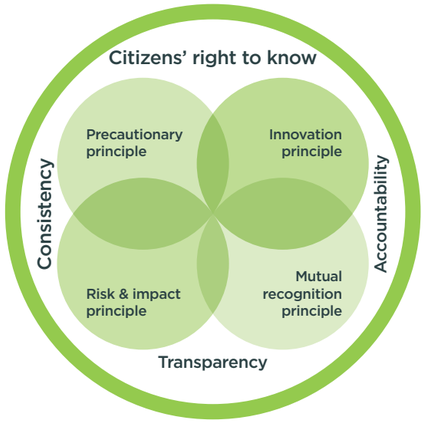
9. **Citizens' 'Right to Know'/transparency & inclusivity principle:** multi-level and multi-sector stakeholder engagement, accountability and empowerment should underpin environmental policy development, including involvement of citizens in decision-making. Local level buy-in and participation should guide decision-making, ideally at local levels where decisions impact. [Foundation EU policy – Citizens' 'Right to Know'] http://ec.europa.eu/environment/basics/benefits-law/right2know/index_en.htm



These 'decision-making principles' should operate in a mutually inter-dependent way, as illustrated in the following diagram and considering the principles in TFEU article 191(3) .

Operational principles

10. **Pollution prevention principle:** reducing or eliminating pollution at source based on taking an integrated approach to environmental protection. (TFEU article 191(2)).

11. **Polluter pays principle:** the costs of pollution control and remediation should be borne by those who cause pollution rather than the community at large. (TFEU article 191(2); Rio principle 16).

    In general our community regard this as a very important principle to maintain. It is harmonised with the EU, and is possible to apply for recent incidents where the polluter can be identified. For legacy pollution issues (e.g. pollution from industrial posts even going back to Victorian times) and diffuse pollution or when a polluter is no longer in business and able to pay, a solution must be found to improve any adverse environmental legacy. Science could be applied to identify the source of certain pollutants e.g. plastics.

12. **Rectification at source principle:** environmental damage should be rectified, compensated or treated at or as near to source as practicable and waste should be dealt with as close as possible to where it is produced (TFEU article 191(2)).

13. **Impacts on other regions principle:** resources can be exploited pursuant to a national environmental policy, however the responsibility is with the originator of the policy to ensure that activities do not cause damage to the environment of another geographical region or in areas beyond the limits of national jurisdiction. (Rio principle 2).

TFEU Article 191(3) states: In preparing its policy on the environment, the Union shall take account of:
— available scientific and technical data,
— environmental conditions in the various regions of the Union,
— the potential benefits and costs of action or lack of action,
— the economic and social development of the Union as a whole and the balanced development of its regions.

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SUSTAINABILITY

Principles for the management of chemicals in the environment

Principles for the management of chemicals in the environment

The UK government published a 25-year plan for the environment, and in the context of both this plan and the UK exiting the EU, the government are considering the 'principles' on which environmental policy for the UK should be based going forward.

To date, the UK has been a key player in the development of EU chemicals policy. Continuing with harmonised principles and rules will be important for frictionless trade in chemicals/goods and collaborative research when the UK leaves the EU. This will be key to a future partnership with the EU and will enable the UK to play a leading role in global developments in environment and chemicals management policy aimed at ensuring high standards.

Principles for the environment and for the sound management of chemicals are already applied in a global context, for example within the 1992 Rio Declaration and are embedded in the Treaty for the Functioning of the EU (TFEU) as a foundation for all EU policymaking.

The UK is a world leader and major collaborator in the development of both EU and global principles and policies for the management of chemicals in the environment. As such, the UK will be a strong partner for the EU, post EU-exit. As a world leader on the international stage, the UK has been instrumental in developing globally harmonised chemicals management strategies, supported by a global, excellent and strongly collaborative chemical sciences community.

In this document, we set out the principles that should be the foundation for UK policies for the management of chemicals in the environment. These have been developed through analysing existing global and European principles and with input and expertise from our chemistry community. We believe that when implemented as an interconnected set, these principles working together provide a foundation for regulatory decisions that support innovation, whilst at the same time protecting health and the environment.

