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The circular approach of AQUACOMBINE combines aquaculture, farming and bioprocessing to utilize all fractions of the produced biomass and produce value added food, feed, biocompounds and bioenergy.

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## Production of halophytes on saline soils with seawater irrigation with a focus on Salicornia spp.

Outdoor can be a sustainable way to cultivate Salicornia spp. and thus supports well the idea of circular bioeconomy.

Halophytes can successfully be cultivated outdoors by several techniques. One option is to use natural seawater to irrigate halophytes. There exist systems that were used since centuries to accumulate salt from the seawater is a sophisticated way. Natural seawater flows into the system at each high tide. Salinity within different parts of the system and the water level itself can be controlled by simple pushers that opens or closes the water entry into the system or in parts of the system. One of these salinas is used to cultivate and irrigate Salicornia spp. according to regulations valid for organic agriculture. The sediment contains enough nutrients and with each high tide fresh seawater containing nutrients is floods the cultivated plants. The cultivation needs a lot of hand work because there are not, yet machines developed and the sediment itself is very muddy. In addition, the salina has to be observed carefully and constantly, to be able react and modulate the water levels according to the tide. However, from an ecological point of view, the way of cultivation is very sustainable and supports well the idea of circular bioeconomy. Seeds from the naturally occurring plants are used, seedlings are sown in early spring and already in early summer fresh tips can be harvested for the local market. The plants are completely harvested when fully matured in October. The time of the different steps of the cultivation cycle depend very much on the weather conditions, as for all crop plants cultivated outdoor.

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