. The reason is simple. When a system is well designed, it makes everything better: speed, reliability, security, efficiency, convenience and capabilities are all increased, most often by many orders of magnitude.

No one would dream of running a bank without the computers and software that are the central nervous system of any institution. Every time you fly in a plane you put your life in the ‘hands’ of a computer for most of the trip, albeit with some human supervision.

If you happen to be in hospital in critical condition, your life-support system is likely to be controlled by software run by a computer. One area where developments in technology have been especially slow is in the process of enabling democracy. Enormous opportunities in this area remain unrealised: citizen engagement, real-time participation, communication between government and constituents, and elections.

All around the world, from the most developed countries to the most challenged ones, running a successful, clean election is the first step towards true democracy. The process of assuring the eligibility and enfranchisement of voters, the voting itself, counting the votes, producing election returns, canvassing and tallying is still done mostly manually in a majority of countries. In each one of these stages, the 2,000-year-old system is unreliable at best and corrupt at worst. This leaves room for all kinds of problems. In many cases these problems are swept under the rug, but they pervert the ideal of democracy, that in elections it is only the will of the people that prevails.

Many people perceive the election process to be straightforward and take for granted that it works. For this reason, very little attention is given to election administration. But as one of the founders of Smartmatic, the largest voting technology company in the world, I can say that the election process is much more complex than most people realise.

After 11 years of conducting thousands of elections on every continent, and working side by side with countless election professionals, Smartmatic election specialists have discovered common themes in the challenges faced by those with the difficult jobs of organising, running, and managing elections. Current opposition to the use of election technology is predominantly defended along two lines. The first is that an election is such a straightforward and simple matter that it does not need technology. How difficult can it be to count papers and declare a winner?

The second is the inverse of the first (and thus an obvious contradiction): an election is such a complex and difficult process that no computer system is secure enough or robust enough to handle it.

Both arguments are flawed

Running a mid-sized election (say, in a country with 20 million voters) is not simple for a host of reasons. It is mission critical for the country, it is dispersed over a large territory, it can have thousands of candidates in hundreds of jurisdictions, it requires that millions of election instruments be under strict security while they move around the country’s territory, and it requires the disciplined performance of hundreds of thousands of poll workers and subcontractors on a very tight schedule. Precisely because elections are so complex and difficult to conduct, well-designed computer systems are essential to make them reliable and to guarantee that the process is tamper-proof and free of errors.

How can the benefits of running an automated election be summarised?

There are nine areas in which automation results in significant improvements over traditional manual voting and counting systems.

Security. The security of a paper-based, manual vote with a manual count is extremely low. Single copies of each vote make them easy to tamper with or destroy. Also, from voting to counting to final tally, and at every step in between, human error and tampering, not only of the votes, is easy and very common. The most vulnerable type of election is that which uses no technology at any stage (Fig. 2 and 3). Well-designed, special-purpose systems reduce the possibility of results tampering and eliminate fraud. Security is increased by 10 to 1,000 times, depending on the level of automation.

Accuracy. Computerised voting, counting, aggregating and tallying eliminate the introduction of errors (the result of the human factor) that to a greater or lesser extent always affect results in a manual election.

Speed. Official results (as opposed to preliminary ones based on quick counts or exit polls)
can be had a few minutes after polls close. A good example comes from the Republic of the Philippines, where before automation it took 6 weeks to produce official results, versus less than 12 hours after the automated elections of 2010 (Alave et al. 2010).

**Privacy.** The sophistication of IT-based, randomisation algorithms guarantees that votes are never stored in sequence. This, combined with the accessibility features (see point on accessibility), creates the most robust privacy settings available, making sure each citizen’s vote is truly private and not susceptible to being influenced in any way.

**Auditability.** One of the biggest issues with manual voting is that it leaves a very weak audit trail, with very little or no redundency of data. A well-designed automated election, by contrast, produces multiple copies of every data point both in electronic and paper-based forms, creating a very rich audit trail that cannot be circumvented. This gives parties, election officials, candidates, accredited observers and even citizens the capability to verify that the results truly reflect the will of the voters. This is one of the strongest arguments in favour of good automated elections.

