DECISIONS

DECISION No 1386/2013/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 20 November 2013

on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet'

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(3) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee [1],

Having regard to the opinion of the Committee of the Regions [2],

Acting in accordance with the ordinary legislative procedure [3],

Whereas:

(1) The Union has set itself the objective of becoming a smart, sustainable and inclusive economy by 2020 with a set of policies and actions aimed at making it a low-carbon and resource-efficient economy [4].

(2) Successive environment action programmes have provided the framework for Union action in the field of the environment since 1973.

(3) The Sixth Community Environment Action Programme [5] ('6th EAP') ended in July 2012, but many measures and actions launched under that programme continue to be implemented.

(4) The final assessment of the 6th EAP concluded that the programme delivered benefits for the environment and provided an overarching strategic direction for environment policy. Despite those achievements, unsustainable trends still persist in the four priority areas identified in the 6th EAP: climate change; nature and biodiversity; environment and health and quality of life; and natural resources and wastes.

(5) The final assessment of the 6th EAP highlighted some shortcomings. The achievement of the objectives set out in the Seventh Environment Action Programme ('7th EAP') therefore requires the full commitment of the Member States and the relevant Union institutions and the willingness to take responsibility for the delivery of the programme's intended benefits.

(6) According to the report of the European Environment Agency entitled 'The European environment – state and outlook 2010' ('SOER 2010')' a number of major environmental challenges still remain, and serious repercussions will ensue if nothing is done to address them.

(7) Global systemic trends and challenges, related to population dynamics, urbanisation, disease and pandemics, accelerating technological change and unsustainable economic growth add to the complexity of tackling environmental challenges and achieving long-term sustainable development. Ensuring the Union's long-term prosperity requires taking further action to address those challenges.

[1] OJ C 161, 6.6.2013, p. 77.
[2] OJ C 218, 30.7.2013, p. 53.
[3] Position of the European Parliament of 24 October 2013 (not yet published in the Official Journal) and decision of the Council of 15 November 2013.
[4] COM(2010) 2020 and European Council conclusions of 17 June 2010 (EUCO 13/10).
[5] Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme (OJ L 242, 10.9.2002, p. 1).

(8) It is essential that Union priority objectives for 2020 are established, in line with a clear long-term vision for 2050. This would also provide a stable environment for sustainable investment and growth. The 7th EAP should build on policy initiatives in the Europe 2020 strategy ([1]), including the Union climate and energy package ([2]), the Commission Communication on a Roadmap for moving to a low-carbon economy in 2050 ([3]), the EU Biodiversity Strategy to 2020 ([4]), the Roadmap to a Resource Efficient Europe ([5]), the Innovation Union Flagship Initiative ([6]) and the European Union Strategy for Sustainable Development.

(9) The 7th EAP should help to achieve the environment and climate change targets on which the Union has already agreed and to identify policy gaps where additional targets may be required.

(10) The Union has agreed to achieve a reduction of at least 20 % of its greenhouse gas (GHG) emissions by 2020 (30 %, provided that other developed countries commit themselves to comparable emissions reductions and that developing countries contribute adequately according to their responsibilities and respective capabilities); to ensure that 20 % of energy consumption comes from renewable energy by 2020; and to achieve a 20 % cut in primary energy use compared with projected levels, by improving energy efficiency ([7]).

([1]) COM(2010) 2020.

([2]) Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO_2 emissions from light-duty vehicles (OJ L 140, 5.6.2009, p. 1), Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (OJ L 140, 5.6.2009, p. 16), Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community (OJ L 140, 5.6.2009, p. 63), Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC (OJ L 140, 5.6.2009, p. 88), Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 (OJ L 140, 5.6.2009, p. 114), Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 (OJ L 140, 5.6.2009, p. 136).

([3]) COM(2011) 112. The Roadmap was noted by the Council in its Conclusions of 17 May 2011 and was endorsed by the European Parliament in its Resolution of 15 March 2012 (P7_TA(2012)0086).

([4]) COM(2011) 244.

([5]) COM(2011) 571.

([6]) COM(2010) 546.

([7]) European Council of 8 and 9 March 2007.

(11) The Union has agreed to halt the loss of biodiversity and the degradation of ecosystem services in the Union by 2020, and restore them in so far as feasible, while stepping up the Union contribution to averting global biodiversity loss ([8]).

(12) The Union supports the aims of halting global forest cover loss by 2030 at the latest and of reducing gross tropical deforestation by at least 50 % by 2020 compared to 2008 levels ([9]).

(13) The Union has agreed to achieve good status for all Union waters, including freshwater (rivers and lakes, groundwater), transitional waters (estuaries/deltas) and coastal waters within one nautical mile of the coast by 2015 ([10]).

(14) The Union has agreed to achieve good environmental status in all marine waters of the Union by 2020 ([11]).

(15) The Union has agreed to achieve levels of air quality that do not give rise to significant negative impacts on, and risks to, human health and the environment ([12]).

(16) The Union has agreed to achieve, by 2020, the objective that chemicals are produced and used in ways that lead to the minimisation of significant adverse effects on human health and the environment ([13]).

(17) The Union has agreed to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste

([8]) European Council conclusions of 25 and 26 March 2010 (EUCO 7/10); Council conclusions of 15 March 2010 (7536/10); COM(2011) 244.

([9]) Council conclusions of 4 December 2008 (16852/08).

([10]) Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

([11]) Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19).

([12]) Decision No 1600/2002/EC; Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (OJ L 152, 11.6.2008, p. 1).

([13]) Decision No 1600/2002/EC; Johannesburg Plan of Implementation (WSSD 2002).

and by reducing the overall impact of resource use and improving the efficiency of such use, by applying the following waste hierarchy: prevention, preparing for re-use, recycling, other recovery, and disposal ([1]).

(18) The Union has agreed to stimulate the transition to a green economy and to strive towards an absolute decoupling of economic growth and environmental degradation ([2]).

(19) The Union has agreed to strive to achieve a land degradation neutral world in the context of sustainable development ([3]).

(20) Pursuant to Article 191(2) of the Treaty on the Functioning of the European Union (TFEU), Union policy on the environment aims at a high level of protection taking into account the diversity of situations in the various regions of the Union, and is based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should, as a priority, be rectified at source and that the polluter should pay.

(21) Action to deliver the priority objectives of the 7th EAP should be taken at different levels of governance, in accordance with the principle of subsidiarity.

(22) Transparent engagement with non-governmental actors is important in ensuring the success of the 7th EAP and the achievement of its priority objectives.

(23) Not only do biodiversity loss and the degradation of ecosystems in the Union have important implications for the environment and human well-being, they also have impacts on future generations and are costly for society as a whole, particularly for economic actors in sectors that depend directly on ecosystem services.

(24) There is significant scope for reducing GHG emissions and enhancing energy and resource efficiency in the Union. This will ease pressure on the environment and bring increased competitiveness and new sources of growth and jobs through cost savings from improved efficiency, the commercialisation of innovations and better management of resources over their whole life cycle. In order to realise this potential, a more comprehensive Union policy on climate change should recognise that all sectors of the economy have to contribute to tackling climate change.

(25) Environmental problems and impacts continue to pose significant risks for human health and well-being, whereas measures to improve the state of the environment can be beneficial.

(26) The full and even implementation of the environment *acquis* throughout the Union is a sound investment for the environment and human health, as well as for the economy.

(27) Union environment policy should continue to draw on a sound knowledge base and should ensure that the evidence underpinning policy-making, including cases where the precautionary principle has been invoked, can be better understood at all levels.

(28) Environment and climate objectives should be supported by adequate investments, and funds should be spent more effectively in line with those objectives. The use of public- private initiatives should be encouraged.

(29) Environmental integration in all relevant policy areas is essential in order to reduce pressures on the environment resulting from the policies and activities of other sectors and to meet environmental and climate-related targets.

(30) The Union is densely populated, and over 70 % of its citizens live in urban and peri-urban areas and face specific environmental and climate-related challenges.

(31) Many environmental challenges are global and can only be fully addressed through a comprehensive global approach, while other environmental challenges have a strong regional dimension. This requires cooperation with partner countries, including neighbouring countries and overseas countries and territories.

([1]) Directive 2008/98/EC, of the European Parliament and of the Council of 19 November 2008 on waste (OJ L 312, 22.11.2008, p. 3).
([2]) Council conclusions of 11 June 2012 (11186/12); COM(2011) 571.
([3]) United Nations General Assembly Resolution A/Res/66/288 of 27 July 2012 on the outcome of the Rio + 20 Conference, entitled 'The Future We Want'.

(32) The 7th EAP should support the implementation, within the Union and at international level, of the outcomes of, and commitments undertaken at, the 2012 United Nations Conference on Sustainable Development (Rio + 20) and which aim to transform the global economy into an inclusive and green economy in the context of sustainable development and poverty reduction.

(33) An appropriate mix of policy instruments would enable businesses and consumers to improve their understanding of the impact of their activities on the environment and to manage that impact. Such policy instruments include economic incentives, market-based instruments, information requirements as well as voluntary tools and measures to complement legislative frameworks and to engage stakeholders at different levels.

(34) All measures, actions and targets set out in the 7th EAP should be taken forward in accordance with the principles of smart regulation [1] and, where appropriate, subject to a comprehensive impact assessment.

(35) Progress towards meeting the objectives of the 7th EAP should be monitored, assessed and evaluated on the basis of agreed indicators.

(36) In accordance with Article 192(3) TFEU, the priority objectives in respect of Union policy on the environment should be set out in a general action programme.

(37) For the priority objectives set out in this Decision, a number of measures and actions are identified in the 7th EAP set out in the Annex, with a view to achieving those objectives.

(38) Since the objective of this Decision, namely to set up a General Union Environment Action Programme setting out priority objectives, cannot be sufficiently achieved by the Member States but can rather, by reason of the scale and effects of that action programme be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Decision does not go beyond what is necessary in order to achieve that objective,

[1] COM(2010) 543.

HAVE ADOPTED THIS DECISION:

Article 1

A general Union action programme in the field of the environment for the period up to 31 December 2020 ('the 7th Environment Action programme' or '7th EAP'), as set out in the Annex, is hereby adopted.

Article 2

1. The 7th Environment Action Programme shall have the following priority objectives:

(a) to protect, conserve and enhance the Union's natural capital;

(b) to turn the Union into a resource-efficient, green and competitive low-carbon economy;

(c) to safeguard the Union's citizens from environment-related pressures and risks to health and well-being;

(d) to maximise the benefits of Union environment legislation by improving implementation;

(e) to improve the knowledge and evidence base for Union environment policy;

(f) to secure investment for environment and climate policy and address environmental externalities;

(g) to improve environmental integration and policy coherence;

(h) to enhance the sustainability of the Union's cities;

(i) to increase the Union's effectiveness in addressing international environmental and climate-related challenges.

2. The 7th EAP shall be based on the precautionary principle, the principles of preventive action and of rectification of pollution at source and the polluter-pays principle.

3. The 7th EAP shall contribute to a high level of environmental protection and to an improved quality of life and well-being for citizens.

4. All measures, actions and targets set out in the 7th EAP shall be proposed and implemented in accordance with the principles of smart regulation and, where appropriate, subject to a comprehensive impact assessment.

Article 3

1. The relevant Union institutions and the Member States are responsible for taking appropriate action, with a view to the delivery of the priority objectives set out in the 7th EAP. Action shall be taken with due account of the principles of conferral, subsidiarity and proportionality, in accordance with Article 5 of the Treaty on European Union.

2. Public authorities at all levels shall work with businesses and social partners, civil society and individual citizens in implementing the 7th EAP.

Article 4

1. The Commission shall ensure that the implementation of the relevant elements of the 7th EAP is monitored in the context of the regular monitoring process of the Europe 2020 Strategy. This process shall be informed by the European Environment Agency's indicators on the state of the environment as well as indicators used to monitor progress in achieving existing environment and climate-related legislation and targets such as the climate and energy targets, biodiversity targets and resource efficiency milestones.

2. The Commission shall also carry out an evaluation of the 7th EAP. That evaluation shall be based, inter alia, on the European Environment Agency's report on the state of the environment and on a consultation with interested stakeholders. The Commission shall submit a report based on this evaluation to the European Parliament and to the Council in due course before the end of the 7th EAP.

3. In the light of that evaluation and other relevant policy developments, the Commission shall, if appropriate, present a proposal for an 8th EAP in a timely manner, with a view to avoiding a gap between the 7th EAP and the 8th EAP.

Article 5

This Decision shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Done at Strasbourg, 20 November 2013.

For the European Parliament	*For the Council*
The President	*The President*
M. SCHULZ	V. LEŠKEVIČIUS

ANNEX

THE 7th ENVIRONMENT ACTION PROGRAMME TO 2020 – 'LIVING WELL, WITHIN THE LIMITS OF OUR PLANET'

1. The following 2050 vision is intended to help guide action up to and beyond 2020:

In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society.

