



Nature's helping hand

Monday 14 January 2013

Scientists are heading to the unlikely location of Essex to find out more about the effects of climate change.



Tillingham Marsh, Essex

A group led by the University of St Andrews will take to the Essex salt marshes today (Monday 14 January) for two weeks to investigate the increasing demands placed upon nature by a growing population.

The scientists say that society must find a way of managing land better if we are to continue to benefit from nature's helping hand.

The team will look at natural systems, such as mudflats, and their role in benefits such as the purification of water, the production of food and the protection of coastlines, as well as the provision of habitat for wildlife and recreational space for humans.

The land at the Essex Estuary, Fingringhoe Wick Nature Reserve, Abbots Hall Farm and Tillingham Marshes, is an ideal study area as it is representative of the Essex coastline.

The data collected will be used to establish why a diverse population of microbes, plants and animals is important in the provision of natural services.

The initiative is part of a six year NERC-funded programme involving 14 research institutions and led by the University of St Andrews.

Professor David Paterson of the University of St Andrews is the Consortium Leader for the project. He said, "The natural systems that underpin the delivery of nature's services that society enjoys, such as clean water, food and protection from flooding, are being increasingly challenged by climate change and the need to feed a rapidly growing planet.

"Our landscapes need to be managed correctly to ensure that society continues to benefit from nature's services in the future. If we are to continue to benefit from these services, we need to understand them better."

Mudflats and salt marshes are common features of the coast and make-up over half of the UK's total estuarine area. These landscapes support a wide range of economically valuable animal and plant species. For example, certain plant species provide stability to the sediment which can in turn reduce the risk of flooding.

Professor Paterson explained, "At the moment, we know that biodiversity is important, but we do not know how much biodiversity is needed, or how it all works at whole landscape scales, such as an entire mudflat or salt marsh location.

"To safeguard these areas we need to understand the link between the ecosystem functions that microbes, plants and animals carry out and the ecosystem services that mudflats and salt marshes provide."

Following the Essex trip, the team will move west to Morecambe Bay to collect data at West Plain, Cartmel Sands and Warton Sands. Further studies will then be undertaken in Wales, Scotland and Northern Ireland.

Professor Paterson continued, "It is very important to understand the value of the varied habitats that make up the landscape of the UK.

"Some of the most sensitive to the pressures of climate change are coastal systems. Our group will focus on understanding how microbes, plants and animals that live in threatened habitats contribute to our natural environment, economy and society."

NOTE TO EDITORS:

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The study is part of a six year programme funded by NERC (National Environment Research Council) in 2011 called BESS (Biodiversity & Ecosystem Service Sustainability). BESS is made up of four research consortia which aim to understand these links in urban, coastal, lowland agricultural and upland river environments.

CBESS (Coastal Biodiversity & Ecosystem Service Sustainability) is a consortium made up of 14 research institutions, universities and organisations that is concerned with the welfare and management of coastal systems.

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