




Legal and Regulatory Framework Workshop


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Regulation of nutrients recovery and water reuse in Spain: barriers and incentives

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Introduction (I)

- ❑ **Nutrients recovery:** recuperation of P and N from urban wastewater.
- ❑ So far, demonstrated mainly on a **industrial scale**, with effluents from municipal sludge digesters and industrial wastewater.
- ❑ **Public-political perspective:**
 - Response to the scarcity of natural resources.
 - Objective of increasing resource security set by the EU Action Plan for a Circular Economy.
 - CE Action Plan: “the reuse of water in agriculture also contributes to the recycling of nutrients by substituting solid fertilizers”.



Introduction (II): EU new regulations

□ Regulation on minimum requirements for water reuse:

- Circular Economy Action Plan (EC, 2015) announced some measures to promote the reuse of treated waste water, including legislation on requirements for reused water for 2017.
- Finally, the EU Commission's «Proposal for a Regulation of the European Parliament and of the Council on minimum requirements for water reuse was published on 28th May 2018 .
- The European Parliament adopted its first reading position on the Commission Proposal on 12th February 2019 (588 votes in favour, 23 against , 66 abstentions).
- The Council agreed its position (general approach) on 26th June 2019.
- The new Regulation will be directly applicable and binding (different from a Directive).

□ Regulation on fertilizer products:

- Parliament adopted the text on 27 March 2019.
- The Council did so on 21 May 2019.
- Final act was signed by the co-legislators on 5 June 2022.
- The regulation will apply in full from 16 July 2022.



Introduction (III): Legal principles

- **Health, safety and environmental protection**

- «The Commission, in its proposals (...) concerning health, safety and environmental protection will take as a base a high level of protection, taking account in particular of any new development based on scientific facts. Within their respective powers, the European Parliament and the Council will also seek to achieve this objective» (art. 114 TFEU).

- **Precaution and rectification at source**

- «Union policy on the environment shall aim at a high level of protection (...). It shall be 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» (art. 191.2 TFEU).

- **Proximity (art. 16 WFD)**



Spanish situation (I)

- ❑ 1,135,000 tons of WWTP sludge are generated each year in Spain. [Source: 2008-2015 National Sludge Plan]

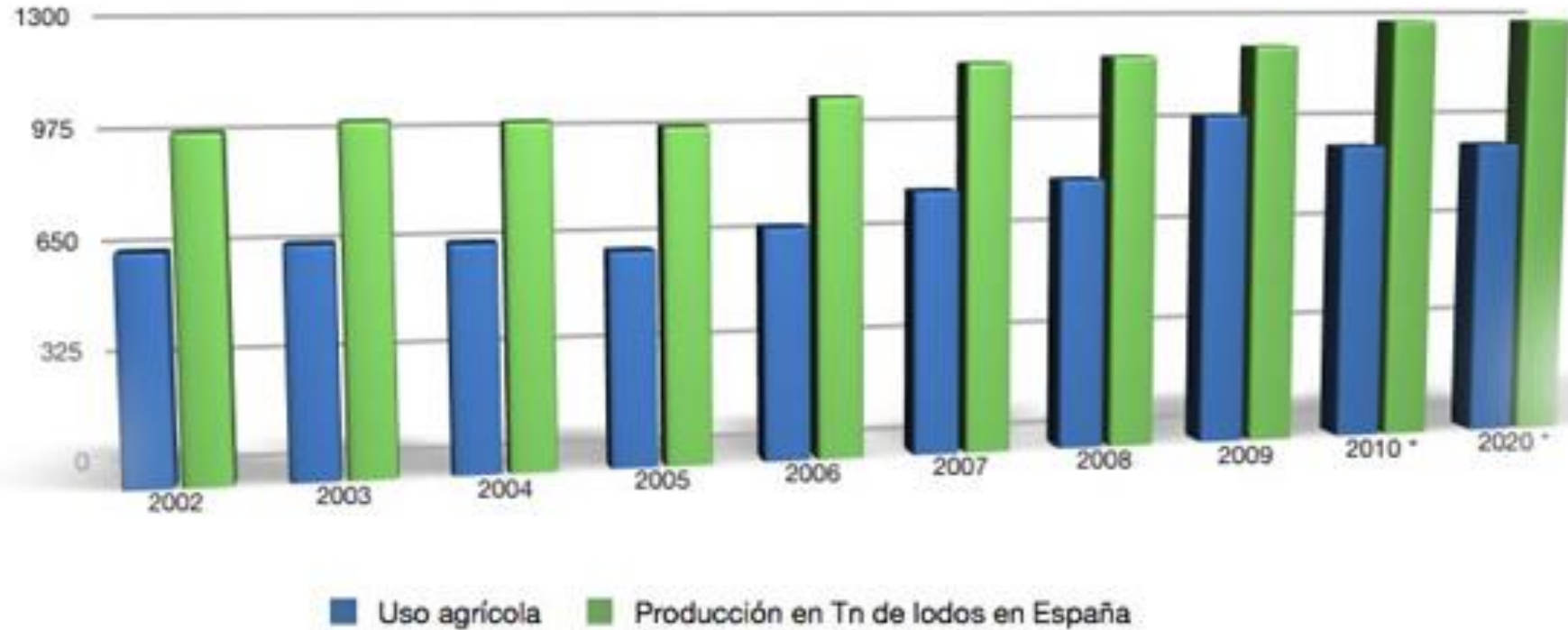
- ❑ Treatment and final destination:
 - Agriculture: 82 %
 - Energy valorisation: 6 %
 - Landfill: 7 %
 - Other treatments: 5 %