A PROGRAMME FOR ACTION TO 2020

2. Over the past 40 years, a broad range of environment legislation has been put in place, amounting to the most comprehensive modern standards in the world. This has helped to address some of the most serious environmental concerns of citizens and businesses in the Union.

3. Emissions of pollutants to air, water and soil have been reduced significantly over the past decades, as have GHG emissions in recent years. Union chemicals legislation has been modernised and the use of many toxic or hazardous substances such as lead, cadmium and mercury has been restricted in products found in most households. Union citizens enjoy a level of water quality that is among the best in the world, and over 18 % of the Union's territory and 4 % of its seas have been designated as protected areas for nature.

4. The Union's environment policy has stimulated innovation and investment in environmental goods and services, generating jobs and export opportunities [1]. Successive enlargements have extended high standards of environmental protection across a large part of the European continent, and the Union's efforts have contributed to increasing international commitment to combatting climate change and biodiversity loss, and to successful global efforts to eliminate ozone-depleting substances and leaded fuels.

5. Considerable headway has also been made in integrating environmental objectives into other Union policies and activities. The reformed Common Agricultural Policy (CAP) has, since 2003, linked direct payments to requirements that farmers maintain land in good agricultural and environmental condition and comply with relevant environment legislation. Fighting climate change has become an integral part of energy policy and progress is being made on integrating resource efficiency, climate change and energy efficiency concerns into other key sectors, such as transport and buildings.

6. However, many environmental trends in the Union continue to be a cause for concern, not least due to insufficient implementation of existing Union environment legislation. Only 17 % of species and habitats assessed under the Habitats Directive [2] have favourable conservation status, and the degradation and loss of natural capital is jeopardising efforts to attain the Union's biodiversity and climate change objectives. Such status of species and habitats as well as the degradation and loss of natural capital have high associated costs which have not yet been properly valued in our economic or social system. 30 % of the Union's territory is highly fragmented, affecting the connectivity and health of ecosystems and their ability to provide services as well as viable habitats for species. While progress has been made in the Union to decouple growth from GHG emissions, resource use and environmental impacts, resource use is still largely unsustainable and inefficient, and waste is not yet properly managed. As a result, businesses in the Union are foregoing the significant opportunities that resource efficiency offers in terms of competitiveness, cost reductions, improved productivity and security of supply. Water quality and air pollution levels are still problematic in many parts of Europe, and Union citizens continue to be exposed to hazardous substances, potentially compromising their health and well-being. Unsustainable land use is consuming fertile soils, and soil degradation continues, resulting in impacts on global food security and the achievement of biodiversity targets.

7. Environmental and climate change in the Union is increasingly caused by developments taking place at global level, including in relation to demographics, patterns of production and trade, and rapid technological progress. Such

[1] The economic benefits of environmental policy (IES, Vrije Universiteit Amsterdam, 2009); COM(2012) 173; Implementing EU legislation for Green Growth (BIO Intelligence Service 2011).

[2] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

developments may offer significant opportunities for economic growth and societal well-being, but pose challenges and uncertainties for the Union's economy and society and are causing environmental degradation worldwide ([1]).

8. Together with current wasteful production and consumption systems in the world economy, rising global demand for goods and services and the depletion of resources are increasing the cost of essential raw materials, minerals and energy, generating more pollution and waste, increasing global GHG emissions and exacerbating land degradation, deforestation and biodiversity loss. Nearly two-thirds of the world's ecosystems are in decline ([2]) and there is evidence that planetary boundaries for biodiversity, climate change and the nitrogen cycle have already been transgressed ([3]). There is likely to be a global shortfall of 40 % in water by 2030 unless there is significant progress made in improving resource efficiency. There is also the risk that climate change will further exacerbate such problems, and will result in high costs ([4]). In 2011, disasters partly due to climate change resulted in global economic losses of over EUR 300 billion. The Organisation for Economic Cooperation and Development (OECD) has warned that the continued degradation and erosion of natural capital risks bringing about irreversible changes that could endanger two centuries of rising living standards and entail significant costs ([5]).

9. Addressing some of those complex issues requires tapping into the full potential of existing environmental technology and ensuring the continuous development and uptake by industry of the best available techniques and emerging innovations, as well as increased use of market-based instruments. Rapid advances in promising fields of science and technology are also needed. This should be made possible by boosting research and creating conditions conducive to private research-related investments. At the same time, there is a need to better understand the potential risks to the environment and human health associated with new technologies, and to assess and manage such technologies better. This is a precondition for public acceptance of new technologies, as well as for the Union's capacity to identify and respond to potential risks associated with technological developments in an effective and timely manner. Major technological innovations should be accompanied by public dialogues and participatory processes.

10. To live well in the future, urgent, concerted action should be taken now to improve ecological resilience and maximise the benefits environment policy can deliver for the economy and society, while respecting the planet's ecological limits. The 7th EAP reflects the Union's commitment to transforming itself into an inclusive green economy that secures growth and development, safeguards human health and well-being, provides decent jobs, reduces inequalities and invests in, and preserves biodiversity, including the ecosystem services it provides (natural capital), for its intrinsic value and for its essential contribution to human well-being and economic prosperity.

11. The transformation into an inclusive green economy requires the integration of environment issues into other policies, such as energy, transport, agriculture, fisheries, trade, economy and industry, research and innovation, employment, development, foreign affairs, security, education and training, as well as social and tourism policy, so as to create a coherent, joined-up approach. Action within the Union should also be complemented by enhanced global action and cooperation with neighbouring countries to tackle common challenges.

12. The Union has set this transformation in motion with long-term, integrated strategies to halt biodiversity loss ([6]), improve resource efficiency ([7]) and expedite the transition towards a safe and sustainable low-carbon economy ([8]). The Commission has further integrated environmental concerns and objectives in recent initiatives taken in other key policy areas, including energy ([9]) and transport ([10]), and sought to enhance the delivery of environmental benefits through reforms of Union policies for agriculture and rural development, fisheries and cohesion, building on achievements to date. In this regard, cross-compliance is particularly important in contributing to the sustainability of agriculture, by promoting the protection of vulnerable ecosystems, such as water bodies, soil and habitats for species.

([1]) SEC(2011)1067; The European Environment — state and outlook 2010: Assessment of Global Megatrends ('SOER 2010').
([2]) UN Secretary-General's High-Level Panel on Global Sustainability report 'Resilient People, Resilient Planet: A future worth choosing', 2012.
([3]) Thresholds associated with nine 'planetary boundaries' have been identified which, once crossed, could lead to irreversible changes with potentially disastrous consequences for humans, including: climate change, biodiversity loss, global freshwater use, ocean acidification, the nitrogen and phosphorus cycles and land-use change (Ecology and Society, Vol. 14, No 2, 2009).
([4]) According to the Stern Review on the Economics of Climate Change, without action, the overall costs of climate change will be equivalent to losing at least 5 % of global gross domestic product (GDP) each year. Including a wider range of risks and impacts, this figure could increase this to 20 % of GDP.
([5]) OECD Environmental Outlook to 2050: The Consequences of Inaction (report, 2012).
([6]) COM(2011) 244.
([7]) COM(2011) 571.
([8]) COM(2011) 112.
([9]) COM(2011) 885.
([10]) COM(2011) 144.

13. The Union has signed up to a large number of legally binding commitments under multilateral environmental agreements as well as to politically binding environmental commitments, including those agreed at the United Nations Conference on Sustainable Development ('Rio + 20') ([1]). The Rio + 20 outcome document recognises that the inclusive and green economy is an important tool for achieving sustainable development and poverty eradication. The document sets out a framework for action covering all three dimensions of sustainable development (environment, social and economic), many of which are reflected in the priority objectives of the 7th EAP. At Rio + 20, it was also agreed to develop sustainable development goals that are coherent with, and integrated into, the post-2015 UN development agenda, in order to strengthen the institutional framework and develop a financing strategy for sustainable development. Rio + 20 also adopted a global 10-year Framework of Programmes on sustainable consumption and production. The Union and its Member States should now ensure that those commitments are implemented within the Union, and should promote their implementation globally.

14. The 7th EAP complements those efforts by defining priority objectives for the Union to attain over the period up to 2020. The 7th EAP shall support implementation and encourage action at all levels and promote environment and climate-related investment, also beyond 2020.

15. In many cases, action to achieve the priority objectives will be required primarily at national, regional or local level, in line with the principle of subsidiarity. In other cases, additional measures at Union and international level will be needed. The public should also play an active role and should be properly informed about environment policy. Since environment policy is a sphere of shared competence in the Union, one of the purposes of the 7th EAP is to create common ownership of shared goals and objectives and ensure a level playing field for businesses and public authorities. Clear goals and objectives also provide policy makers and other stakeholders, including regions and cities, businesses and social partners, and individual citizens, with a sense of direction and a predictable framework for action.

16. The integrated and coherent development of environment and climate policy can help to ensure that the Union's economy and society are well-prepared to face the abovementioned challenges. Such action will require focusing on three thematic objectives:

(a) protecting, conserving and enhancing the Union's natural capital;

(b) turning the Union into a resource-efficient, green and competitive low-carbon economy;

(c) safeguarding the Union's citizens from environment-related pressures and risks to health and well-being.

Those three thematic objectives are inter-related and should be pursued in parallel. Action taken under one objective will often help to contribute to the achievement of the other objectives. For example, improving resource efficiency will ease the pressure on natural capital, while enhancing the resilience of the Union's natural capital base will deliver benefits for human health and well-being. Action to mitigate and adapt to climate change will increase the resilience of the Union's economy and society, while stimulating innovation and protecting the Union's natural resources.

THEMATIC PRIORITIES

Priority objective 1: To protect, conserve and enhance the Union's natural capital

17. The Union's economic prosperity and well-being is underpinned by its natural capital, i.e. its biodiversity, including ecosystems that provide essential goods and services, from fertile soil and multi-functional forests to productive land and seas, from good quality fresh water and clean air to pollination and climate regulation and protection against natural disasters. A substantial body of Union legislation seeks to protect, conserve and enhance natural capital, including the Water Framework Directive ([2]), the Marine Strategy Framework Directive ([3]), the Urban Wastewater Directive ([4]), the Nitrates Directive ([5]), the Floods Directive ([6]), the Priority Substances

([1]) United Nations General Assembly Resolution A/Res/66/288.
([2]) Directive 2000/60/EC.
([3]) Directive 2008/56/EC.
([4]) Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (OJ L 135, 30.5.1991, p. 40).
([5]) Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (OJ L 375, 31.12.1991, p. 1).
([6]) Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (OJ L 288, 6.11.2007, p. 27).

Directive ([1]), the Air Quality Directive and related directives ([2]) and the Habitats and Birds Directives ([3]). Legislation to tackle climate change, chemicals, industrial emissions and waste also contributes to easing the pressures on soil and biodiversity, including ecosystems, species and habitats as well as reducing nutrient releases.

18. However, recent assessments show that biodiversity in the Union is still being lost and that most ecosystems are seriously degraded ([4]) as a result of various pressures. For example, invasive alien species pose greater risks to plant, animal and human health, the environment and the economy than previously estimated. The EU Biodiversity Strategy to 2020 sets out targets and actions needed to reverse those negative trends, to halt the loss of biodiversity and the degradation of ecosystem services by 2020 and restore them as far as feasible ([5]). It is necessary to step up the implementation of that Strategy, and meet the targets contained therein in order to enable the Union to meet its biodiversity headline target for 2020. Whereas the Strategy includes built-in measures to improve the implementation of the Birds and Habitats Directives, including the Natura 2000 network, reaching the headline target will require the full implementation of all existing legislation aimed at protecting natural capital.

19. Despite the requirement in the Water Framework Directive to protect, enhance and restore all bodies of surface and ground water, and considerable efforts to date, the objective of 'good ecological status' by 2015 is likely to be met only for 53 % of surface water bodies in the Union ([6]). The Marine Strategy Framework Directive target to achieve 'good environmental status' by 2020 is coming under severe pressure, due to, inter alia, continued overfishing, pollution (including underwater noise and marine litter) as well as the effects of global warming such as acidification, in Europe's seas. In particular in the Mediterranean and the Black Sea, where the majority of coastal states are not Union Member States, close collaboration within the Union and with its neighbours will be essential to tackle such challenges effectively. And while Union air and industrial emissions policies have helped to reduce many forms of pollution, ecosystems continue to suffer from excess nitrogen and sulphur deposition and ozone pollution associated with emissions from transport, power generation and unsustainable agricultural practices.

