

crynodeb gwyddoniaeth



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Diweddariad y Llawlyfr Rheoli Morfeydd Heli Crynodeb Gwyddoniaeth SC030220/SS

Mae Asiantaeth yr Amgylchedd wedi diweddarau'r Llawlyfr Rheoli Morfeydd Heli er mwyn helpu cynllunwyr arfordirol ac awdurdodau gweithredu sy'n gweithio o fewn Rheoli Llifogydd ac Erydiad yr Arfordir. Mae'r llawlyfr yn darparu dealltwriaeth o ofynion morfeydd heli a sut a phryd i'w rheoli. Mae fersiwn electronig ar gael yn www.saltmarshmanagementmanual.co.uk.

Mae morfeydd heli yn ecosystemau gwerthfawr a fedrant chwarae rôl bwysig wrth reoli perygl llifogydd ac erydiad yr arfordir yn ogystal â rheoli llygredd a gwaredu gwastraff. Maent hefyd yn helpu i gynnal ansawdd dŵr ar gyfer pysgodfeydd, amaethyddiaeth, hamdden a thwristiaeth. Seilir eu gwerth ar gydadwaith eu helfennau sylfaenol (pridd, dŵr, planhigion ac anifeiliaid), eu ffurf ffisegol (gan gynnwys sianelau a wyneb y morfa heli) a'r casgliad o blanhigion ac anifeiliaid maent yn ei ddal.

O fewn yr amgylchedd arfordirol ac aberol ehangach, ystyrir cynnal a chadw, adfer neu wella morfeydd heli yn gynyddol fel dull o reoli'r perygl o lifogydd. Mae ganddynt, yn ogystal, y fantais o helpu i gadw cynefin naturiol pwysig. Er mwyn helpu rheolwyr a chynllunwyr arfordirol ac aberol ddod o hyd i broblemau potensial gyda morfeydd heli a darganfod atebion addas, comisiynodd Asiantaeth yr Amgylchedd Royal Haskoning i adolygu a diweddarau'r *Llawlyfr Rheoli Morfeydd Heli* cyfredol. Bwriedwyd i hyn gymryd profiad diweddar mewn rheoli morfeydd heli i ystyriaeth, a gwelliannau mewn dealltwriaeth wyddonol ac arfer rheoli ers i'r Arweiniad gwreiddiol gael ei gyhoeddi.

Cyhoeddir y Llawlyfr Rheoli Morfeydd Heli fel adroddiad ar bapur ac fel plattform electronig, rhyngweithiol sydd ar gael ar wefan y prosiect (www.saltmarshmanagementmanual.co.uk), neu ar ddisg. Mae'r Llawlyfr yn rhychwantu'r meysydd canlynol:

1. Beth yw'r morfa heli y medrem ei rheoli?
Mae'n mynd i'r afael â morffoleg ac ecoleg aberoedd a baeau a'r prosesau sy'n gysylltiedig â hwy a'u his-systemau rhynglanwol (traethellau lleidiog a morfeydd heli).

2. Pam fod morfeydd heli'n werth eu rheoli?
Mae'n edrych ar werth morfeydd heli, gan gyfeirio'n arbennig at arwyddocâd ecosystemau a chadwraeth, ac amddiffyniad rhag llifogydd ac arfordirol.

3. Ffactorau sy'n arwain at newid mewn morfeydd heli.
Mae'n edrych ar y ffactorau a fedrant effeithio ar gynefin morfa heli ac arwain at newid morffolegol ac ecolegol, gan gynnwys dulliau o ddefnyddio yn y gorffennol sydd wedi dylanwadu ar ddatblygiad morfeydd heli a gweithgareddau cyfredol a fedrent effeithio ar gyflwr a dosbarthiad morfeydd heli.

4. Rheoli morfeydd heli.
Mae'n trafod amrediad o dechnegau sydd ar gael ar gyfer cynnal a chadw, adfer neu wella morfeydd heli, ynghyd â'u heffeithiau amgylcheddol potensial. Mae'r bennod hon hefyd yn rhychwantu technegau creu morfeydd heli y gellir eu defnyddio lle nad oes morfa heli'n bodoli ac yn rhoi cyfres o enghreifftiau astudiaeth achos.