**Accessibility and turnout.** The friendliness of user interfaces to which we are now accustomed via our phones and computers can make voting more accessible. In automated elections, voters from all age groups consistently report that it is easier to vote electronically than with pen and paper. In addition, it has been widely demonstrated that it facilitates voting for those who are illiterate, because they can simply touch the face of their candidate or the colour of their party with a finger (Fig. 1).

Voters with disabilities are lobbying governments for computer-based systems, because these systems allow them to vote and to do so unassisted, thanks to the use of audio voting and special controls that allow people with reduced motor skills to vote easily. So the technology would increase turnout of people with disabilities, strengthening inclusivity and the democratic process.

**Integrity.** Modifying, misplacing or spoiling a paper ballot or election return is a common occurrence in manual elections. With a well-designed automated election system, the possibility of this happening is reduced to zero. Multiple digital and paper copies of each element are created, which ensures that data are never lost, modified or destroyed.

**Cost reduction.** Even after taking into consideration the initial investment in technology, the cost per voter per election falls significantly. Smartmatic, the largest voting technology company in the world, has customers that have reduced the cost per voter per election by between 15% and 50% by automating their elections.

**Sustainability.** India used to cut down 280,000 trees and utilise huge amounts of energy and water to produce the paper ballots needed for each election. This cost to the environment was eliminated when elections were automated (Quraishi 2014). After observing how elections are run in more than 70 countries and interacting with election commissions around the world, researchers at Electoralmaturity.org, which is sponsored by Smartmatic, have developed the Election Automation Maturity Model. This model enables anyone to assess the benefits derived from varying levels of automation within an election.

Any country will advance from left to right and from the bottom up, as shown in Figure 2, following the curve. However, an election commission sometimes takes many steps at the same time. Theoretically it is possible to complete all eight steps together although no country has ever done this. Stage zero would be a purely manual election using no technology. Stage 1 is the minimum level of automation, where there is only automated monitoring of a manual election.

The model proceeds all the way to Stage 8, where there is a combination of e-voting (using voting machines), i-voting (using the Internet), and the use of biometrics to authenticate voter eligibility and activate the voting session.

Shedding further light on good election system security. The following analysis is based on research conducted by Smartmatic since 2001, which provides a model of what constitutes good security design for elections systems to work in any part of the world. Real and perceived threats to election security are highly culture-dependent. The security assumptions made in Brazil are entirely different from those made in Switzerland, which are again different from those in the US or in the Philippines. It is for this reason that our starting position is always to assume the worst-case scenario. We require the most constraining security requirements, to make an approach secure enough to be used universally.

First and foremost, our design approach makes one key assumption: one cannot trust anyone. This is simply stated, but as far as we know, no other election system designer has taken this as the core key design variable on which to build a solution.

But what is meant by not trusting anyone?

It goes without saying that this includes hackers and criminals who could attempt to attack the system. But it also includes the political parties, the government, the election commission, everyone who works with the election commission, voters and, of course, the company building the system and its employees.

**So how do you make an unhackable election system?**

As obvious as it sounds, let’s first remember that, in order to hack a system, you need time and money (to purchase, e.g. a computer). The more robust and advanced the security and cryptography are, the more time and money you will need to successfully attack the system. Thus, the time and money needed are directly proportional to the level of security. However, if you want to hack a cryptographic system more quickly (less time), you need more computational power (more money). Therefore, the two are inversely proportional to each other.
This is all great news for digital voting technologists, as we will see soon. To create a completely unhackable system, Smartmatic combined the following ideas: security fragmentation, security layering, encryption, device identity assurance, multi-key combination and opposing-party auditing. Explaining all of them is beyond the scope of this article.

The important thing is that, when all of these methods are combined, it becomes possible to calculate with mathematical precision the probability of the system being hacked in the available time, because an election usually happens in a few hours or at the most during a few days. (For example, for one of our average customers, the probability was 1×10-19. That is a point followed by 19 zeros and then 1). The probability is lower than that of a meteor hitting the earth and wiping us all out in the next few years—approximately 1×10-7 (Chemical Industry Education Centre, Risk-Ed n.d.)—hence it seems reasonable to use the term ‘unhackable’, to the chagrin of the purists and to my pleasure.

Although this level of security is astronomically high, it is not enough simply to provide mathematically perfect security. Why not? Because although it is true, people need to know it is true, and this mathematics is just too technical for the general population to understand. It is for that reason that we created the citizens’ audit: a simple, yet powerful method by which any concerned citizen can verify that the results of an election are indeed accurate and have not been tampered with.