20. Protecting, conserving, enhancing and valuing the Union's natural capital therefore also requires tackling problems at source through, inter alia, better integration of natural capital objectives in the development and implementation of other policies, and ensuring that policies are coherent and deliver mutual benefits. The environment-related elements set out in the Commission's reform proposals, in particular for Union agriculture, fisheries and cohesion policy, backed by the proposals for greening the Union budget under the Multi-Annual Financial Framework 2014–2020 are designed to support those objectives. Since agriculture and forestry together represent 78 % of land cover in the Union, they play a major role in maintaining natural resources, especially good quality water and soil as well as biodiversity and diverse cultural landscapes. Greening of the CAP will promote environmentally beneficial agricultural and forestry practices such as crop diversification, the protection of permanent grassland and grazing land, and sustainable agroforestry, and will also promote the establishment and maintenance of ecologically valuable farmland and forest areas, including through extensive and traditional practices. It will also increase the land use, land-use change and forestry sector's capacity to act as a carbon sink. An essential element in sustainable agriculture is farming with a sense of responsibility for future generations, while at the same time remaining resource-efficient and productive.

21. The Union has the world's largest maritime territory and therefore has a significant responsibility for ensuring the protection of the marine environment. In the case of the marine environment, while the maritime sector offers economic opportunities, from fishing, shipping and aquaculture to raw materials and offshore energy and marine biotechnology, care needs to be taken to ensure their exploitation is compatible with the conservation and sustainable management of marine and coastal ecosystems. In conjunction, maritime spatial planning and integrated coastal management within and between Member States can play an effective role in coordinating sustainable use of marine waters and coastal zones, when applying the ecosystem-based approach to the management of different sectoral activities in those areas. The marine environment is not adequately protected partly because completion of the Natura 2000 network is behind schedule, requiring further efforts from Member States. Marine-protected areas also need to be managed more efficiently.

([1]) Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council (OJ L 348, 24.12.2008, p. 84).
([2]) Directive 2008/50/EC and Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air (OJ L 23, 26.1.2005, p. 3).
([3]) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7) and Directive 92/43/EEC.
([4]) European Environment Agency Technical Report 12/2010.
([5]) Paragraph 14 of the European Council conclusions of 26 March 2010 (EUCO 7/10) states: 'There is an urgent need to reverse continuing trends of biodiversity loss and ecosystem degradation. The European Council is committed to the long term biodiversity 2050 vision and the 2020 target set out in the Council's conclusions of 15 March 2010.'.
([6]) COM(2012) 673.

22. Ecosystem-based approaches to climate change mitigation and adaptation which also benefit biodiversity and the provision of other ecosystem services should be used more extensively as part of the Union's climate change policy, while other environmental objectives such as biodiversity conservation and the protection of soil and water should be fully taken into account in decisions relating to renewable energy. Finally, measures to address transport-related air pollution and CO_2 emissions will need to be taken ([1]).

23. The degradation, fragmentation and unsustainable use of land in the Union is jeopardising the provision of several key ecosystem services, threatening biodiversity and increasing Europe's vulnerability to climate change and natural disasters. It is also exacerbating soil degradation and desertification. More than 25 % of the Union's territory is affected by soil erosion by water, which compromises soil functions and affects the quality of freshwater. Soil contamination and sealing are also persistent problems. More than half a million sites throughout the Union are thought to be contaminated and until they are identified and assessed, they will continue to pose potentially serious environmental, economic, social and health risks. Every year more than 1 000 km^2 of land are taken for housing, industry, transport or recreational purposes. Such long-term changes are difficult or costly to reverse, and nearly always involve trade-offs between various social, economic and environmental needs. Environmental considerations including water protection and biodiversity conservation should be integrated into planning decisions relating to land use so that they are made more sustainable, with a view to making progress towards the objective of 'no net land take', by 2050.

24. Varying levels of progress have been made at Member State level to ensure soil protection, including with regard to contaminated site identification, awareness-raising, research and the development of monitoring systems. However, progress with risk-based and other remediation efforts is uneven, and results and Union level reporting are limited. In response to concerns such as adverse impacts on the natural water cycle, the Commission has developed guidelines on soil sealing ([2]). Further efforts to strengthen the regulatory context, develop networks, share knowledge, produce guidelines and identify examples of best practice can also contribute to better soil protection. The Commission has submitted a proposal for a Directive establishing a framework for the protection of soil and amending Directive 2004/35/EC ([3]).

25. To reduce the most significant man-made pressures on land, soil and other ecosystems in Europe, action will be taken to ensure that decisions, relating to land use, at all relevant levels give proper consideration to environmental as well as social and economic impacts. The Rio + 20 outcome, recognising the economic and social significance of good land management, called for a 'land degradation neutral world'. The Union and its Member States should reflect on how best to make such a commitment operational within their respective competencies. The Union and its Member States should also reflect as soon as possible on how soil quality issues could be addressed using a targeted and proportionate risk-based approach within a binding legal framework. Targets should also be set for sustainable land use and soil.

26. Although nitrogen and phosphorus inputs to the Union environment have decreased considerably over the past 20 years, excessive nutrient releases continue to affect air and water quality and to have a negative impact on ecosystems, causing significant problems for human health. In particular, ammonia release from inefficient fertiliser management and inadequate waste water treatment urgently need to be tackled to achieve further significant reductions in nutrient releases. Further efforts to manage the nutrient cycle in a more cost-effective, sustainable and resource-efficient way, and to improve efficiency in the use of fertilisers are also required. Such efforts call for investments in research and improvements in the coherence and implementation of Union environment legislation to address those challenges, tightening standards where necessary and addressing the nutrient cycle as part of a more holistic approach which integrates and creates links between existing Union policies that play a role in tackling eutrophication and excessive nutrient releases, and avoids a situation whereby nutrient emissions are shifted across environmental media.

27. Action under the EU Biodiversity Strategy to restore at least 15 % of degraded ecosystems in the Union and to expand the use of Green Infrastructure (a tool for providing ecological, economic and social benefits through natural solutions, incorporating green spaces, aquatic ecosystems and other physical features in terrestrial and marine areas) will help to overcome land fragmentation. Such action will, in combination with the full implementation of the Birds and Habitats Directives, supported by Prioritised Action Frameworks, further enhance natural capital and increase ecosystem resilience, and can offer cost-effective options for climate change mitigation and adaptation and disaster risk management. Meanwhile, Member States' efforts to map and assess ecosystems and their services will improve data availability, and, along with the 'no net loss' initiative planned in 2015, will contribute to

([1]) COM(2011) 144.
([2]) SWD(2012) 101.
([3]) COM(2006) 232.

maintaining the stock of natural capital at a variety of scales. The integration of the economic value of ecosystem services into accounting and reporting systems at Union and national level by 2020 will result in better management of the Union's natural capital.

28. In order to protect, conserve and enhance the Union's natural capital, the 7th EAP shall ensure that by 2020:

(a) the loss of biodiversity and the degradation of ecosystem services, including pollination, are halted, ecosystems and their services are maintained and at least 15 % of degraded ecosystems have been restored;

(b) the impact of pressures on transitional, coastal and fresh waters (including surface and ground waters) is significantly reduced to achieve, maintain or enhance good status, as defined by the Water Framework Directive;

(c) the impact of pressures on marine waters is reduced to achieve or maintain good environmental status, as required by the Marine Strategy Framework Directive, and coastal zones are managed sustainably;

(d) air pollution and its impacts on ecosystems and biodiversity are further reduced with the long-term aim of not exceeding critical loads and levels;

(e) land is managed sustainably in the Union, soil is adequately protected and the remediation of contaminated sites is well underway;

(f) the nutrient cycle (nitrogen and phosphorus) is managed in a more sustainable and resource-efficient way;

(g) forest management is sustainable, and forests, their biodiversity and the services they provide are protected and, as far as feasible, enhanced and the resilience of forests to climate change, fires, storms, pests and diseases is improved.

This requires, in particular:

(i) stepping up the implementation of the EU Biodiversity Strategy without delay, in order to meet its targets;

(ii) fully implementing the Blueprint to Safeguard Europe's Water Resources [1], having due regard for Member States' specific circumstances, and ensuring that water quality objectives are adequately supported by source-based policy measures;

(iii) urgently increasing efforts, inter alia, to ensure that healthy fish stocks are achieved in line with the Common Fisheries Policy, the Marine Strategy Framework Directive and international obligations. Combating pollution and establishing a Union-wide quantitative reduction headline target for marine litter supported by source-based measures and taking into account the marine strategies established by Member States. Completing the Natura 2000 network of marine protected areas, and ensuring that coastal zones are managed sustainably;

(iv) agreeing and implementing an EU Strategy on adaptation to climate change [2], including the mainstreaming of climate change adaptation into key Union policy initiatives and sectors;

(v) strengthening efforts to reach full compliance with Union air quality legislation and defining strategic targets and actions beyond 2020;

(vi) increasing efforts to reduce soil erosion and increase soil organic matter, to remediate contaminated sites and to enhance the integration of land use aspects into coordinated decision-making involving all relevant levels of government, supported by the adoption of targets on soil and on land as a resource, and land planning objectives;

(vii) taking further steps to reduce emissions of nitrogen and phosphorus, including those from urban and industrial wastewater and from fertiliser use, inter alia, through better source control, and the recovery of waste phosphorus;

(viii) developing and implementing a renewed Union Forest Strategy that addresses the multiple demands on, and benefits of, forests and contributes to a more strategic approach to protecting and enhancing forests, including through sustainable forest management;

[1] COM(2012) 673.
[2] COM(2013) 216.

(ix) enhancing Union public information provision, awareness and education on environment policy.

Priority objective 2: To turn the Union into a resource-efficient, green and competitive low-carbon economy

29. The Europe 2020 Strategy seeks to promote sustainable growth by developing a more competitive low-carbon economy that makes efficient, sustainable use of resources. Its 'Resource-efficient Europe' Flagship Initiative aims to support the shift towards an economy that is efficient in the way it uses all resources, absolutely decouples economic growth from resource and energy use and its environmental impacts, reduces GHG emissions, enhances competitiveness through efficiency and innovation and promotes greater energy and resource security, including through reduced overall resource use. The Roadmap to a Resource Efficient Europe and the Roadmap for moving to a competitive low-carbon economy ([1]) are key building blocks of the Flagship Initiative, setting out the framework for future actions to deliver on those objectives, and should be supported by the exchange of best practice between Member States. Furthermore, a partnership between the Union, its Member States and industry, under the Union's integrated industrial policy will provide a means of stepping up investment and innovation in six green economy-related growth markets ([2]).

30. Innovation to improve resource efficiency is required throughout the economy to improve competitiveness in the context of rising resource prices, scarcity, raw material supply constraints and dependency on imports. The business sector is the primary driver of innovation, including eco-innovation. However, markets alone will not yield the desired results, and in order to improve their environmental performance, small and medium-sized enterprises (SMEs), in particular, require specific assistance with the uptake of new technologies, including through research and innovation partnerships on waste ([3]). Government action, at Union and Member State level, is essential to provide the right framework conditions for investment and eco-innovation, stimulating the development of sustainable business or technological solutions to environmental challenges and promoting sustainable patterns of resource use ([4]).

31. This key requirement for meeting environmental challenges also has important socioeconomic benefits and can stimulate competitiveness. Potential job growth brought about by the transformation to a low carbon, resource-efficient, safe and sustainable economy is central to the fulfilment of the Europe 2020 employment objectives ([5]). Employment in environmental technologies and service sectors in the Union has been growing by around 3 % annually over recent years ([6]). The global market for eco-industries is estimated to be worth at least one trillion EUR ([7]), and is forecast to almost double over the next 10 years. European companies already have a global lead in recycling and energy efficiency and should be encouraged to benefit from this growth in global demand, supported by the Eco-innovation Action Plan ([8]). For example, the European renewables sector alone is expected to generate more than 400 000 new jobs by 2020 ([9]). A sustainable bioeconomy can also contribute to intelligent and green growth in Europe, and, at the same time, it will benefit from improved resource efficiency.

32. Fully implementing the Union Climate and Energy Package is essential to reaching the milestones identified for 2020 and for building a competitive, safe and sustainable low-carbon economy by 2050. Whereas the Union is currently on track to reduce domestic GHG emissions 20 % below 1990 levels by 2020, meeting the 20 % energy efficiency target will require far more rapid efficiency improvements and behavioural change. The Energy Efficiency Directive ([10]) is expected to make a significant contribution in this regard, and could be complemented by efficiency requirements for the energy use of products placed on the Union market. A comprehensive assessment of the availability of sustainable biomass is also important in the light of the increasing demand for energy and the on-going debate on the conflict between land use for food and land use for bio-energy. It is also vital to ensure that biomass in all its forms is produced and used sustainably and efficiently over its whole life cycle, so as to minimise or avoid negative impacts on the environment and climate and with due regard for the economic context of the various uses of biomass as a resource. This would contribute to building a low-carbon economy.

