

The Caspian Interactive Map Service.

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Abstract

The Caspian Interactive Map Service (IMapS) has been developed by UNEP-WCMC in collaboration with the Caspian Environment Programme (CEP) and the International Petroleum Industry Environmental Conservation Association (IPIECA) to provide accurate and up to date information on the location and status of the environment in the Caspian Sea region to local government, private companies, and community organisations within each of the Caspian's coastal provinces. The IMapS holds information collected from a variety of sources such as local and national governments, non-governmental and inter-governmental organisations and private companies on a diverse range of environmental subjects such as individual species of importance, habitats, threats, and socio-economic resources. The service makes use of ArcIMS 9 with several additional features to deliver this information dynamically over the Internet in a form that is usable by a variety of different people from field based environmental practitioners to high level policy makers.

The collaboration

The Caspian Interactive Map Service (IMapS) is being developed under an agreement between the Caspian Environment Programme (CEP), the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and the International Petroleum Industry Environmental Conservation Association (IPIECA). This IMapS is the fourth in a series that includes the Mediterranean, Black Sea and Caribbean. These have all been created in partnership with IPIECA over the past 8 years.

The Caspian IMapS makes use of ArcIMS 9 and Macromedia Coldfusion MX7 to provide access to environmental data online. This service is designed for use in oil spill planning and response for users in the Caspian region and around the world.

The Data

The data included in the service has been collated from a wide variety of sources including Government agencies, national and international non-governmental organisations and international conservation bodies. The data presented provides information on protected areas, sensitive habitats, species, oil spill response features and basic infrastructure information. The service uses the latest information held within UNEP-WCMC's extensive ArcSDE databases held on both SQL Server and Oracle Platforms. These datasets are all interlinked and connect through to other information held in spatial databases that provide more in-depth information on the specific management and status of individual protected areas as well as a full description of the source of the individual feature.

Customisations

The Caspian IMapS has been substantially modified from the original ArcIMS html viewer to provide the user with additional functionality that better enables them to

view and query the data held in the service. The IMapS also has the ability to create and store customised reports generated from the system. These customisations have been developed by combining the functionality already present with ArcIMS with the ArcIMS Coldfusion connector and Coldfusion MX7.

Email

The email tool combines the functionality already in-built into the ArcIMS HTML viewer with Coldfusion to allow a user to email a URL from the IMapS to themselves or a colleague. This allows them to return to the map at the same extent and with the same layers visible as they were at before. This functionality is designed to allow users to share information on the distribution of environmentally sensitive areas without sending large email attachments and also ensures that they are viewing the most current information.

Species query tool

The species query tool allows the user to query information on the distribution of species in the current area of interest. Rather than clutter up the layer list in the IMapS with multiple species distribution layers a species tool has been created that allows them to be displayed separately. To access the data the user zooms to the area that they are interested in finding out information on. After clicking the species query button a new window opens that utilises the ArcIMS Coldfusion connector to query the species point and polygon layers and return a list of the individual species that have a distribution that crosses the area of extent. Maps are then available for the actual distribution of these species showing both their distribution in the area of interest as well as in the whole Caspian, these also make use of the ArcIMS Coldfusion Connector.

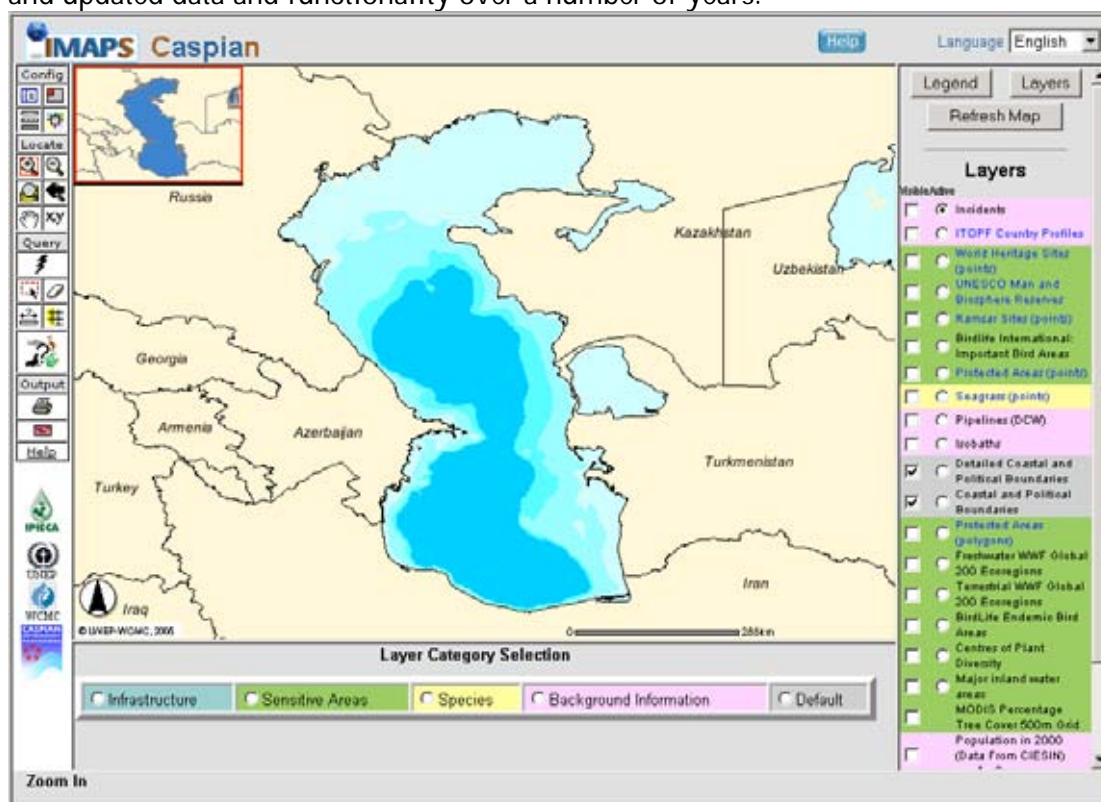
The IMapS Report Creator

The IMapS report creator allows the user to create a customised pdf or flashpaper report based on the spatial and aspatial information collated by UNEP-WCMC. The system makes use of the ArcIMS coldfusion connector and cfdocument functionality available with Coldfusion MX7 to create a dynamic report based on the extent of the current area of interest. This report queries the various individual layers held in the IMapS and selects those features that fall within the current extent. These features are then used to create individual maps, tables and summary information on each of the subsets of information selected. This information is then collated into a single report that draws summary information together providing sections on the individual themes with more detailed information available for each theme in the annexes.

Conclusion

The Caspian IMapS represents the latest development in the series of IMapS developed in conjunction with IPIECA. This particular IMapS has made significant use of the functionality available with Macromedia Coldfusion MX7 and the ArcIMS Coldfusion connector to extend the capabilities of the service and provide increased access to the underlying data. Once the developments have been completed on the Caspian IMapS they will also be rolled out throughout the other IMapS in the series.

It is intended that the Caspian IMapS will become an integral tool for environmental practitioners working in the Caspian region and will continue to develop with new and updated data and functionality over a number of years.



To access the Caspian IMapS go to <http://ipieca.unep-wcmc.org/imaps/ipieca/caspian>

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