

Bohai Bay gets green light for 'blue' economy

By ZHAO RUIXUE
AND JU CHUANJIANG

The authorities of Changdao, an island county set at the juncture of Bohai Bay and the Yellow Sea, have announced a major commitment to establishing a "blue marine economy" in the area.

The move follows the development of a similar initiative to build a larger "blue" economic zone in Shandong, the county's home province. President Hu Jintao gave his blessing to the project during his inspection tour of the area in April.

Jiang Qingchun, Party secretary of the county committee, said: "We will spare no efforts to play a leading role in establishing a blue economic zone around the Shandong Peninsula. We will devise our own development blueprint and transform Changdao into an environmentally-friendly and highly civilized county."

During 2008 the county won a string of honors, establishing it among China's first tranche of sophisticated, contemporary regions with sustainable economies and a developed tourism base.

Jiang said: "Changdao's advantages all stem from the sea. Capitalizing on maritime resources and accelerating the speed of developing an eco-fishing program, together with a number of environmentally friendly industries and an eco-tourism base are our best options for sustained growth."

The authorities' ambitious goals include the construction of a national eco-fishing model area with 1 million mu (66,666.7 hectares) of underwater forests and fish farms of more than 1 million mu (66,666.7 hectares) in size and the formation of a national ocean energy base intended to generate 1 million kilowatts in

wind power. They also plan to develop an internationally known holiday resort projected to attract 1 million high-end tourists annually.

Eco-aquaculture farm

Sun Yubin, director of the county's Oceanic and Fishery Bureau (OFB), said developing aquaculture farms will put Changdao on a sustainable growth track and create a highly-efficient modern fishing industry.

The man-made underwater 'seaweed' is expected to provide a superior environment for ocean organisms and thus create conditions for multi-layered cultivation

methods. This will see kelp kept in the upper layer, fish and shellfish in the middle layer and valuable seafood items, including abalone and sea cucumber, nurtured on the deepest level.

Statistics from OFB show Changdao's submarine forest and ecological fish farms currently extend to 400,000 mu (26,667 hectares) and 600,000 mu (40,000 hectares). Seafood output value enjoyed a 29 percent year-on-year increase during 2008.

Another 600,000 mu (40,000 hectares) of undersea forests and 400,000 mu (26,667 hectare) of eco-fish farms are expected to be built within the next five years. The fishing base will then cater for such ocean species as abalone, sea cucumber, sea urchin, scallop and kelp.

Li Naisheng, deputy director of the Department of Science and Technology of Shandong province and a director of the National Oceanographic Center in Qingdao (NOCQ) said: "Changdao's large-scale eco-aquaculture is now at an internationally advanced level and will set an example for other coastal areas looking at developing an aquatic industry."



The environmentally-friendly Changdao islands are a true paradise for birds as well as a haven for many other wildlife and marine species.

Yuan Keting

Green corridor

As the islands' undersea forests are expanding, onshore forests are also on the increase on the 32 islands of Changdao, which, scattered from the north to the south, form a green corridor on the sea.

With forest coverage of 58 percent, the county boasts 48,000 mu (3,200 hectares) of forests, more than 700 sq m in per capita forested area.

To preserve the quality of the environment, the authorities have now invested 120 million yuan in building sewage and refuse disposal facilities. Currently, 30 percent of the county's potentially renewable resources are actually recycled.

After an on-site inspection tour, more than 10 experts from a number of research institutes, including the NOCQ, concluded that Changdao has achieved zero emissions for sulfur dioxide and carbon dioxide.

Its environmental protection

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JIANG QINGCHUN

Party secretary of the Changdao county committee

facilities can now absorb the 170,000-tons of carbon dioxide emitted annually by local industrial sector, as well as some 350,000-tons carbon dioxide produced by other sectors.

To ensure that Changdao is on the way towards achieving eco-friendly industrial development, the county government has also planned for various specialist areas, including a precious marine resource conservation zone, a fishing zone,

an eco-tourism zone, a dedicated bird preservation zone and a series of forest parks. Within these specialist areas, the authorities will conduct strict screening procedures before approving any new investment projects. They will also require existing industrial facilities in these areas to reduce pollution. Already a number of particularly heavy polluters in these areas have been shut down or relocated.