([1]) COM(2011) 112.
([2]) COM(2012) 582, entitled 'A stronger European industry for growth and economic recovery'.
([3]) Principle IX of the Small Business Act for Europe, proposes actions to enable SMEs to turn environmental challenges into opportunities (COM(2008) 394).
([4]) Fostering Innovation for Green Growth (OECD 2011) and The Eco-Innovation Gap: An economic opportunity for business (EIO 2012).
([5]) COM(2012) 173.
([6]) The EU eco-industry sector employed around 2,7 million people in 2008 and for 2012 this figure could be around 3,4 million (Ecorys, 2012).
([7]) 'The number of Jobs dependent on the Environment and Resource Efficiency improvements' (ECORYS 2012).
([8]) COM(2011) 899.
([9]) The impact of renewable energy policy on economic growth and employment in the EU (Employ-RES 2009).
([10]) Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).

33. All sectors of the economy will need to contribute to reducing GHG emissions if the Union is to deliver its fair share of global efforts. The Union needs to agree the next steps for its climate and energy framework beyond 2020 in order to prepare itself for international negotiations on a new legally binding agreement, but also to provide Member States, industry and other sectors with a clear legally-binding framework and target(s) to make the medium- and long-term investments needed in emissions reduction, energy efficiency and renewable energy. Hence the Union needs to consider policy options to make the transition to a low-carbon economy in a gradual, cost-effective way, taking into account the indicative milestones set out in the Low-Carbon Economy Roadmap to 2050, which should serve as the basis for further work. The Green Paper on a 2030 framework for climate and energy policies ([1]) represents an important step in this regard. The 2050 Energy roadmap and the White Paper on transport need to be underpinned by strong policy frameworks. Moreover, Member States need to develop and put in place long-term, cost-effective low-carbon development strategies aimed at achieving the Union objective of reducing GHG emissions by 80 % to 95 % by mid-century, compared to 1990 levels, as part of a global effort to limit the average temperature increase to below 2 °C compared to pre-industrial levels, and in the context of necessary reductions by developed countries as a group, according to evidence provided by the Intergovernmental Panel on Climate Change (IPCC). The Union Emissions Trading System will continue to be a central pillar of Union climate policy beyond 2020, and should be structurally reformed to incentivise low-carbon investment. Consistent with international commitments, the Union, together with other parties to the United Nations Framework Convention on Climate Change (UNFCCC), should support developing countries in their efforts to mitigate climate change through capacity-building, financial aid and technology transfer.

34. The uptake by industry of the 'Best Available Techniques' under the Industrial Emissions Directive ([2]) will deliver improved resource-use patterns and reduced emissions for over 50 000 major industrial installations in the Union, thus making a significant contribution to stimulating the development of innovative techniques, greening the economy and reducing costs for industry in the longer term. This development can be further encouraged by the implementation of enviromental management systems, such as EMAS ([3]), by industry.

35. Some existing policy instruments relating to production and consumption are limited in scope. There is a need for a framework that gives appropriate signals to producers and consumers to promote resource efficiency and the circular economy. Measures will be taken to further improve the environmental performance of goods and services on the Union market over their whole life cycle including measures to increase the supply of environmentally sustainable products and stimulate a significant shift in consumer demand for such products. This will be achieved using a balanced mix of incentives for consumers and businesses (including SMEs), market-based instruments and regulations to reduce the environmental impacts of their operations and products. Consumers should receive accurate, easy to understand and reliable information about the products they purchase, through clear and coherent labelling, including in relation to environmental claims. Packaging should be optimised to minimise environmental impacts, and resource efficient business models such as product service systems, including leasing of products, should also be supported. Existing product legislation such as the Ecodesign and Energy Label Directives ([4]) and the Ecolabel Regulation ([5]) will be reviewed with a view to improving the environmental performance and resource efficiency of products throughout their lifecycle, and addressing existing provisions through a more coherent policy and legislative framework for sustainable production and consumption in the Union ([6]). This framework supported by lifecycle indicators should address the fragmentation and scope limitations of the existing Sustainable Consumption and Production (SCP) *acquis*, and identify, and where necessary fill, gaps in policy, incentives and legislation to ensure minimum requirements are in place with regard to the environmental performance of products and services.

36. Since 80 % of all environmental impacts of a product during its lifecycle originate in its design phase, the Union policy framework should ensure that priority products placed on the Union market are 'eco-designed' with a view to optimising resource and material efficiency. This should include addressing, inter alia, product durability, reparability, re-usability, recyclability, recycled content and product lifespan. Products should be sustainably sourced and

([1]) COM(2013) 169.

([2]) Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17).

([3]) Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) (OJ L 342, 22.12.2009, p. 1).

([4]) Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (OJ L 285, 31.10.2009, p. 10) and Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (OJ L 153, 18.6.2010, p. 1).

([5]) Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel (OJ L 27, 30.1.2010, p. 1).

([6]) Ecodesign, Energy Label, Ecolabel, EMAS and Unfair Commercial Practice legislation is due for revision before 2015.

designed for re-use and recycling. Those requirements will have to be implementable and enforceable. Efforts will be stepped up at Union and national level to remove barriers to eco-innovation ([1]), and to unlock the full potential of Europe's eco-industries, thereby generating benefits for green jobs and growth.

37. To set a framework for action to improve resource efficiency aspects beyond GHG emissions and energy, targets for reducing the overall lifecycle environmental impact of consumption will be set, in particular in the food, housing and mobility sectors ([2]). Taken together, those sectors are responsible for almost 80 % of the environmental impacts of consumption. Indicators and targets for land, water, material and carbon footprints as well as their role within the European Semester should also be considered in this regard. The Rio + 20 outcome recognised the need to significantly reduce post-harvest and other food losses and waste throughout the food supply chain. The Commission should present a comprehensive strategy to combat unnecessary food waste and work with Member States in the fight against excessive food waste generation. Measures to increase composting and anaerobic digestion of discarded food, as appropriate, would be helpful in this regard.

38. In addition to mandatory green public procurement requirements for certain product categories ([3]), most Member States have adopted voluntary action plans and many have set targets for specific product groups. There is, however, considerable scope for administrations at all levels to further reduce their environmental impact through their purchasing decisions. Member States and regions should take further steps to reach the target of applying green procurement criteria to at least 50 % of public tenders. The Commission will consider proposing sector-specific legislation to set mandatory green public procurement requirements for additional product categories and the scope for periodic monitoring of Member States' progress on the basis of adequate Member State data, while having regard for the need to minimise the level of administrative burden. Voluntary green purchaser networks should be developed.

39. There is also considerable potential for improving waste prevention and management in the Union to make better use of resources, open up new markets, create new jobs and reduce dependence on imports of raw materials, while having lower impacts on the environment ([4]). Each year in the Union, 2,7 billion tonnes of waste are produced, of which 98 million tonnes (4 %) are hazardous. In 2011, per capita municipal waste generation averaged 503 kg throughout the Union, but ranges from 298 to 718 kg across individual Member States. On average, only 40 % of solid waste is prepared for re-use or recycled whereas some Member States achieve a rate of 70 %, showing how waste could be used as one of the Union's key resources. At the same time, many Member States landfill over 75 % of their municipal waste ([5]).

40. Turning waste into a resource, as called for in the Roadmap to a Resource Efficient Europe, requires the full implementation of Union waste legislation throughout the Union, based on strict application of the waste hierarchy and covering different types of waste ([6]). Additional efforts are needed to reduce per capita waste generation and waste generation in absolute terms. Limiting energy recovery to non-recyclable ([7]) materials, phasing out landfilling of recyclable or recoverable waste ([8]), ensuring high quality recycling where the use of recycled material does not lead to overall adverse environmental or human health impacts, and developing markets for secondary raw materials are also necessary to achieve resource efficiency objectives. Hazardous waste will need to be managed so as to minimise significant adverse effects on human health and the environment, as agreed at Rio + 20. To achieve that aim, market-based instruments and other measures that privilege prevention, recycling and re-use should be applied much more systematically throughout the Union, including extended producer responsibility, while the development of non-toxic material cycles should be supported. Barriers facing recycling activities in the Union internal market should be removed and existing prevention, re-use, recycling, recovery and landfill diversion targets reviewed so as to move towards a lifecycle-driven 'circular' economy, with a cascading use of resources and residual waste that is close to zero.

([1]) COM(2011) 899.

([2]) Annual food waste generation in the Union is approximately 89 million tonnes, representing 179 kg per capita (BIO Intelligence Service 2010). The aggregated impacts of housing and infrastructure account for around 15-30 % of all consumption-related environmental pressures in Europe and contribute approximately 2,5 tonnes of CO_2 equivalent per capita annually (SEC(2011)1067).

([3]) Regulation (EC) No 106/2008 of the European Parliament and of the Council of 15 January 2008 on a Community energy-efficiency labelling programme for office equipment (OJ L 39, 13.2.2008, p. 1); Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles (OJ L 120, 15.5.2009, p. 5) and the Energy Efficiency Directive.

([4]) For example, the full implementation of Union waste legislation would save EUR 72 billion a year, increase the annual turnover of the Union waste management and recycling sector by EUR 42 billion and create over 400 000 jobs by 2020.

([5]) Eurostat Stat 13/33 Municipal Waste 2011.

([6]) Directive 2008/98/EC.

([7]) 'Recycling' is defined in point (17) of Article 3 of Directive 2008/98/EC as 'any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations;'.

([8]) 'Recovery' is defined in point (15) of Article 3 of Directive 2008/98/EC as 'any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. […];'.

41. Resource efficiency in the water sector will also be tackled as a priority to help deliver good water status. Even though droughts and water scarcity are affecting more and more parts of Europe, an estimated 20-40 % of Europe's available water is still being wasted, for instance, through leakages in the distribution system or inadequate uptake of water efficiency technologies. According to available modelling, there is still considerable scope for improving water efficiency in the Union. Moreover, rising demand and the impacts of climate change are expected to increase the pressure on Europe's water resources significantly. Against this background, the Union and its Member States should take action to ensure that citizens have access to clean water and that water abstraction respects available renewable water resource limits, by 2020, with a view to maintaining, achieving or enhancing good water status in accordance with the Water Framework Directive, including by improving water efficiency through the use of market mechanisms such as water pricing that reflects the true value of water, as well as other tools, such as education and awareness raising [1]. The biggest consuming sectors, such as energy and agriculture, should be encouraged to prioritise the most resource-efficient use of water. Progress will be facilitated by accelerated demonstration and rolling out of innovative technologies, systems and business models building on the Strategic Implementation Plan of the European Innovation Partnership on Water.

42. A long-term and predictable policy framework in all those areas will help to stimulate the level of investments and action needed to fully develop markets for greener technologies and promote sustainable business solutions. Resource efficiency indicators and targets underpinned by robust data collection would provide the necessary guidance for public and private decision-makers in transforming the economy. Once agreed at Union level, such indicators and targets will become an integral part of the 7th EAP. Methodologies to measure the resource efficiency of water, land, material and carbon should be developed by 2015 to assist this process.

43. In order to turn the Union into a resource-efficient, green and competitive low-carbon economy, the 7th EAP shall ensure that by 2020:

(a) the Union has met its 2020 climate and energy targets and is working towards reducing by 2050 GHG emissions by 80–95 % compared to 1990 levels, as part of a global effort to limit the average temperature increase below 2 °C compared to pre-industrial levels, with the agreement of a climate and energy framework for 2030 as a key step in this process;

(b) the overall environmental impact of all major sectors of the Union economy is significantly reduced, resource efficiency has increased, and benchmarking and measurement methodologies are in place. Market and policy incentives that foster business investments in resource efficiency are in place, while green growth is stimulated through measures to foster innovation;

(c) structural changes in production, technology and innovation, as well as consumption patterns and lifestyles have reduced the overall environmental impact of production and consumption, in particular in the food, housing and mobility sectors;

(d) waste is safely managed as a resource and to prevent harm to health and the environment, absolute waste generation and waste generated per capita are in decline, landfilling is limited to residual (i.e. non-recyclable and non-recoverable) waste, having regard to the postponements provided for in Article 5(2) of the Landfill Directive [2] and energy recovery is limited to non-recyclable materials, having regard to Article 4(2) of the Waste Framework Directive [3];

(e) water stress in the Union is prevented or significantly reduced.

This requires, in particular:

(i) fully implementing the Climate and Energy Package and urgently agreeing on the Union's 2030 climate and energy policy framework, with due regard for the most recent IPCC assessment report, taking into account the indicative milestones set out in the Low-Carbon Roadmap, as well as developments within the UNFCCC and other relevant processes;

(ii) generalising the application of 'Best Available Techniques' in the context of the Industrial Emissions Directive and enhancing efforts to promote the uptake of emerging innovative technologies, processes and services;

[1] COM(2012) 673.
[2] Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (OJ L 182, 16.7.1999, p. 1).
[3] Directive 2008/98/EC.