The combination of perfect security with the awareness created of that security by the Citizens Audit is the reason why, after 2.5 billion votes cast and counted with our systems, and after multiple audits, including all citizens’ audits, we have never experienced a successful attempt to hack or tamper with our technology.

Moreover, despite thousands of ‘sore-loser’ candidates in many countries and well-funded movements trying to attack the election system for their own gain, not once has any election result ever been changed in any one of the elections conducted with Smartmatic systems, where more than 38,000 public officers have been elected during the past 10 years, among hundreds of thousands of candidates.

Conclusion

The main message here is threefold. First, manual elections are extremely vulnerable, prone to errors and very expensive. Second, the arguments that have long been made in favour of keeping elections manual are scientifically flawed. They can be placed alongside other thoroughly discredited theories such as those promoted by anti-vaccination groups. Unsupported by facts, they can be immensely damaging. Third, progress is already being made.

Currently more than 70 countries are between Stages 1 and 8 of the Election Automation Maturity Curve, up from less than 30 a mere 5 years ago. The trend is unstoppable, but we would benefit sooner if we fully embrace technology for elections now, focusing only on what is important: that the quality of the solutions is sound and complies with the highest standards.

In addition to all of the above, it is important to mention that Internet (and mobile) voting is rapidly being piloted to substitute postal voting and to provide the best absentee, overseas and military voting systems. This will become very common in the next few years. Internet voting pioneer Estonia (Estonian National Electoral Committee n.d.; Eesti Reformierakont 2015) has already gone further, having become the first country in the world to offer multi-channel voting.

Any citizen can decide to vote online or at the polling station. Few doubt that the future is digital for elections but also for government–citizen interaction, participation, engagement and campaigning. Thus, the sooner we embrace voting technology, the more value we will extract from it.

Pioneering countries are setting a new level of transparency, facilitating engagement and giving their citizens the advanced democratic tools that they demand and deserve.

References


The Insider’s view of Swiss e-voting

Voting via the internet is a key element in Switzerland’s e-government strategy. The authorities have decided to proceed with this project with caution. Corina Casanova, Federal Chancellor of Switzerland says the introduction of e-voting is taking place step by step, and the watchword is “security before speed.”

Switzerland is the home of direct democracy. Citizens have extensive rights to have their say at all three levels of the state: the Confederation, the cantons and the communes. Not only can they elect their representatives to parliament, but they also vote regularly on specific issues. Another characteristic of Swiss democracy is that the means of participating are constantly changing and developing. Since 1994, all those eligible to vote in national elections and other votes have been able to do so by post. Postal voting has proved extremely popular and is now by far the most common method used.

E-voting is a logical extension of postal voting. Instead of receiving the required documents in paper form, filling them out and sending them back or placing them in the ballot box at the polling station, citizens should be able to vote by computer if they so wish. E-voting also takes account of social developments and represents an important step into the digital future for the Swiss political system. Under the Federal Council’s e-government strategy, businesses and members of the public should be able to carry out all their most important transactions with government authorities online. The option of voting via the internet is a key element in this strategy.

The advantages of electronic voting over postal voting or going to the polling station are obvious. Sending the documents and completing the ballot papers online is more efficient than doing so by conventional post, in particular for voters living abroad. Persons with impaired vision can also exercise their voting rights more easily and independently at their computer than if they have to complete a ballot paper or indeed go to the polling station.

E-voting allows errors on ballot papers to be identified and thus prevents invalid votes from being cast. And lastly, e-voting is a response to the needs and preferences of an increasingly digital society. For these reasons, the Swiss authorities have set themselves the goal of providing their citizens with the chance to participate in the political process by voting online.

Security before speed

However, e-voting is not without its risks. If anyone gains unauthorised access to the voting systems, they could obtain data on the voters or in the worst case even manipulate the results. Although abuses cannot be excluded in postal voting, with e-voting the potential damage is greater, because a hacker could potentially manipulate all the data in the system.

In order to take account of these risks, the Swiss authorities have opted for the gradual and carefully controlled introduction of electronic voting. E-voting still remains in a test phase, in which the number of voters who can access the electronic voting system is limited.

