SUMMARY

Request for advice
The Dutch House of Representatives has asked the Wadden Sea Council to advise on the options available for the production, reprocessing and use of *biofuels* in the Wadden Sea region. The Council has extended the request for advice to the options available for *biomass* in the Wadden Sea Region because biomass can also be used for the extraction of energy (heat and electricity) and as a raw material for the production of materials and in the chemistry sector. It is precisely these applications that could play an important role in the Wadden Sea region.

Specific strengths of the Wadden Sea Region
The Wadden Sea region features a number of specific strengths, such as a strong agricultural cluster, an energy and chemistry cluster in the Emsdelta, nearby knowledge clusters and a sustainable business climate. The Council believes that the alternatives for connecting to these area-specific strengths give the Wadden Sea region a good starting position to make a sustainable contribution to the economic strengthening of the region with biomass applications.

Preconditions for biomass
Sustainable biomass developments must however be based on a responsible approach. The Council takes the view that the identity/character of the region must form an important starting point for future spatial and economic developments in which the core characteristics of the Wadden Sea Region are not adversely affected but sooner supported. To achieve this, the Council recommends having the necessary biomass plants and the building developments placed in line with the existing buildings.
A connection will have to be sought with the farm buildings or industrial sites in the outlying area. Spatial-economic research will be needed to optimise the advantages of synergy created by linking up biomass providers and/or the users of the end-products.
Large-scale activities depending on large quantities of biomass supplied from elsewhere must be concentrated in the Wadden Sea ports since the open landscape here has already been seriously compromised and the ports can play a facilitating role. The Council advises municipal and provincial authorities to incorporate these spatial conditions for biomass activities in the spatial policy in order to avoid an adverse effect on the Wadden Sea landscape.

The Council regards the Wadden Sea area as being ideally suitable for small-scale biomass cultivation that could function as an experimental garden for the development of knowledge and innovative concepts. The agricultural sector could function as a supplier here with its potential quantity of biomass (remnant stream).

Making optimum use of opportunities
Manure digestion is currently the most frequently occurring production combination with biomass in the agricultural sector in the Wadden Sea region. This application is not however yielding any clear financial-economic benefit at present. The Council believes that a review of the current (subsidy) policy for manure digestion will have to be considered in the light of the future potential and cost effectiveness. The options for more high-value application variants of biomass in the agricultural sector could be looked into more closely. Such research falls outside the scope of the Councils assignment. The Council also sees opportunities for making better use of the various remnant streams from the rural Wadden Sea area. Decentralised, small-scale biomass remnant stream utilisation could contribute to the creation of local jobs in the Wadden Sea region.

Large-scale biomass activities will have to be clustered in the Emsdelta owing to the presence of deep sea harbours and the possibility of connecting up with the energy and chemistry cluster here. The spatial concentration (clustering) of biomass developments offers the best opportunities for growth, innovation and economic reinforcement, prevents the fragmentation of knowledge and development and also reduces the spatial pressure on the rest of the Wadden sea region.

An intensive partnership with the knowledge clusters present in the area could make it possible to quickly make industrial and commercial use of experimental knowledge and improve the innovative strength of the Wadden Sea region. The Wadden Sea region could thus develop and profile itself as an innovation region for biomass: an experimental garden for new technologies and concepts. Successful pilots and innovations could subsequently be commercially scaled-up and exploited outside of the Wadden Sea region.

Highly qualified personnel will be needed for the continued development and innovation of the high quality biomass technologies. However the percentage of the working population with a higher education is relatively low in the Northern Netherlands. Specific knowledge development will be required to ensure that the Wadden Sea region can develop into an innovation region for biomass. The Council advises the government to pursue a policy aimed at mitigating the knowledge and education problem in the Northern Netherlands.

Wadden Fund
The Wadden Fund can be regarded as a region-specific facility that contributes to the good starting position of the Wadden Sea region for the continued development of biomass activities. Innovations and the continued development of biomass technologies can be completed faster with the aid of the Wadden Fund, which makes it possible for the fund to make a positive contribution to the outlined development of the Wadden Sea region as an experimental garden for biomass.

advice biomass 2008/04

Raad voor de Wadden * lange markstraat 5 8911 ad leeuwarden * postbus 392 8901 bd leeuwarden *
telefoon (058) 212 60 15 * telefax (058) 212 01 58 * e-mail info@raadvoordewadden.nl * site www.raadvoordewadden.nl