(iii) giving impetus to the public and private research and innovation efforts required for the development and uptake of innovative technologies, systems and business models which will speed up and lower the cost of transition to a low-carbon, resource-efficient, safe and sustainable economy. Further developing the approach set out in the Eco-innovation Action Plan, identifying priorities for incremental innovation as well as system changes, promoting a larger market share of green technologies in the Union and enhancing the competitiveness of the European eco-industry. Establishing indicators and setting realistic and achievable targets for resource efficiency;

(iv) developing measurement and benchmarking methodologies by 2015 for resource efficiency of land, carbon, water and material use and assessing the appropriateness of the inclusion of a lead indicator and target in the European Semester;

(v) establishing a more coherent policy framework for sustainable production and consumption including, where appropriate, the consolidation of existing instruments into a coherent legal framework. Reviewing product legislation with a view to improving the environmental performance and resource efficiency of products throughout their lifecycle. Stimulating consumer demand for environmentally sustainable products and services through policies which promote their availability, affordability, functionality and attractiveness. Developing indicators and realistic and achievable targets for the reduction of the overall impact of consumption;

(vi) developing training programmes geared towards green jobs;

(vii) increasing efforts to reach existing targets and reviewing approaches to green public procurement, including its scope, in order to increase its effectiveness. Establishing a voluntary green purchaser network for Union businesses;

(viii) fully implementing Union waste legislation. Such implementation will include applying the waste hierarchy in accordance with the Waste Framework Directive and the effective use of market-based instruments and other measures to ensure that: (1) landfilling is limited to residual (i.e. non-recyclable and non-recoverable) waste, having regard to the postponements provided for in Article 5(2) of the Landfill Directive; (2) energy recovery is limited to non-recyclable materials, having regard to Article 4(2) of the Waste Framework Directive; (3) recycled waste is used as a major, reliable source of raw material for the Union, through the development of non-toxic material cycles; (4) hazardous waste is safely managed and its generation is reduced; (5) illegal waste shipments are eradicated, with the support of stringent monitoring; and (6) food waste is reduced. Reviews of existing product and waste legislation are carried out, including a review of the main targets of the relevant waste directives, informed by the Roadmap to a Resource Efficient Europe, so as to move towards a circular economy; and internal market barriers for environmentally-sound recycling activities in the Union are removed. Public information campaigns are required to build awareness and understanding of waste policy and to stimulate a change in behaviour;

(ix) improving water efficiency by setting and monitoring targets at river basin level on the basis of a common methodology for water efficiency targets to be developed under the Common Implementation Strategy process, and using market mechanisms, such as water pricing, as provided for in Article 9 of the Water Framework Directive and, where appropriate, other market measures. Developing approaches to manage the use of treated wastewater.

Priority objective 3: To safeguard the Union's citizens from environment-related pressures and risks to health and well-being

44. Union environment legislation has delivered significant benefits for the health and well-being of the public. However, water pollution, air pollution and chemicals remain among the general public's top environmental concerns in the Union [1]. The World Health Organisation (WHO) estimates that environmental stressors are responsible for between 15 % and 20 % of all deaths in 53 European countries [2]. According to the OECD, urban air pollution is set to become the primary environmental cause of mortality worldwide by 2050.

45. A substantial proportion of the Union's population remains exposed to levels of air pollution, including indoor air pollution, exceeding WHO recommended standards [3]. For example, local coal-fuelled heating and combustion engines and installations are a significant source of mutagenic and carcinogenic poly-aromatic hydrocarbons (PAH) and dangerous emissions of particulate matter (PM 10, PM 2,5 and PM 1). Action is especially needed in areas, such

[1] Special Eurobarometer survey 365 (2011).
[2] 'SOER 2010'.
[3] SOER 2010.

as in cities, where people, particularly sensitive or vulnerable groups of society, and ecosystems, are exposed to high levels of pollutants. In order to ensure a healthy environment for all, local measures should be complemented with adequate policy at both national and Union level.

46. Access to water of satisfactory quality remains problematic in a number of rural areas in the Union. Yet ensuring the good quality of Europe's bathing waters benefits both human health and the Union's tourism industry. The adverse consequences of floods and drought for human health and economic activity are being experienced more frequently, partly due to changes to the hydrological cycle and land use.

47. The failure to fully implement existing policy is preventing the Union from achieving adequate air and water quality standards. The Union will update targets in line with the latest science and seek more actively to ensure synergies with other policy objectives in areas such as climate change, mobility and transport, biodiversity and the marine and terrestrial environment. For example, reducing certain air pollutants, including short-lived climate pollutants, can make an important contribution to climate mitigation. Further work in this direction will be informed by a comprehensive review of Union air quality legislation and by the implementation of the Blueprint to Safeguard Europe's Water Resources.

48. Tackling pollution at source remains a priority and the implementation of the Industrial Emissions Directive will further reduce emissions from major industrial sectors. Achieving the goals set out in the Roadmap to a Single European Transport Area will also lead to more sustainable mobility in the Union, thereby addressing a major source of noise and local air pollution.

49. Available data on long-term average exposure show that 65 % of Europeans living in major urban areas are exposed to high noise levels ([1]), and more than 20 % to night time noise levels at which adverse health effects occur frequently.

50. Horizontal chemicals legislation (REACH ([2]) and the Classification, Labelling and Packaging ([3]) Regulations), as well as legislation on biocidal products ([4]) and plant protection products ([5]), provides baseline protection for human health and the environment, ensures stability and predictability for economic operators, and promotes the uptake of evolving non-animal testing methods. However, there is still uncertainty about the full impacts on human health and the environment of the combined effects of different chemicals (mixtures), nanomaterials, chemicals that interfere with the endocrine (hormone) system (endocrine disruptors) and chemicals in products. Research indicates that some chemicals have endocrine-disrupting properties that may cause a number of adverse effects on health and the environment, including with regard to the development of children, potentially even at very low doses, and that such effects warrant consideration of precautionary action.

In light of this, efforts need to be stepped up to ensure that, by 2020, all relevant substances of very high concern, including substances with endocrine-disrupting properties, are placed on the REACH candidate list. There is a need for action to deal with such challenges, especially if the Union is to attain the goal agreed at the World Summit on Sustainable Development in 2002, reaffirmed at Rio + 20, and accepted also as the goal of the Strategic Approach to International Chemicals Management, namely to ensure 'the minimisation of significant adverse effects' of chemicals on human health and the environment by 2020 and to respond to new and emerging issues and challenges in an effective, efficient, coherent and coordinated manner.

The Union will further develop and implement approaches to address combination effects of chemicals and safety concerns related to endocrine disruptors in all relevant Union legislation. In particular, the Union will develop harmonised hazard-based criteria for the identification of endocrine disruptors. The Union will also set out a comprehensive approach to minimising exposure to hazardous substances, including chemicals in products. The safety and sustainable management of nanomaterials and materials with similar properties will be ensured as part of a comprehensive approach involving risk assessment and management, information and monitoring. There are also concerns about the potential impacts on the environment and human health of materials that contain particles of a

([1]) 'High noise levels' are defined as noise levels above 55dB Lden and 50dB Lnight.

([2]) Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1).

([3]) Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

([4]) Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products (OJ L 167, 27.6.2012, p. 1).

([5]) Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC (OJ L 309, 24.11.2009, p. 1).

size that falls outside the scope of the nanomaterials definition but which may have similar properties to nanomaterials. Such concerns should be examined further in the planned Commission review of the definition of nanomaterials in 2014 in the light of experience and of scientific and technological developments. Together, those approaches will increase the chemical knowledge base and provide a predictable framework driving the development of more sustainable solutions.

51. Meanwhile, the growing market for bio-based products, chemicals and materials may offer advantages such as lower GHG emissions and new market opportunities, but care needs to be taken to ensure that the full life-cycle of such products is sustainable and does not exacerbate competition for land or water, or increase emission levels.

52. Climate change will further aggravate environmental problems by causing prolonged droughts and heat waves, floods, storms, forest fires, soil and coastal erosion, as well as new or more virulent forms of human, animal or plant disease. Dedicated action should be taken to ensure that the Union is adequately prepared to face the pressures and changes resulting from climate change, and to strengthen its environmental, economic and societal resilience. Since many sectors are and will be increasingly subject to the impact of climate change, adaptation and disaster risk management considerations need to be further integrated into Union policies.

53. In addition, measures to enhance ecological and climate resilience, such as ecosystem restoration and green infrastructure, can have important socioeconomic benefits, including for public health. The synergies and potential trade-offs between climate-related and other environmental objectives, such as air quality, need to be adequately managed. For example, switching to certain lower carbon emission fuels in response to climate-related or security of supply considerations could lead to substantial increases in particulate matter and dangerous emissions, especially in the absence of appropriate abatement technologies.

54. In order to safeguard the Union's citizens from environment-related pressures and risks to health and well-being, the 7th EAP shall ensure that by 2020:

(a) outdoor air quality in the Union has significantly improved, moving closer to WHO recommended levels, while indoor air quality has improved, informed by the relevant WHO guidelines;

(b) noise pollution in the Union has significantly decreased, moving closer to WHO recommended levels;

(c) citizens throughout the Union benefit from high standards for safe drinking and bathing water;

(d) the combination effects of chemicals and safety concerns related to endocrine disruptors are effectively addressed in all relevant Union legislation, and risks for the environment and health, in particular in relation to children, associated with the use of hazardous substances, including chemicals in products, are assessed and minimised. Long-term actions with a view to reaching the objective of a non-toxic environment will be identified;

(e) the use of plant protection products does not have any harmful effects on human health or unacceptable influence on the environment, and such products are used sustainably;

(f) safety concerns related to nanomaterials and materials with similar properties are effectively addressed as part of a coherent approach in legislation;

(g) decisive progress is made in adapting to the impact of climate change.

This requires, in particular:

(i) implementing an updated Union air quality policy, aligned with the latest scientific knowledge, and developing and implementing measures to combat air pollution at source taking into account the differences between the sources of indoor and outdoor air pollution;

(ii) implementing an updated Union noise policy aligned with the latest scientific knowledge, and measures to reduce noise at source, and including improvements in city design;

(iii) increasing efforts to implement the Water Framework Directive, the Bathing Water Directive [1] and the Drinking Water Directive [2], in particular for small drinking water supplies;

(iv) continuing to implement REACH in order to ensure a high level of protection for human health and the environment as well as the free circulation of chemicals within the internal market while enhancing competitiveness and innovation, while being mindful of the specific needs of SMEs. Developing by 2018 a Union strategy for a non-toxic environment that is conducive to innovation and the development of sustainable

[1] Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC (OJ L 64, 4.3.2006, p. 37).
[2] Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption (OJ L 330, 5.12.1998, p. 32).

substitutes including non-chemical solutions, building on horizontal measures to be undertaken by 2015 to ensure: (1) the safety of manufactured nanomaterials and materials with similar properties; (2) the minimisation of exposure to endocrine disruptors; (3) appropriate regulatory approaches to address combination effects of chemicals and (4) the minimisation of exposure to chemicals in products, including, inter alia, imported products, with a view to promoting non-toxic material cycles and reducing indoor exposure to harmful substances;

(v) monitoring the implementation of Union legislation on the sustainable use of biocidal products and plant protection products and reviewing it, as necessary, to keep it up to date with the latest scientific knowledge;

(vi) agreeing and implementing an EU Strategy on adaptation to climate change, including the integration of climate change adaptation and disaster risk management considerations into key Union policy initiatives and sectors.

THE ENABLING FRAMEWORK

55. Achieving the abovementioned priority thematic objectives requires an enabling framework which supports effective action. Measures will be taken to improve four key pillars of this enabling framework: to improve the way Union environment laws are implemented in all areas; to strengthen the scientific knowledge and evidence base for environment policy; to secure investments and create the right incentives to protect the environment; and finally, to improve environmental integration and policy coherence both within the area of environment policy and between environment policy and other policies. Those horizontal measures will benefit Union environment policy beyond the scope and timeframe of the 7th EAP.

Priority objective 4: To maximise the benefits of Union environment legislation by improving implementation

56. In addition to the significant advantages for health and the environment, the benefits of ensuring that Union environment legislation is actually implemented are threefold: the creation of a level playing field for economic actors operating in the Internal Market; the stimulation of innovation; and the promotion of first-mover advantages for European companies in many sectors. The costs associated with failure to implement legislation, by contrast, are high, broadly estimated at around EUR 50 billion a year, including costs related to infringement cases ([1]). In 2009 alone there were 451 infringement cases related to Union environment legislation, with a further 299 reported in 2011 together with an additional 114 new proceedings being initiated ([2]), making the environment *acquis* the area of Union law with most infringement proceedings. The Commission also receives numerous complaints directly from Union citizens, many of which could be better addressed at Member State or local level.

57. Improving the implementation of the Union environment *acquis* at Member State level will therefore be given top priority in the coming years. There are significant differences in implementation between and within Member States. There is a need to equip those involved in implementing environment legislation at Union, national, regional and local levels with the knowledge, tools and capacity to improve the delivery of benefits from that legislation, and to improve the governance of the enforcement process.

