

Project to develop a long-term strategy for bioresources

Background

Bioresources are a valuable resource, or by-product of wastewater treatment. Within the UK, sludge is typically treated using anaerobic digestion and the biosolids produced are primarily recycled to agricultural land. This recognises the potential for sewage sludge to become an important resource, rather than a waste. This approach also delivers a number of environmental and economic benefits (e.g. recovery of nutrients and renewable energy generation).

The regulatory regime for sludge and bioresources reflects its interactions with land, air and water and the industry is required to meet a diverse range of evolving and incrementally changing regulatory requirements. The water industry is now at a critical juncture considering the cumulative impact of key industry sustainability challenges (e.g., Net Zero Carbon target ambitions), managing environmental impacts, market challenges, resilience of the supply chain and the potential for opportunities around improved environmental outcomes. The water industry needs to review their approach to the management of bioresources now and in the future to ensure they can respond as efficiently as possible.

Why a bioresources strategy is necessary

Greater certainty around the long-term approach for managing sludge and bioresources is required to support the delivery of national policies, improved environmental outcomes (e.g. land and water quality, agriculture, waste, resources, carbon and energy security), better planning and investment decisions as well as the development of a productive bioresources market.

A strategic and systems thinking approach to regulation and the delivery of opportunities for bioresources needs to be developed and embraced by the water industry, regulators and other

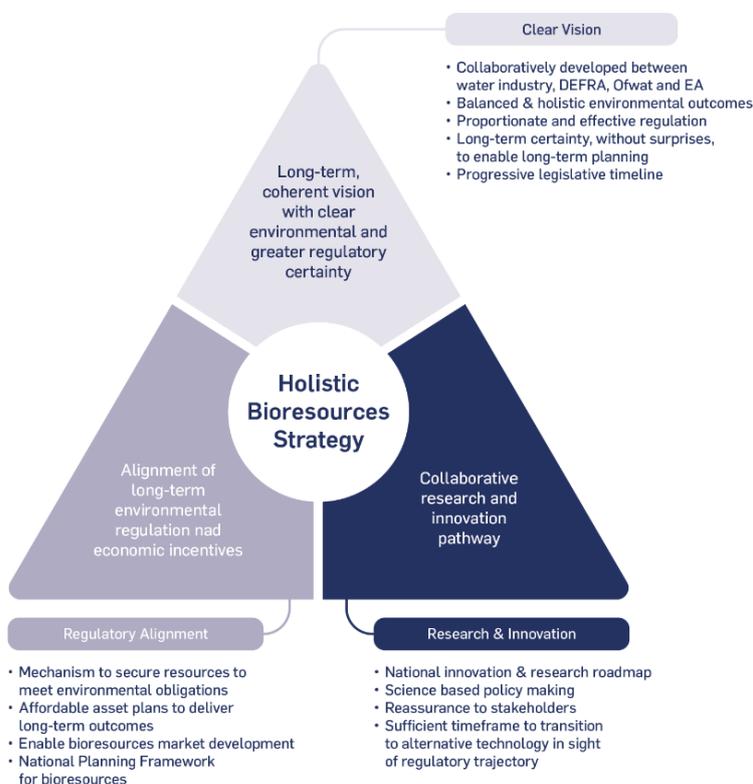


Figure 1 Proposed bioresources strategy

key stakeholders. This collaborative approach should consider the end-to-end management of sludge and the creation of bioresources to provide greater certainty for the sector and a holistic and affordable solution.

A clear long-term vision for 2050, balancing the drivers for change impacting the sector is essential for effective regulation and the development of long-term asset plans. This can only be achieved with a clear policy framework, a shared timeline and the robust consideration of innovation and technology. Three core principles could underpin the development of a long-term bioresources strategy (see figure 1), these include:

1. A long-term vision with clear environmental outcomes and regulatory certainty.
2. Alignment of environmental and economic regulation.
3. Development of a collaborative research and innovation pathway, or programme.

Objectives of the project

This project will bring together the English water industry, environmental and economic regulators and other key stakeholders to collaborate and co-create a long-term strategy for the safe and sustainable management of bioresources through to 2050. The objectives of the project are to:

1. Engage with key stakeholders that are involved in the end-to-end management of bioresources and obtain their input on the development of the strategy.
2. Undertake a literature review and engagement to understand the drivers for change and opportunities that can influence bioresource management within England
3. Consider the research/technological and regulatory needs to support a long-term strategy for bioresources including any requirements for subsequent asset management plans and business plans.
4. Propose a long-term (2050) strategy for bioresources with an appropriate regulatory roadmap and timeline.

Methodology

The project will be managed by CIWEM with support from Atkins as the competitively selected Technical Advisor. The methodology is underpinned by stakeholder engagement and the various project outputs will be shared with the Project Steering Group (PSG) and the Project Advisory Board (PAB) reviewed and discussed at meetings. The project is scheduled to complete in Winter 2022 and four work packages have been initially proposed.

WP1: Mobilisation and establishing approach to stakeholder engagement

Procurement of the technical advisor, agreement of project objectives, methodology and programme, as well as the approach to communications and engagement.

WP2: Evaluate drivers for change (challenges/risks and opportunities)

Develop an understanding of current practice and future influences with a particular focus on regulation and policy to determine the potential direction of travel through horizon scanning.

WP3: Develop options for bioresources management and assessing influence of research and regulations

The outputs from work package 2 will underpin the development of options for bioresource management. These will reflect the drivers, challenges/risks, opportunities and aspirations from stakeholders. Following the development and prioritisation of options a review of research and regulations and the impact this could have on a forward-looking strategy will be undertaken.

WP4: Developing a strategy and roadmap for managing bioresources

A long-term (2050) strategy for managing bioresources together with a roadmap that includes adaptive pathways will be compiled. This will include a timeline and direction of travel that indicates the activities to be completed within the short, medium and long-term (with Business Planning cycles mapped).

Outcomes

There are a number of outcomes and benefits associated with the development of a long-term bioresources strategy and roadmap for England. These should be realised by the water industry, regulators and other impacted stakeholders (e.g. markets, agriculture and renewable energy). Specific benefits include:

- A shared understanding of the drivers, opportunities and challenges for the management of bioresources.
- Greater certainty and alignment of environmental and economic regulation and legislation, together with a proposed direction of travel for bioresources management.
- Consideration and development of a high-level collaborative research and innovation programme.
- Effective planning for the water industry, regulators and relevant stakeholders with confidence to make strategic interventions, and long-term investment in new technology.

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