The legal regulations on e-voting are being constantly evaluated and amended to take account of political and technical developments. Currently the issue of verifiability is the focus for these modifications. It must be possible to verify whether the votes have been transmitted, recorded and counted correctly. The authorities’ credibility is an essential element in any democracy. Voters must have confidence in the security of the e-voting system if it is to gain political and social acceptance. Even though the authorities have set themselves the goal of introducing e-voting across the board, they have still accorded security a greater importance than the speed at which the system is introduced.

Starting 15 years ago

Alongside direct democracy, federalism is one of the most important features of the Swiss political system. The cantons extensive autonomy has also had an influence on the introduction of e-voting. The Confederation issues the legislation and authorises the use of electronic voting systems. However, the cantons are free to decide whether to introduce e-voting and if so, what system they wish to offer their citizens.

The e-voting project was launched 15 years ago. The first trials were held at national votes in 2004 and 2005 in three of the 26 cantons. Since then, the system has been gradually expanded. In 2008, legislation came into force on the phased introduction of e-voting in the cantons and for Swiss voters living abroad. It quickly became clear that the Swiss abroad gained particular benefit from and had a special interest in voting online. At present, three different e-voting systems are being used.

In the referendum on 14 June this year, 14 cantons offered the option of electronic voting: 12 of these only offered it to voters living abroad, while two made the offer to a limited number of voters in their cantons. In the first 12 cantons, more than half of those who chose to vote did so electronically. In the two other cantons, the online turnout was considerably lower.

Before every ballot, the cantons must submit a new application to use e-voting. In mid-August, the Federal Council unfortunately had to refuse authorisation for one of the three systems to be used in the national elections on 18 October of this year. An external audit revealed a previously unrecognised defect in the system for protecting voting secrecy. Technically, this problem can be solved, but not in time for the system to be used in the elections.

In the short-term, the decision is a setback for e-voting in Switzerland, but in the medium to long-term, it will prove beneficial, because it increases the authorities’ credibility. They have demonstrated that they do indeed regard security as more important than speed.
Most people know the Speaker of the House of Commons as the person who calls “Order” in the Chamber, and attempts to enforce at least some semblance of it during Parliamentary proceedings. Whilst this is by no means an erroneous perception (although it is by no means a complete job description) I took the view when I was elected to the position in June 2009 that it should be part of the role of any modern Speaker to act as a champion of, and an ambassador for, Parliament. The practical realisation of this ambition was an expansion of the Speaker’s Outreach Programme, my championing of the new Parliamentary Education Centre, and looking at new ways to engage the House of Commons with the people we are paid to represent.

The Speaker’s Commission on Digital Democracy was a product of this desire to open up Parliament and to improve the way we interact, with a focus on how digital technology could widen participation in politics and a view to encouraging more effective engagement. For over a year, members of the Commission involved in extensive consultation with a wide range of experts from different communities, ethnicities and age and income brackets.

It was this diversity of views that informed the Commissioners, who reported back on January 26, 2015 with five key targets and further recommendations as to how the House of Commons might harness the power of the digital revolution to facilitate better dialogue between politicians and ordinary people. The recommendation that online voting be available by 2020 for all citizens sparked an intriguing debate and, garnered perhaps understandably, the most media interest. However, it was just one aspect of a broader narrative of digital engagement explored at the Commission. Whilst online voting had been piloted on a small scale, it was not available at the recent general election.

At the present moment, there are two ways of voting in the United Kingdom - either in person or by proxy in a polling station; and in advance by post.

During our inquiry commission on online voting, we observed several representatives from the younger generation making a mention about the inconvenience of having to vote in person. In fact, this has often put a lot of people off doing so. On the other hand, several experts flagged concerns about the potential for cyber-attacks and hacking, especially with the possibility of voter impersonation and intimidation becoming commonplace when voting is undertaken online. Yet, those with disabilities, people living abroad and military personnel posted overseas – all of those who don’t get to cast their votes manually, would undeniably benefit from a secure online voting system.

However, at the bottom line, I have always been clear that protecting the integrity of the ballot box is of utmost importance, and I look forward to the discussions that will follow.