58. The high number of infringements, complaints and petitions in the area of the environment shows the need for an effective, workable system of checks and balances at national level to help to identify and resolve implementation problems, along with measures to prevent them from arising in the first place, such as liaison between the relevant administrations responsible for implementation and experts during the policy development phase. In this respect, efforts in the period up to 2020 will focus on delivering improvements in four key areas.

59. First, the way knowledge about implementation is collected and disseminated will be improved to help the general public and environment professionals fully understand the purpose and benefit of Union environment legislation and how national and local administrations give effect to Union commitments ([3]). The appropriate use of available online tools could contribute to this goal. Implementation challenges specific to an individual Member State will be targeted for assistance, similar to the tailored approach followed in the European Semester process. For instance, partnership implementation agreements involving the Commission and individual Member States will be drawn up, addressing issues such as where to find financial support for implementation and better information systems to track progress. With a view to maximising the effectiveness of this approach, Member States should, as appropriate and in accordance with their administrative arrangements, encourage participation by local and regional authorities. The Technical Platform for Cooperation on the Environment set up by the Committee of the Regions and the Commission will facilitate dialogue and information pooling, with a view to improving the implementation of legislation at local level.

([1]) The costs of not implementing the environment *acquis* (COWI 2011).
([2]) 29th annual report on monitoring the application of EU law (2011) (COM(2012) 714).
([3]) COM(2012) 095.

60. Second, the Union will extend requirements relating to inspections and surveillance to the wider body of Union environment law, and further develop inspection support capacity at Union level, drawing on existing structures, inter alia, to respond to requests from Member States for assistance, to address situations where there is due reason for concern and to facilitate cooperation throughout the Union. Reinforced peer review and best practice sharing, as well as agreements for joint inspections within Member States, at their request, are to be encouraged.

61. Third, the way in which complaints about implementation of Union environment law are handled and remedied at national level will be improved where necessary.

62. Fourth, Union citizens will have effective access to justice in environmental matters and effective legal protection, in line with the Aarhus Convention and developments brought about by the entry into force of the Lisbon Treaty and recent case law of the Court of Justice of the European Union. Non-judicial dispute resolution will also be promoted as an alternative to litigation.

63. The general standard of environmental governance throughout the Union will be further improved by enhancing cooperation at Union level, as well as at international level, between professionals working on environmental protection, including government lawyers, prosecutors, ombudsmen, judges and inspectors, such as the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL), and encouraging such professionals to share good practices.

64. In addition to helping Member States to improve compliance [1], the Commission will continue to do its part to ensure that legislation reflects the latest science, takes into account experiences at Member State level with regard to giving effect to Union commitments, and is coherent and fit for purpose. As a general rule, where legal obligations are sufficiently clear and precise and where a harmonised application in all Member States is deemed the most effective way of achieving Union objectives, those legal obligations will be enshrined in regulations, which have direct and measurable effects and lead to fewer inconsistencies in implementation. The Commission will step up its use of scoreboards and other means of publicly tracking Member States' progress in implementing specific pieces of legislation.

65. In order to maximise the benefits of Union environment legislation by improving implementation, the 7th EAP shall ensure that by 2020:

(a) the public has access to clear information showing how Union environment law is being implemented consistent with the Aarhus Convention;

(b) compliance with specific environment legislation has increased;

(c) Union environment law is enforced at all administrative levels and a level-playing field in the internal market is guaranteed;

(d) citizens' trust and confidence in Union environment law and its enforcement is enhanced;

(e) the principle of effective legal protection for citizens and their organisations is facilitated.

This requires, in particular:

(i) ensuring that systems at national level actively disseminate information about how Union environment legislation is being implemented, and complementing such information with a Union level overview of individual Member States' performance;

(ii) drawing up partnership implementation agreements on a voluntary basis between Member States and the Commission, involving local and regional participation where appropriate;

(iii) extending binding criteria for effective Member State inspections and surveillance to the wider body of Union environment law, and further developing inspection support capacity at Union level, drawing on existing structures, backed up by support for networks of professionals such as IMPEL, and by the reinforcement of peer reviews and best practice sharing, with a view to increasing the efficiency and effectiveness of inspections;

(iv) ensuring consistent and effective mechanisms at national level for the handling of complaints about implementation of Union environment law;

[1] COM(2008) 773.

(v) ensuring that national provisions on access to justice reflect the case law of the Court of Justice of the European Union. Promoting non-judicial dispute resolution as a means of finding amicable and effective solutions for disputes in the environmental field.

Priority objective 5: To improve the knowledge and evidence base for Union environment policy

66. Union environment policy is based on environmental monitoring, data, indicators and assessments linked to the implementation of Union legislation, as well as formal scientific research and 'citizen science' initiatives. There has been considerable progress on strengthening this knowledge base, raising awareness and improving the confidence of policy-makers and the public in the evidence which underpins policy, including policies where the precautionary principle has been applied. This has facilitated better understanding of complex environmental and societal challenges.

67. Steps should be taken at Union and international level to further strengthen and improve the science-policy interface and citizen engagement, such as through the appointment of Chief Scientific Advisors, as already done by the Commission and some Member States, or by making better use of institutions or bodies specialising in adapting scientific knowledge for public policy, such as national environment agencies and the European Environment Agency, as well as the European Environment Information and Observation Network (EIONET).

68. However, the pace of current developments and uncertainties surrounding likely future trends requires further steps to maintain and strengthen this knowledge and evidence base in order to ensure policy in the Union continues to draw on a sound understanding of the state of the environment, possible response options and their consequences.

69. Over the past decades, there have been improvements in the way environmental information and statistics are collected and used at Union and at national, regional and local level, as well as globally. However, data collection and quality remain variable and the multiplicity of sources can make access to data difficult. Continuous investment is therefore needed to ensure that credible, comparable and quality-assured data and indicators are available and accessible to those involved in defining and implementing policy. Environmental information systems need to be designed in order to enable new information on emerging themes to be easily incorporated. Union-wide electronic data-exchange should be further developed, with enough flexibility to encompass new areas.

70. Further implementation of the Shared Environmental Information System ([1]) principle of 'produce once, use often' and the common approaches and standards on acquisition and collation of consistent spatial information under the INSPIRE ([2]) and Copernicus ([3]) systems, as well as other environmental information systems for Europe (such as the Biodiversity Information System for Europe (BISE) and the Water Information System for Europe (WISE)), will help avoid duplication of effort and eliminate any unnecessary administrative burden on public authorities, as will efforts to streamline reporting obligations under different relevant pieces of legislation. Progress should also be made to improve the availability and harmonisation of statistical data, including on waste. Member States should make information gathered to assess environmental impacts of plans, programmes and projects (e.g. through Environmental or Strategic Impact Assessments) more accessible to the public.

71. There are still significant gaps in knowledge, some of them relevant to the priority objectives of the 7th EAP. Investing in further data collection and research to fill those gaps is therefore essential to ensure that public authorities and businesses have a sound basis for taking decisions which fully reflect true social, economic and environmental benefits and costs. Five gaps merit particular attention:

(1) data and knowledge gaps — advanced research is required to fill such gaps and adequate modelling tools are needed to better understand complex issues related to environmental change, such as the impact of climate change and natural disasters, the implications of species loss for ecosystem services, environmental thresholds and ecological tipping points. While available evidence fully warrants precautionary action in such areas, further research into planetary boundaries, systemic risks and our society's ability to cope with them will support the development of the most appropriate responses. This should include investment in filling data and knowledge gaps, mapping and assessing ecosystem services, understanding the role of biodiversity in underpinning such services, as well as understanding how biodiversity adapts to climate change and how the loss of biodiversity affects human health;

([1]) COM(2008) 046.
([2]) Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) (OJ L 108, 25.4.2007, p. 1).
([3]) Regulation (EU) No 911/2010 of the European Parliament and of the Council of 22 September 2010 on the European Earth monitoring programme (GMES) and its initial operations (2011 to 2013)(OJ L 276, 20.10.2010, p. 1) and COM(2013) 312 on a proposal for a Regulation of the European Parliament and of the Council establishing the Copernicus Programme and repealing Regulation (EU) No 911/2010.

(2) the transition to an inclusive green economy requires giving proper consideration to the interplay between socioeconomic and environmental factors. Improving our understanding of sustainable consumption and production patterns, how the costs and benefits of action and the costs of inaction can be considered more accurately, how changes in individual and societal behaviour contribute to environmental outcomes and how Europe's environment is affected by global megatrends can help to better target policy initiatives towards improving resource efficiency and relieving pressure on the environment;

(3) there are still uncertainties surrounding the human health and environmental implications of endocrine disruptors, the combined effects of chemicals, certain chemicals in products and certain nanomaterials. Filling the remaining knowledge gaps can accelerate decision-making and enable the further development of the chemicals-related *acquis* to better target areas of concern, and also help to stimulate a more sustainable approach to the use of chemicals. A Union-wide database should be considered, in order to increase the transparency and regulatory oversight of nanomaterials. An improved understanding of the environmental factors and the levels of exposure affecting human health and the environment would allow preventive policy actions to be taken. Targeted human biomonitoring, when justified by specific concerns, can provide authorities with a more comprehensive view of actual exposure of the population to pollutants, especially sensitive population groups such as children, and can provide better evidence for guiding appropriate responses;

(4) in order to develop a comprehensive approach to minimising exposure to hazardous substances, in particular for vulnerable groups, including children and pregnant women, a chemical exposure and toxicity knowledge base will be established. This, together with the development of guidance documentation on test methods and risk assessment methodologies will accelerate efficient and appropriate decision-making, which is conducive to innovation and the development of sustainable substitutes including non-chemical solutions;

(5) ensuring all sectors contribute to efforts to combat climate change requires a clear overview of GHG measurement, monitoring and data collection, which is currently incomplete for key sectors.

Horizon 2020 will provide the opportunity to focus research efforts and to deploy Europe's innovation potential by bringing together resources and knowledge across different fields and disciplines within the Union and internationally.

72. New and emerging issues arising from rapid technological developments that outpace policy, such as nanomaterials and materials with similar properties, unconventional energy sources, carbon capture and storage and electromagnetic waves, pose risk management challenges and can give rise to conflicting interests, needs and expectations. This in turn can lead to increasing public concern and potential hostility to new technologies. There is therefore a need to ensure a broader, explicit societal debate about the environmental risks and possible trade-offs that we are willing to accept in the light of sometimes incomplete or uncertain information about emerging risks and how they should be handled. A systematic approach to environmental risk management will improve the Union's capacity to identify and act upon technological developments in a timely manner, while providing reassurance to the public.

73. In order to improve the knowledge and evidence base for Union environment policy, the 7th EAP shall ensure that by 2020:

(a) policy-makers and stakeholders have a more informed basis for developing and implementing environment and climate policies, including understanding the environmental impacts of human activities and measuring the costs and benefits of action and the costs of inaction;

(b) the understanding of, and the ability to evaluate and manage, emerging environmental and climate risks are greatly improved;

(c) the environment science-policy interface is strengthened, including the accessibility of data for citizens and the contribution of citizens' science;

(d) the impact of the Union and its Member States in international science-policy fora is enhanced in order to improve the knowledge base for international environment policy.

This requires, in particular:

(i) coordinating, sharing and promoting research efforts at Union and Member State level with regard to addressing key environmental knowledge gaps, including the risks of crossing environmental tipping-points and planetary boundaries;

(ii) adopting a systematic and integrated approach to risk management, particularly in relation to the evaluation and management of new and emerging policy areas and related risks as well as the adequacy and coherence of regulatory responses. This could help to stimulate further research on the hazards of new products, processes and technologies;

(iii) simplifying, streamlining and modernising environmental and climate change data and information collection, management, sharing and re-use, including the development and implementation of a Shared Environmental Information System;

(iv) developing a comprehensive chemical exposure and toxicity knowledge base which draws on data generated without animal testing where possible. Continuing the Union's coordinated approach to human and environmental biomonitoring including, where appropriate, standardisation of research protocols and assessment criteria;

(v) intensifying cooperation at international, Union and Member State level on the environment science-policy interface.

Priority objective 6: To secure investment for environment and climate policy and address environmental externalities

74. The efforts required to achieve the objectives set out in the 7th EAP will need adequate investment from public and private sources. At the same time, while many countries are struggling to cope with the economic and financial crisis, the need for economic reforms and the reduction of public debts offer new opportunities to move rapidly towards a more resource-efficient, safe and sustainable low-carbon economy.

75. Attracting investment in some areas is currently difficult in particular because of the absence of, or distortion to, price signals arising from a failure to account properly for environmental costs or from public subsidies for environmentally harmful activities.