[Source: Instituto Superior del Medio Ambiente]



Spanish situation (II)

Producción de lodos en España en los últimos años.
Fuente: Ministerio de Medio Ambiente y CCAA * Datos previstos por la UE



Source: AGQLabs



Spanish legal framework

- ❑ Sewage sludge in the agricultural sector:
 - Royal Decree 1310/1990, of 29 October, on the use of sewage sludge in the agricultural sector.
 - Ministerial Order AAA/1072/2013, of 7 June, on the use of sewage sludge in agriculture.
 - Regional regulations.

- ❑ Fertilisers:
 - Royal Decree 506/2013, of 28 June, on fertiliser products.

- ❑ Water reuse:
 - Royal Decree 1620/2007, of 7 December, establishing the legal regime for the reuse of treated water.



Barriers (I):

❑ Precaution principle

❑ Economic barriers for the reuse of urban wastewater:

- Asunción Torres López (2018):
 - «Tariffs for water services are limited to the supply of drinking water and wastewater treatment, excluding other activities», such as water reuse.
 - «The cost of the reuse corresponds to the holder of the concession/authorisation of reuse; although in practice it is imputed to the public entities, including the municipalities that own the treatment plants».
- Teresa Navarro (2019):
 - Absence of an integral and supra-municipal management of urban water resources, with would allow the simultaneous development of the phases of water purification and water reuse.
- De Paoli & Mattheis (2016), «Cost, pricing and financing of water reuse against natural resources»:
 - “The larger the capacity of the plant, the smaller the unitary costs of recycled water».

Barriers (II):

- ❑ Leticia Gallego Valero et al. (2018), «Analysis of Environmental Taxes to Finance Wastewater Treatment in Spain: An Opportunity for Regeneration?»:
 - In nine regions, the amounts collected from wastewater taxes do not exceed the amount of the cost of activated sludge treatment without the removal of nutrients.
 - «Spanish regions have limited financial means to cover the costs of tertiary treatments for environmental purposes, in addition to relatively few cases in which the costs of tertiary treatments suitable for reuse are covered by surpluses»
 - «Only two regions could finance UV treatment and only six could finance chlorination, which allows water to be reused. In addition, except in Catalonia, the revenues derived from applied taxes and rates do not guarantee sufficient funds to cover the costs of tertiary treatments with environmental objectives.»



Barriers (III):

- ❑ Structural and regulatory barriers for water reuse, pointed out by Teresa Navarro (2019):
 - The absence of public sector leadership in terms of reuse.
 - Duplicities that do not make sense: when the person who intends to reuse water is also the holder of the first use concession, he or she must apply for a new concession.
 - The "traditional and obsolete procedure for granting water concessions", which should be revised to provide speed and incentives to the water reuse process.



Possible incentives (I)

- ❑ Spain is one of the 6 MS that have their own legislation on water reuse at state level.
- ❑ Cost savings for farmers: the use of sewage sludge as fertilizer could save about 37% (according to ISMA).
- ❑ The Spanish Circular Economy Strategy, not yet approved, includes the reuse of water as an individual priority sector. It proposes the following actions:
 - 38: Regulatory adjustment for the promotion of the reuse of reclaimed wastewater
 - 39: Preparation of a guide for the implementation of the regulatory instrument at EU level
 - 40: Support for irrigation projects whose resources include the reuse of wastewater
 - 41: Actions on reuse included in the Basin Hydrological Plans
 - 43: Promotion of research work to establish the minimum quality criteria required for reused water from a health and environmental point of view



Possible incentives (II)

- ❑ The General Direction for Water deals with the preparation of a National Plan for Purification, Sanitation, Efficiency, Savings and Reuse.
- ❑ It would be important to establish a financing model that promotes water reuse.
- ❑ Other instruments, such as the Swedish certification system for fertiliser products extracted from sewage, could be also considered (certification rule SPCR 178, by SP Technical Research Institute)
- ❑ The new European Fertilizer Products Regulation, which will enter into force in 2022, will provide a new harmonized framework for its use.
- ❑ The new European Regulation on minimum requirements for water reuse will be approved soon.



Conclusions

- ❑ General environmental principles of EU Law consider principles of precaution and highest protection when concerning safety and health, but also rectification at source and proximity
- ❑ New EU regulations for fertilizer products and for water reuse are coming into force
- ❑ Spanish agriculture and water economies will be favoured by the initiatives of water reuse and nutrients recovery
- ❑ There is a Spanish regulatory framework that expressly contemplates the reuse of water
- ❑ However, it does not exist a system of incentives to guarantee the economic viability of the water reuse initiatives and to promote innovative or radical solutions for wastewater treatment and nutrient recovery, such as those developed within the framework of the Run4Life project.





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Thank you for your attention!

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