THE UN ATLAS OF THE OCEANS

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UN Atlas of the Oceans

A Partnership led by UN Agencies for sustainable use of the world oceans

What is the UN Atlas of the Oceans?

- A contribution to UNCED - the Earth Summit - and instrument of collaboration among UN agencies with ocean mandates;

- An entry point to organised, selected, reliable and up-to-date information on sustainable development of oceans and coastal areas;

- CD-ROMs and other products produced in collaboration with a publisher to facilitate access to the Atlas and enhance the use of its content.
What are its features?

- Based on FAO Community Directory Server (CDS), with development shared by 5 programs;
- Dedicated collaborative network on global oceans;
- Information is organised and maintained by a hierarchy of editors from the ocean community;
- Web-based publication by UN and partners;
- An organised database on ocean information;
- Integrated source of knowledge and policy advice;
- Communication support for ocean communities;
- Intuitive user and management interface;
- Rapid downloads to CD-ROMs.

By whom is it being operated?

- Initiated by UN S/Cmte on Oceans and Coastal Areas;
- Developed by 6 UN Agencies with mandates on oceans plus CBD;
- Led by FAO Fisheries Department;
- Co-funded by UN Foundation and the 7 UN agencies with NOAA support;
- In collaboration with non-UN Partners: e.g., NGOs, private sector, NOAA, HDNO;
- Editors are mostly staff from partners with some volunteers from the ocean community.
What does it contain?

- A stable thematic structure for ocean info;
- Documents uploaded to server;
- Published or grey literature and drafts;
- Fact sheets, images, maps, data, statistics;
- Links to databases, web sites, documents;
- Info on UN and other projects;
- Contact points;
- News events, discussions and polling.

The Atlas process & products
How is it used?

About

Four Ways to Enter the Atlas

Uses

Geography

Issues

About the Oceans

Information important for understanding the oceans.

The focus is an encyclopaedia of information relevant to sustainable development.

- Biology;
- Coasts and coral reefs;
- Early explorations;
- Ecology;
- Education and training;
- How oceans are changing;
- How oceans were formed;
- International cooperation;
- Maps, statistics, databases;
- Monitoring & observing sys.;
- Ocean-atmosphere interface;
- Ocean dynamics;
- Physical & chemical properties;
## Uses of the Oceans

Information on the uses of the oceans

- Disposal of waste from land;
- Energy;
- Fisheries and Aquaculture;
- Human Settlement on Coast;
- Marine biotechnology;
- Non-consumptive uses;
- Ocean dumping & ship wastes;
- Offshore Oil, Gas and Mining;
- Recreation & Tourism;

### The focus is on

- information relevant to sustainable development, resources, technology, management, sector issues.

## Issues in the Oceans

Broad, cross-cutting ocean issues - such as sustainability, food security, global change, and pollution.

The focus is on

- information relevant to sustainable development of the oceans.

- Climate Change;
- Economics;
- Emergencies;
- Food Security;
- Governance;
- Human Health;
- Pollution & Degradation;
- Safety at Sea;
- Sustainable Develop.
As we begin a new century, world energy consumption is projected to increase by 60 percent from 1997 to 2020 [1]. Much of the growth is projected for regions of the developing world [2]. The major bottleneck for the energy sector could result from the future growth of energy demand in the developing countries. Developing countries are experiencing rapid growth in population, energy demand, and the environmental degradation that often results from industrial development. This highlights the paramount need for new energy producing ideas and methods to achieve sustainable energy growth and minimal environmental impact. The oceans of the world represent a ready-to-harvest resource for both hydrocarbons and renewable sources of energy.

Many of the world's potential issues of hydrosurfaces lie beneath the ocean. The hydropower industry has developed techniques suited to conditions found on the offshore, both in oil and gas (known as exploration) and to successfully extract it for human use. The past fifty years have witnessed ever-expanding exploration for and exploitation of offshore oil and gas resources. Unfortunately the focus of these activities was on near-shore and shallow-water prospects. It has since widened to include areas of deeper water, areas where environmental conditions are severe, and environmentally vulnerable areas such as encircling and semi-encircling seas. At present, there are more than 8,000 offshore oil and gas installations operating worldwide, 1,000 in the Gulf of Mexico, 90 in the Caspian, 700 in the Middle East, 500 in Europe.

Waves are harnessed by the different types of wave energy devices to produce a form of electrical power. They are devices that transform the energy in waves into electricity. Wave energy devices can be categorized as either fixed or floating. These devices can be used to generate electricity, desalinate water, or produce other useful products. Wave energy devices can be classified into two main categories: artificial waves and natural waves. Artificial waves are generated by machines placed on or near the ocean surface. Natural waves are generated by the movement of ocean water due to wind or other factors. The most common natural waves are those caused by the movement of ocean water due to wind. These waves can be used to generate electricity, desalinate water, or produce other useful products. The most common natural waves are those caused by the movement of ocean water due to wind. These waves can be used to generate electricity, desalinate water, or produce other useful products.
Another notable example of an OWC is the "Mighty Wave 2". It is the world's largest offshore device, and was launched in July 1993 by the Japan Marine Science and Technology Center. The prototype, moored facing the predominant wave direction, has a displacement of 4,400 tons and measures 50m long. The Mighty Wave is a large transformer that converts wave energy into kinetic energy. A number of such devices could be deployed behind the dam to generate energy. The resultant power is then transmitted to the shore via cables.

Another promising type of wave energy converter is the Tapered Channel (Japan). This design is characterized by simplicity and efficiency. As the waves travel down the channel, the energy of the waves is converted to kinetic energy, which drives a generator to generate electricity.

Advantages:
The primary advantages of wave energy systems are:
- They can be integrated into harbor designs and coastal protection systems, reducing the cost of such systems, and providing dual use.
- They can be used to generate electricity in areas that have a lot of wave energy availability.
- They are less likely to cause environmental damage compared to other forms of energy generation.

[See More button to access more information]
Where do we stand?

- The software is operational and tested, but still advancing as more programs join its use;
- The overload during the opening weeks is solved;
- The information structure is stable;
- UN, NOAA and NGO staff are principal editors;
- Much information is in place but more arrives daily;
- The CD-ROM generator prototype (for mirrors of the site) is developed;
- Routine maintenance began November 2002;
- UN Partners have signed long-term agreements.
On the First Anniversary

- All reviews have been positive. Stories have run in major languages, all over the world;
- Many educational and ocean sites have linked;
- Russian Atlas of the Ocean Maps are uploaded;
- Most empty outline topics have been filled in;
- Membership has grown from 30 to about 1400;
- Over 1,000 pages per day are served on average;
- There are 3,100 knowledge items in addition to the 1050 Topic Pages and their See Mores;
- UN Partners have signed long-term agreements.

What are the plans?

- Recruiting Topic Editors outside the UN system to maintain and improve the Atlas
- Initiate series of CD-ROMS for consumers and educators by publisher
- Pursue linking throughout the ocean and educational community
Issues for the future

- Further institutional mainstreaming within the UN and the Partners
- Securing long-term funding
- Keeping pace with technological progress
- Equitable access (web, CD, languages)
- Expanded collaboration across all sectors to further develop the Atlas
- Co-operation with other global projects

An exciting challenge!

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