76. The Union and its Member States will need to put in place the right conditions to ensure that environmental externalities are adequately addressed, including by ensuring that the right market signals are sent to the private sector, with due regard to any adverse social impacts. This will involve applying the polluter-pays principle more systematically, in particular through phasing out environmentally harmful subsidies at Union and Member State level, guided by the Commission, using an action-based approach, inter alia, via the European Semester, and considering fiscal measures in support of sustainable resource use such as shifting taxation away from labour towards pollution. As natural resources become increasingly scarce, the economic rent and profits associated with their ownership or exclusive use may increase. Public intervention to ensure that such rents are not excessive and that externalities are taken into account will lead to a more efficient use of those resources and will help to avoid market distortions, as well as generate public revenue. Environment and climate priorities will be pursued in the framework of the European Semester, including via lead indicators where those priorities are relevant to the sustainable growth prospects of individual Member States to which country-specific recommendations are addressed. Other market-based instruments, such as payments for ecosystem services, should be used more extensively at Union and national level to incentivise private sector involvement and the sustainable management of natural capital.

77. The private sector, in particular SMEs, should also be encouraged to take up opportunities offered under the new Union financial framework to step up its involvement in efforts to achieve environment and climate objectives, especially in relation to eco-innovation activities and the uptake of new technologies. Public-private initiatives for eco-innovation should be promoted under European Innovation Partnerships, such as the Innovation Partnership on Water ([1]). Through the new framework for Innovative Financial Instruments ([2]), private sector access to finance for investments in environment, in particular biodiversity and climate change, should be facilitated. European enterprises should be further encouraged to disclose environmental information as part of their financial reporting, beyond the extent required under existing Union legislation ([3]).

78. In its proposals for the 2014–2020 Union Multiannual Financial Framework, the Commission has improved the mainstreaming of environment and climate objectives in all Union funding instruments in order to provide opportunities for Member States to achieve related objectives. It has also proposed raising climate-related expenditure to at least 20 % of the whole budget. In key policy areas such as agriculture, rural development and cohesion policy, incentives for the provision of environmentally-beneficial public goods and services should be enhanced, and funding linked to environment-related *ex-ante* conditionalities, including supporting ('flanking') measures. This should ensure that funds are spent more effectively and in line with environment and climate objectives. Those proposals envisage matching Union policies with coherent financial resources for implementation, and additional funds for the environment and climate change, so as to effectively deliver tangible and coherent benefits on the ground.

79. In addition to such mainstreaming, the LIFE programme ([4]) will allow funds to be combined and better aligned with policy priorities in a more strategic, cost-effective way, in support of environment and climate-related measures, through the deployment of a range of projects, including 'integrated projets'.

([1]) COM(2012) 216.
([2]) COM(2011) 662.
([3]) COM(2011) 681.
([4]) Proposal for a Regulation of the European Parliament and of the Council on the establishment of a Programme for the Environment and Climate Action (COM(2011) 874, 2011/0428(COD)).

80. The increased capital provided to the European Investment Bank (EIB) as part of the 2012 Compact for Growth and Jobs provides an additional source of investment [1] which should be spent in line with Union environment and climate objectives.

81. Experience gained in the 2007–2013 programming period shows that although significant funds are available for the environment, the uptake at all levels in the early years has been very uneven, potentially jeopardising the achievement of agreed objectives and targets. To avoid repeating this experience, Member States should integrate environment and climate objectives in their funding strategies and programmes for economic, social and territorial cohesion, rural development and maritime policy, prioritise the early uptake of funding for the environment and climate change and reinforce the capacity of implementing bodies to deliver cost-effective and sustainable investments in order to secure the necessary adequate financial support for investments in these areas.

82. In addition, it has been difficult to trace biodiversity and climate-related expenditure. To assess progress towards attaining those objectives, a tracking and reporting system should be established at Union and Member State level. Establishing such a system is important for the Union's overall effort relating to multilateral agreements on climate change and biodiversity. In this context, the Union will contribute to the intergovernmental process launched at Rio + 20 to assess financing needs and propose options for an effective sustainable development financing strategy.

83. Work to develop indicators for monitoring economic progress and which complement and go beyond gross domestic product (GDP) should continue. Securing transparent, sustainable investment depends on the proper valuation of environmental goods. Further efforts to measure the value of ecosystems and the cost of their depletion, together with corresponding incentives, will be needed to inform policy and investment decisions. Work to develop a system of environmental accounts, including physical and monetary accounts for natural capital and ecosystem services, will need to be stepped up. This supports the outcome of Rio + 20, which recognises the need for broader measures of progress to measure well-being and sustainability to complement GDP.

84. In order to secure investment for environment and climate policy and address environmental externalities, the 7th EAP shall ensure that by 2020:

(a) environment and climate policy objectives are achieved in a cost-effective way and are supported by adequate finance;

(b) public and private sector funding for environment and climate-related expenditure is increased;

(c) the value of natural capital and ecosystem services, as well as the costs of their degradation are properly assessed and considered in policy-making and investments.

This requires, in particular:

(i) phasing out environmentally harmful subsidies at Union and Member State level without delay, and reporting on progress through the National Reform Programmes; increasing the use of market-based instruments, such as Member States' taxation policies, pricing and charging, and expanding markets for environmental goods and services, with due regard to any adverse social impacts, using an action-based approach, supported and monitored by the Commission, inter alia, via the European Semester;

(ii) facilitating the development of, and access to, innovative financial instruments and funding for eco-innovation;

(iii) adequately reflecting environment and climate priorities in policies and funding strategies to support economic, social and territorial cohesion;

(iv) making dedicated efforts to ensure the full and efficient use of available Union funding for environmental action, including by significantly improving its early uptake under the Union's Multiannual Financial Framework 2014–2020 and devoting 20 % of the budget to climate change mitigation and adaptation through the mainstreaming of climate action and linking that funding to clear benchmarks, target setting, monitoring and reporting;

(v) developing and applying a system for reporting and tracking environment-related expenditure in the Union budget, in particular expenditure on climate change and biodiversity, by 2014;

(vi) integrating environmental and climate-related considerations into the European Semester process, where this is relevant for individual Member States' prospects for sustainable growth and is appropriate for country-specific recommendations;

[1] European Council conclusions of 29 June 2012 (EUCO 76/12).

(vii) developing and applying alternative indicators that complement and go beyond GDP to monitor the sustainability of progress and continuing work to integrate economic indicators with environmental and social indicators, including by means of natural capital accounting;

(viii) further developing and encouraging 'payments for ecosystem services' schemes;

(ix) putting in place incentives and methodologies that stimulate companies to measure the environmental costs of their business and profits derived from using environmental services and to disclose environmental information as part of their annual reporting. Encouraging companies to exercise due diligence, including throughout their supply chain.

Priority objective 7: To improve environmental integration and policy coherence

85. Although integrating environmental protection concerns into other Union policies and activities has been a Treaty requirement since 1997, the overall state of Europe's environment indicates that progress made to date, while commendable in some areas, has not been sufficient to reverse all negative trends. The achievement of many of the priority objectives of the 7th EAP will demand even more effective integration of environmental and climate-related considerations into other policies, as well as more coherent, joined-up policy approaches that deliver multiple benefits. This should help to ensure that difficult trade-offs are managed early on, rather than in the implementation phase, and that unavoidable impacts can be mitigated more effectively. The necessary measures should be developed in a timely manner in order to ensure that relevant targets are met. The Strategic Environmental Assessment Directive ([1]) and Environmental Impact Assessment Directive ([2]), when correctly applied, are effective tools for ensuring that environmental protection requirements are integrated in plans and programmes as well as in projects.

86. Local and regional authorities, which are generally responsible for decisions on the use of land and marine areas, have a particularly important role to play in assessing environmental impacts and protecting, conserving and enhancing natural capital, thus also achieving greater resilience to the impact of climate change and to natural disasters.

87. The envisaged expansion of energy and transport networks, including offshore infrastructure, will need to be compatible with protection of nature and climate adaptation needs and obligations. Incorporating green infrastructure into related plans and programmes can help overcome fragmentation of habitats and preserve or restore ecological connectivity, enhance ecosystem resilience and thereby ensure the continued provision of ecosystem services, including carbon sequestration, and climate adaptation, while providing healthier environments and recreational spaces for people to enjoy.

88. The 7th EAP includes a number of priority objectives designed to enhance integration. In its proposals for the Common Agricultural Policy, the Common Fisheries Policy, the Trans-European Networks and the Cohesion policy reforms, the Commission has included measures to further support environmental integration and sustainability. For the 7th EAP to succeed, those policies should further contribute to meeting environment-related targets and objectives. Similarly, efforts primarily intended to achieve environmental improvements should be designed to deliver benefits also for other policies wherever possible. For instance, efforts to restore ecosystems can be targeted to benefit habitats and species and to sequester carbon dioxide, while improving the delivery of ecosystem services vital for many economic sectors, such as pollination or water purification for agriculture, and creating green jobs.

89. In order to improve environmental integration and policy coherence, the 7th EAP shall ensure that by 2020:

(a) sectoral policies at Union and Member State level are developed and implemented in a way that supports relevant environment and climate-related targets and objectives.

This requires, in particular:

(i) integrating environmental and climate-related conditionalities and incentives in policy initiatives, including reviews and reforms of existing policy, as well as new initiatives, at Union and Member State level;

(ii) carrying out *ex-ante* assessments of the environmental, social and economic impacts of policy initiatives at appropriate Union and Member State level to ensure their coherence and effectiveness;

(iii) fully implementing the Strategic Environmental Assessment Directive and the Environmental Impact Assessment Directive;

([1]) Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (OJ L 197, 21.7.2001, p. 30).

([2]) Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (OJ L 26, 28.1.2012, p. 1).

(iv) using *ex-post* evaluation information relating to experience with implementation of the environment *acquis* in order to improve its consistency and coherence;

(v) addressing potential trade-offs in all policies in order to maximise synergies and avoid, reduce and, if possible, remedy unintended negative effects on the environment.

MEETING LOCAL, REGIONAL AND GLOBAL CHALLENGES

Priority objective 8: To enhance the sustainability of the Union's cities

90. The Union is densely populated and by 2020, 80 % of its population is likely to live in urban and peri-urban areas. Quality of life will be directly influenced by the state of the urban environment. The environmental impacts of cities also spread well beyond their physical limits, as they rely heavily on peri-urban and rural regions to meet demand for food, energy, space and resources, and to manage waste.

91. Most cities face a common set of core environmental problems, including air quality concerns, high levels of noise, traffic congestion, GHG emissions, biodiversity loss and degradation, water scarcity, floods and storms, diminishing green areas, contaminated sites, brownfields and inappropriate waste and energy management. At the same time, Union cities are standard-setters in urban sustainability and often pioneer innovative solutions to environmental challenges ([1]) including in relation to resource efficiency and green economy initiatives relevant to Europe 2020. An ever-growing number of European cities are putting environmental sustainability at the core of their urban development strategies.

92. Growing urbanisation of the Union has raised awareness of the importance of the natural environment in urban areas. Biodiversity conservation through actions such as the reintroduction of nature into the urban environment and urban landscaping is increasingly evident. European cities' biodiversity performance needs to be assessed and improved. That assessment could be informed by a specific urban biodiversity index, such as the Singapore index presented at the UN Conference on Biodiversity held in Nagoya in 2010.

93. Union citizens, whether urban or rural dwellers, benefit from a range of Union policies and initiatives that support sustainable development of urban areas. However, such sustainable development requires effective and efficient coordination between different levels of administration and across administrative boundaries and the systematic involvement of regional and local authorities in the planning, formulation and development of policies which have an impact on the quality of the urban environment. The enhanced coordination mechanisms at national and regional level proposed under the Common Strategic Framework for the next funding period and the creation of an 'Urban Development Network' ([2]) would help to ensure this, as well as involve more stakeholder groups and the general public in decisions that affect them. Local and regional authorities would also benefit from the further development of tools to streamline environmental data collection and management, and to facilitate the exchange of information and best practice, as well as efforts to improve implementation of environment law at Union, national, regional and local level ([3]). This is in line with the commitment made at Rio + 20 to promote an integrated approach to planning, building and managing sustainable cities and urban settlements. Integrated approaches to urban and spatial planning, in which long-term environmental considerations are fully taken into account alongside economic, social and territorial challenges, are essential to ensuring that urban communities are sustainable, efficient and healthy places to live and work.

94. The Union should further promote and, where appropriate, expand existing initiatives that support innovation and best practice in cities, networking and exchanges and encourage cities to showcase their leadership with regard to sustainable urban development ([4]). The Union's institutions and the Member States should facilitate and encourage the uptake of Cohesion policy funding and of other funds to support cities in their efforts to enhance sustainable urban development, raise awareness and encourage the involvement of local actors ([5]). The development of, and agreement on, a set of sustainability criteria for cities, informed by consultation with Member States and other relevant stakeholders, would provide a reference base for such initiatives and promote a coherent, integrated approach to sustainable urban development ([6]).