5. Arolwg a monitro morfa heli
Mae'n disgrifio elfennau nodweddiadol rhaglenni er mwyn monitro systemau ffisegol a biolegol morfa heli.

Yn ei ddau fersiwn, bydd y Llawlyfr Rheoli Morfeydd Heli yn helpu rheolwyr arfordirol ac aberol, cwsmeriaid a chynllunwyr i ddod i benderfyniadau cadarn yng nghyswllt cynnal a chadw, adfer neu wella morfeydd heli.

Mae'r crynodeb hwn yn ymwneud â gwybodaeth o Brosiect Gwyddoniaeth SC030220, yr adroddwyd yn fanwl yn ei gylch yn yr allbynnau canlynol:-

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Ariannwyd y prosiect hwn gan Grŵp Gwyddoniaeth
Asiantaeth yr Amgylchedd, sy'n darparu gwybodaeth,
arfau a thechnegau gwyddonol sy'n ein galluogi i warchod
a rheoli'r amgylchedd mewn dull mor effeithiol ag y bo
modd.

Mae copïau pellach o'r crynodeb hwn ac adroddiad(au)
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science summary



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Update of Saltmarsh Management Manual Science Summary

The Environment Agency have updated the Saltmarsh Management Manual to assist coastal planners and operating authorities working in Flood and Coastal Erosion Management. The manual provides an understanding of the requirements of saltmarsh and when and how to manage it. An electronic version is available at www.saltmarshmanagementmanual.co.uk.

Saltmarshes are valuable ecosystems which can play an important role in flood and coastal erosion risk management as well as pollution control and waste disposal. They also help maintain water quality for fisheries, agriculture, recreation and tourism. Their value is based on the interaction of their basic components (soil, water, flora and fauna), their physical shape (including channels and saltmarsh surface) and the assemblage of plants and animals they hold.

Within the wider coastal and estuarine environment, saltmarsh maintenance, restoration or enhancement is increasingly being considered as a means of managing flood risk. It also has the advantage of helping to conserve an important natural habitat. To help coastal and estuarine managers and planners to identify potential problems with saltmarshes and find appropriate solutions, the Environment Agency commissioned Royal Haskoning to revise and update the existing *Saltmarsh Management Guide*. This was intended to take account of recent experience in saltmarsh management, and advances in science understanding and management practice since the publication of the original Guide.

The Saltmarsh Management Manual is published both as a hard copy report and as an interactive, electronic platform which is available on the project website (www.saltmarshmanagementmanual.co.uk), or on disk. The Manual covers the following areas:

1. What is the saltmarsh that we might manage?
Addresses the morphology and ecology of estuaries and bays and the processes associated with them and their intertidal sub-systems (mudflats and saltmarshes).

2. Why is saltmarsh worth managing?
Examines the value of saltmarsh, with particular reference to ecosystem and conservation significance, and flood and coastal defence.

3. Factors leading to saltmarsh change.
Explores the factors that may affect saltmarsh habitat and lead to both morphological and ecological change, including past uses that have influenced the development of saltmarshes and current activities that could affect the condition and distribution of saltmarsh.

4. Saltmarsh management.
Discusses a range of techniques that are available for maintaining, restoring or enhancing saltmarshes, along with their potential environmental effects. This chapter also covers saltmarsh creation techniques that can be used in areas where there is no existing saltmarsh and gives a series of case study examples.

5. Survey and monitoring of saltmarsh
Describes the typical components of programmes to monitor the physical and biological systems of a saltmarsh.

In both its versions, the Saltmarsh Management Manual will help coastal and estuarine managers, clients and planners to arrive at sound decisions for maintaining, restoring or enhancing saltmarshes.

This summary relates to information from Science Project SC030220, reported in detail in the following outputs:-

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This project was funded by the Environment Agency's Science Group, which provides scientific knowledge, tools and techniques to enable us to protect and manage the environment as effectively as possible.

Further copies of this summary and related report(s) are available from our [publications catalogue](#) or our National Customer Contact Centre T: 08708 506506 or E: enquiries@environment-agency.gov.uk.

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