Overarching principles:

1. **Integration principle:** environmental protection requirements must be integrated into the definition and implementation of all policies and activities. (Rio principle 4; TFEU Article11)

2. **Sustainability principle:** the needs of the present generation should be met without compromising the ability of future generations to meet their own needs. (Rio principle 3)

3. **Global partnership principle:** we shall co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem and preserve health & wellbeing of citizens (Rio principle 7, TFEU article 191(4) plus a component re human health in accordance with TFEU article 191(1))

4. **Capacity building principle** – continually improving scientific understanding through exchange of scientific & technical knowledge, across agencies, nations and globally. (Rio principle 9)

The above principles are long-standing overarching principles for the environment from the international Rio 1992 'Earth Summit' declaration to which the UK is an existing signatory. Formally including such overarching principles in UK policy frameworks, supports the aim of the UK continuing to be a global leader in environmental policy and assists in harmonising with EU principles, which followed on from the Rio declaration. In addition, decision-making and operational principles should be implemented.

Decision-making principles:

5. **Precautionary principle:** where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. (Rio principle 15; TFEU Article 191(2))

   This principle requires significant discussion by governments as to how it is implemented in practice and in particular in relation to the full interpretation stated in the Communication from the EU Commission (EC) on the precautionary principle in 2000. An important point made by the EC is that 'The implementation of an approach based on the precautionary principle should start with a scientific evaluation, as complete as possible, and where possible identifying at each stage the degree of scientific uncertainty.' Full scientific certainty is rarely achieved, even with a large amount of scientific evidence, and uncertainty is often complex to communicate. The scientific community is integral to the implementation of the precautionary principle and assessing risk. The ultimate risk management decisions are taken by policymakers based not only on the science but on societal acceptability of the degree of precaution desired in a given situation and should involve all relevant stakeholders, with experienced high calibre scientists as key contributors to decision-making.

6. **Risk & impact principle:** an environmental and human health risk and impact assessment shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision by the national competent authority. (Rio principle 17)

   Risk assessment is performed for hundreds and thousands of substances by government bodies such as the Health & Safety Executive, Public Health England, the Environment Agency, the Foods Standards Agency and in EU by the European Chemicals Agency and European Commission Joint Research Centre. Risk assessment relies on a significant body of scientific data and high calibre expertise to interpret the evidence and inform policymakers on the risk and impact of potential adverse health and environmental outcomes. There is an opportunity to link environmental policy to health and wellbeing policies and a principle through which to do this, is via scientifically informed integrated risk and impact assessments. See also principles of risk assessment and risk management from the health and safety executive http://www.hse.gov.uk/risk/principles.htm]

7. **Mutual recognition principle:** it should be considered as to whether the decision being taken is in agreement with the nature of decisions taken in other nations, where mutual interests require harmonisation e.g. for trading or collaboration purposes.

   The principle of mutual recognition stems from Regulation (EC) No 764/2008. In the EU context it defines the rights and obligations for public authorities and enterprises that wish to market their products in another EU member state country. A similar principle could be developed to consider harmonisation in matters relating to environmental issues of mutual importance between collaborative partners. The interpretation of the scientific data and technical approaches used act as a strong determinant in achieving mutual recognition.

8. **Innovation principle:** whenever legislation is under consideration, its (positive and negative) impact on innovation should be assessed and addressed (European Policy Strategy Centre; new principle based on EU developments).

   *The innovation principle was introduced by the **European Risk Forum (ERF)**, a Brussels-based non-for-profit think tank, in October 2013. This principle has been discussed in the EU in 2016 by the European Political Strategy Centre https://ec.europa.eu/epsc/sites/epsc/files/strategic_note_issue_14.pdf*

   *We propose here that **the innovation principle should not be applied in isolation** but in concert with the precautionary principle, the mutual recognition principle, and the risk & impact principle.*