([1]) See, for example, the 'Cities of tomorrow' report (European Commission, 2011) and SWD(2012)0101.
([2]) COM(2011) 615.
([3]) For example the Water Information System for Europe (WISE), the Biodiversity Information System for Europe (BISE) and the European Climate Adaptation Platform (CLIMATE-ADAPT).
([4]) Examples include the European Innovation Partnership on Smart Cities and Communities COM(2012)4701, the European Green Capital Award and the research Joint Programming Initiative Urban Europe.
([5]) The Commission has proposed to ring-fence a minimum 5 % of the European Regional Development Fund (ERDF) in each Member State to fund integrated sustainable urban development.
([6]) This approach should draw from existing initiatives such as Local Agenda 21 as well as other best practices.

95. In order to enhance the sustainability of Union cities, the 7th EAP shall ensure that by 2020:

(a) a majority of cities in the Union are implementing policies for sustainable urban planning and design, including innovative approaches for urban public transport and mobility, sustainable buildings, energy efficiency and urban biodiversity conservation.

This requires, in particular:

(i) agreeing on a set of criteria to assess the environmental performance of cities, taking into account economic, social and territorial impacts;

(ii) ensuring that cities have information about, and better access to, financing for measures to improve urban sustainability;

(iii) sharing best practice between cities at Union and international level in relation to innovative and sustainable urban development;

(iv) in the context of ongoing Union initiatives and networks, developing and promoting a common understanding of how to contribute to improved urban environments by focusing on the integration of urban planning with objectives related to resource efficiency, an innovative safe and sustainable low-carbon economy, sustainable urban land-use, sustainable urban mobility, urban biodiversity management and conservation, ecosystem resilience, water management, human health, public participation in decision-making and environmental education and awareness.

Priority objective 9: To increase the Union's effectiveness in addressing international environmental and climate-related challenges

96. Ensuring the sustainable use of resources is one of the most pressing challenges facing the world today and is central to ending poverty and securing a sustainable future for the world [1]. At Rio + 20, world leaders renewed their commitment to sustainable development and to ensuring the promotion of an economically, socially and environmentally sustainable future for the planet, for present and future generations. They also recognised that the inclusive and green economy is an important tool for achieving sustainable development. Rio + 20 outlined that in the light of a growing population and in an increasingly urbanised world, such challenges require that international action be taken in a number of areas, such as water, oceans, sustainable land and ecosystems, resource efficiency (in particular waste), sound management of chemicals, sustainable energy and climate change. The phasing-out of environmentally harmful subsidies, including fossil fuel subsidies also requires additional action. In addition to translating these commitments into action at local, national and Union level, the Union will engage proactively in international efforts to develop the solutions needed to ensure sustainable development globally.

97. Rio + 20 decided to replace the UN Commission on Sustainable Development with a High-Level Political Forum, which will enhance the integration of the three dimensions of sustainable development and follow up and review progress on the implementation of the outcomes of Rio + 20 and relevant outcomes of other UN summits and conferences, thereby contributing to the implementation of sustainable development goals as part of the overarching post-2015 framework.

98. Many of the priority objectives set out in the 7th EAP can only be fully achieved as part of a global approach and in cooperation with partner countries, and overseas countries and territories. That is why the Union and its Member States should engage in relevant international, regional and bilateral processes in a strong, focused, united and coherent manner. Particular emphasis should be given to the Black Sea and the Arctic regions, where there is a need for intensified cooperation and increased Union involvement, including through membership of the Convention on the Protection of the Black Sea against Pollution and by gaining permanent observer status in the Arctic Council, in order to address new and shared environmental challenges. The Union and its Member States should continue to promote an effective, rules-based framework for global environment policy, complemented by a more effective, strategic approach in which bilateral and regional political dialogues and cooperation are tailored towards the Union's strategic partners, candidate and neighbourhood countries, and developing countries, respectively, supported by adequate finance.

99. The time span covered by the 7th EAP corresponds to key phases in international climate, biodiversity and chemical policy. To remain within the 2 °C ceiling, global GHG emissions need to be cut by at least 50 % of their 1990 levels by 2050. However, the pledges countries have made so far to reduce GHG emissions will deliver no more than one third of the reductions required by 2020 [2]. Without more resolute global action, climate change is unlikely to be

[1] Human Development Report (UNDP, 2011).
[2] The Emissions Gap Report 2012, United Nations Environment Programme (UNEP), outlines that unconditional pledges amount to reductions of approximately 4 GtCO2e, compared with a median estimate of 14 GtCO2e of reductions necessary to remain below the 2 °C ceiling.

curtailed. Even in a best-case scenario, countries will increasingly face inevitable impacts from climate change because of historical GHG emissions and will need to develop climate adaptation strategies. Under the Durban Platform for Enhanced Action, a comprehensive and robust agreement applicable to all is to be agreed by 2015 and implemented as of 2020. The Union will remain engaged proactively in this process, including in discussions on how to close the gap between current emission reduction pledges by developed and developing countries, and on action needed to stay on an emission pathway compatible with the 2 °C objective, informed by the latest findings from the IPCC. The implementation of the Rio + 20 outcome must also ensure coherence and complementarity with this process so that they are mutually reinforcing. The follow-up to Rio + 20 should also help to reduce GHG emissions, thus supporting the fight against climate change. In parallel, the Union should pursue and further intensify climate change partnerships with strategic partners and should take further action to mainstream environmental and climate-related considerations in its trade and development policies, bearing in mind mutual commitments and benefits.

100. The global biodiversity targets [1] laid down under the Convention on Biological Diversity (CBD) need to be met by 2020 as the basis for halting and ultimately reversing the loss of biodiversity worldwide. The Union will contribute its fair share to those efforts, including with regard to the doubling of total biodiversity-related international resource flows to developing countries by 2015 and will at least maintain this level until 2020, as set out among the preliminary targets agreed in the context of the CBD's resources mobilisation strategy [2]. It is also important for the Union to play an active role in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) once it becomes a full member, in order to link up the local, regional and international levels of biodiversity governance. The Union will continue to support the implementation of the United Nations Convention to Combat Desertification (UNCCD), in particular by taking action in striving to achieve a land degradation neutral world as agreed at Rio + 20. It will also step up efforts to reach the target for the sound management of chemicals throughout their life-cycle and of hazardous waste, as reinforced at Rio + 20, and to support related conventions. The Union will continue to play an active and constructive role in helping to achieve the objectives of such processes.

101. The Union has a good track-record when it comes to membership of multilateral environmental agreements (MEAs), although a number of Member States have still not ratified key agreements. This compromises the Union's credibility in related negotiations. Member States and the Union should ensure the ratification and approval, respectively, in a timely manner, of all MEAs to which they are signatories.

102. The Union and its Member States should proactively engage in international negotiations on new and emerging issues, in particular on new Conventions, agreements and assessments, and, accordingly, reaffirm their strong determination to continue efforts to launch, as soon as possible, negotiations in the framework of a UN General Assembly for an UNCLOS (United Nations Convention on the Law of the Sea) implementing agreement on the conservation and sustainable use of marine biological diversity of Areas Beyond National Jurisdiction and supporting the completion of the first 'World Ocean Assessment'.

103. The Union should also leverage its position as one of the largest markets in the world to promote policies and approaches that decrease pressure on the global natural resource base. This can be done by changing patterns of consumption and production, including by taking the steps necessary to promote sustainable resource management at international level and to implement the 10-year Framework of Programmes on Sustainable Consumption and Production, as well as ensuring that trade and internal market policies support the achievement of environment and climate goals and provide incentives to other countries to upgrade and enforce their environmental regulatory frameworks and standards, with a view to preventing environmental dumping. The Union will continue to promote sustainable development through the negotiation and implementation of dedicated provisions in its international trade agreements and the bilateral Forest Law Enforcement, Governance and Trade voluntary partnership agreements, which ensure that only legally-harvested timber enters the Union market from partner countries. In this context, the European Union Timber Regulation [3] serves as a legal basis for the Union to address the global problem of illegal logging through its demand for timber and timber products. Other policy options to reduce the impacts of Union consumption on the global environment, including deforestation and forest degradation, will also be explored.

104. The Union should also further intensify its contribution to initiatives that facilitate the transition towards an inclusive and green economy at international level, such as the promotion of appropriate enabling conditions, the development of market-based instruments and indicators beyond GDP, consistent with its internal policies.

[1] CBD Strategic Plan for Biodiversity 2011–2020.
[2] CBD Decision XI/4.
[3] Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (OJ L 295, 12.11.2010, p. 23).

105. The Union should continue to promote environmentally responsible business practices. New obligations under the Union's Responsible Business Initiative [1] for listed and large, unlisted, extractive and primary forest logging companies to report payments they make to governments will result in greater transparency and accountability in the way natural resources are exploited. As a leading provider of environmental goods and services, the Union should promote global green standards, free trade in environmental goods and services, the further deployment of environment and climate-friendly technologies, protection of investment and intellectual property rights and the international exchange of best practice.

106. In order to increase the Union's effectiveness in addressing international environmental and climate-related challenges, the 7th EAP shall ensure that by 2020:

(a) the outcomes of Rio + 20 are fully integrated into the Union's internal and external policies and the Union is contributing effectively to global efforts to implement agreed commitments, including those under the Rio conventions and to initiatives aimed at promoting the global transition towards an inclusive and green economy in the context of sustainable development and poverty eradication;

(b) the Union is providing effective support to national, regional and international efforts to address environmental and climate-related challenges and to ensure sustainable development;

(c) the impact of consumption in the Union on the environment beyond the Union's borders is reduced.

This requires, in particular:

(i) working as part of a coherent and comprehensive post-2015 approach to the universal challenges of poverty eradication and sustainable development, and through an inclusive, collaborative process, towards the adoption of sustainable development goals that:

— are coherent with existing internationally agreed goals and targets on, inter alia, biodiversity, climate change, social inclusion and social protection floors;

— address, at national and international level, priority areas such as energy, water, food security, oceans and sustainable consumption and production, decent work, good governance and the rule of law;

— are universally applicable, covering all three dimensions of sustainable development;

— are assessed and accompanied by targets and indicators, while taking into account different national circumstances, capacities and levels of development, and

— are consistent with, and supportive of, other international commitments, such as those concerning climate change and biodiversity;

(ii) working towards a more effective UN structure for sustainable development, in particular its environmental dimension by:

— further strengthening the United Nations Environment Programme (UNEP) in line with the outcome of Rio + 20, building on the decision by the UN General Assembly to change the designation of the Governing Council of the UNEP to the UN Environment Assembly of the UNEP [2], while continuing to strive for an upgrade of the UNEP's status to that of a specialised Agency;

— supporting efforts to enhance synergies between multilateral environmental agreements, in particular in the chemicals and waste cluster and the biodiversity cluster; and

— contributing to ensuring a strong and authoritative voice for the environment in the work of the High-Level Political Forum;

(iii) strengthening the impact of various sources of funding, including taxation and domestic resource mobilisation, private investment, new partnerships and innovative financing sources, and creating options for using development aid to leverage those other sources of financing as part of a sustainable development financing strategy, as well as in the Union's own policies, including international commitments on climate and biodiversity finance;

[1] Proposals for the revision of the Transparency Directive (COM(2011) 683, 2011/0307(COD)) and the Accounting Directives (COM(2011) 684, 2011/0308(COD).

[2] Decision taken by the UN General Assembly, A/67/784 of 7 March 2013, on the recommendation of the UNEP Governing Council.

(iv) engaging with partner countries in a more strategic way, for example by focusing cooperation with:

— strategic partners on the promotion of best practice in domestic environment policy and legislation and convergence in multilateral environmental negotiations;

— countries covered by the European Neighbourhood Policy on gradual approximation with key Union environment and climate policy and legislation and on strengthening cooperation to address regional environmental and climate-related challenges;

— developing countries to support their efforts to protect the environment, fight climate change and reduce natural disasters, and implement international environmental commitments as a contribution to poverty reduction and sustainable development;

(v) engaging in existing and new multilateral environmental and other relevant processes, in a more consistent, proactive and effective way, including through the timely outreach to third countries and other stakeholders, with a view to ensuring that commitments for 2020 are met at Union level and promoted globally, and to agree on international action to be taken beyond 2020, and ratifying and boosting efforts to implement all key multilateral environmental agreements well before 2020. Implementing the 10-year Framework of Programmes on Sustainable Consumption and Production;

(vi) assessing the environmental impact, in a global context, of Union consumption of food and non-food commodities and, if appropriate, developing policy proposals to address the findings of such assessments, and considering the development of a Union action plan on deforestation and forest degradation;

(vii) promoting the further development and implementation of emissions trading schemes around the world and facilitating the linking of such systems;

(viii) ensuring that economic and social progress is achieved within the carrying capacity of the Earth, by increasing understanding of planetary boundaries, inter alia, in the development of the post-2015 framework in order to secure human well-being and prosperity in the long-term.