Some of the key issues frequently raised within the Commission were that of the perceived barriers to understanding how Parliament works, and access to the decision making process. Clearly, the first feeds into the second. If it is difficult to determine how a system works, it certainly gets harder to engage with it. This is where digital technology can help, and the Commission places a strong emphasis on education, with one of its key targets to ensure that, by 2020, the House should ensure that everyone can understand what Parliament does, in order to enhance public engagement.
One way in which better engagement might be encouraged is by a focus on issues, rather than political participation. The Commissioners recognised that whilst many people would not describe themselves as “party political”, they are interested in issues that have a direct impact on their lives.

The Commission explored ways in which digital can open up the debate on issues to interested members of the public, such as the introduction of a “Cyber Chamber” – one that would give people the opportunity to discuss the topics raised in Westminster Hall. MPs could contribute, or simply observe. However, such an initiative might be helpful in either case, whether for MPs to be aware of or be capable of responding to what people outside are saying. It would at least start to fuse the two parts of the body politic. This approach has already been piloted successfully twice in the new Parliament, and I am confident that it will become a regular feature.

The new House of Commons e-petitions site established in July 2015 was set up in response to recommendations made by the Procedure Committee, but its aims to mirror many of those outlined in the Digital Democracy report. Now the Petitions Committee can either choose to write to the petitioner, meet them in person to discuss their petition, recommend that a Parliamentary Committee look into the issues raised or ask for time for the matter to be debated. This is a mammoth step forward in putting petition issues at the heart of the engagement narrative.

I am extremely proud of the work undertaken by the Digital Democracy Commission and I am looking forward to the debate it will continue to generate, both in the UK and overseas, where it has sparked quite a bit of interest. In 21st century Britain, there is, rightly, an expectation of openness in politics, a need for greater clarity, and harnessing digital to deliver a better understanding of how Parliament works and, crucially, how it can work more effectively with the people it represents.
For decades, politically motivated violence has destabilized the basic standards for democratic elections in post-civil war Sri Lanka. However, for the first time, the European Parliament’s chief observer of the Sri Lanka election Christian Preda noted that the 17 August Parliamentary elections in Colombo were “well-administered and offered voters a genuine choice from among a broad range of political alternatives, though campaign rules were restrictive.”

The Sri Lankan electorate voted to reject polarisation and promote democratisation. The country emerged from the latest elections with a hung parliament with Ranil Wickremesinghe of United National Party (UNP) returning to power.

Preda’s criticism was that, while freedoms of assembly and movement were respected during the mission, campaign rules were highly restrictive — not allowing candidates to engage in door-to-door campaigning, to canvass in person or distribute leaflets — party activists and candidates campaigned vigorously, focusing on small meetings with voters.

He also mentioned that Mahinda Deshapriya, the Sri Lankan Commissioner of Elections and his staff administered the elections in a transparent and impartial manner, demonstrated strong leadership, and enjoyed the confidence of all stakeholders. During the election period, he had exceptionally broad powers to instruct any state institution, including media and the police.

“The wide interpretation of these powers, including that the Commissioner may order state media outlets to halt broadcasts, posed a challenge to recently gained media freedoms,” Preda pointed out.

Overall, however, journalists now enjoy a freer working environment, and state outlets could provide a platform for various political parties. Although the main ruling party benefitted from preferential treatment on state outlets, the accommodation of a plurality of viewpoints and the move towards balanced coverage are to be welcomed.

The mission considers that although there are no legal barriers for women to vote or to run as candidates, their participation was extremely low, only 9% of the candidates.

Ignazio Corrao, head of the European Parliament delegation which joined the EU EOM on 12 July, added: “We are happy to say that elections took place in a well-organised manner and we congratulate the new elected members of the Parliament. We hope that they will conduct the important reforms the country needs and look forward to a closer cooperation with the EU.”

The EU Election Observation Mission to Sri Lanka was established on 15 July, following an invitation from the Commissioner of Elections. The mission was made up of over 85 observers deployed in all 22 electoral districts.
11th International Electoral Affairs Symposium and
International Electoral Awards Ceremony
13th - 14th November 2015
in Mexico

For more information, please visit: www.electoralforum.org
Phone: +44-203 137 8655, Email: information@parlicentre.org
The promise of a better future starts with a clean and transparent election.

We help countries take their first steps.

We have processed over 2.3 billion auditable, secret and secure votes in elections around the world.

www.smartmatic.com