New energy base

Jiang said: "Though small in land area, Changdao has huge potential for wind power development thanks to its vast seawater area and its advantageous position directly in the wind path of the Bohai Bay."

Endorsing Jiang's assertion, Fan Xianen, deputy director of the county's Economic and Trade Bureau said 82 wind power generators have already been installed on four of Changdao's islands—South Changshan, North Changshan, Xiaoheshan and Tuoji, with a combined generating capacity of 62,300 kw a year, accounting for 54 percent of the province's current total capacity of electricity derived from wind power generators.

The 82 generators are projected to produce 13,000 kwh of electricity this year, generating 100 million yuan in sales revenues.

Changdao has around 2,400 sq km of sea areas that can be

used to generate wind power, creating ideal conditions for building an ocean-based wind power plant.

The development of a 1 million kw ocean wind power plant has been backed by several industry experts and is now listed on the province's middle and long-term development plans for the renewable energy sector.

Four large utility companies—Sanrong Group, Datang Corporation, Huaneng Group and Guodian Corporation—have now all signed contracts with local authorities to jointly develop the 1.1 billion yuan project.

The first commercial ocean wind project, with an intended 48,000 kw power capacity is scheduled to begin construction in the second half of the year. It is expected to come on-line in 2010. The power plant is then projected to generate 2.8 billion kwh in electricity and 3 billion yuan in annual sales.

Tourists follow emperors to seek holiday paradise

By WANG QIAN

According to local legends, both the Emperor Shihuang of the Qin Dynasty (221 BC - 206 BC) and his successor, Emperor Wudi of the Western Han Dynasty (206 BC-AD 24), scoured the island paradise of Changdao in search of the fabled elixir of life. The fact that neither is still around perhaps testifies to their ultimate failure, however it is has not deterred millions from following in their sandal steps and setting out to explore this exotic locale for themselves.

Today visitors to Changdao, the only island county in the eastern province of Shandong, are more likely to come in search of an ideal holiday destination rather than some mythical potion of potency.

Lushly set between the twin peninsulas of Jiaodong and Liaodong, Changdao actually consists of 32 small islands, scattered like a string of pearls across Bohai Bay.

Commenting on the islands' recent surge in popularity, Zhong Bo, director of the Changdao Tourism Administration, said: "Due to the opening-up of some of the islands, Changdao has enjoyed a dramatic increase in the number of visitors from Southeast Asia, Europe and Russia."

Keen to capitalize on this sudden influx of big spending out-of-towners, the local authorities have set out to establish the county as a premium holiday resort and have sought to maximize the appeal of its natural resources and cultural heritage.

With a 56 percent green coverage and an attractive climate, the county is also home to one of China's foremost beach resorts. It has won a series of awards,

including an acknowledgement as a leading national nature reserve, a national forest park and a State-level geo-park.

Today the beauty of the islands, noted by many renowned ancient writers, including the Tang Dynasty (AD 618-907) poet Li Bai, retains its almost mythical quality. Dubbed a "wonderland in the sea" in the *Shanhaijing*, or the Book of the Mountains and Seas, a classic ancient Chinese book featuring geographical and cultural observations as well as a collection of pre-Qin Dynasty (221-206 BC) myths, Changdao is the source of countless legends.

Changdao's history can even be traced back to the prehistoric period, evidenced by the 35,000-year-old human cranium fossils unearthed in the area. Further proof of its long association with mankind came with the discovery of the remains of a large prehistoric village built around 6,500 years ago.

Experts say the ancient ruins, found in Changdao's Daheishan village, have identical cultural features to the Banpo Site in Xi'an in northwest China, identified as dating back to the New Stone Age (9500 BC-3500 BC). These cultural similarities have earned the site and its long dead residents the title of "eastern Banpo culture".

With fishing as the traditional means for making a living, Changdao people have long worshiped Matsu, the Chinese goddess of the sea. It is to her that many pray for the safety of their family members fishing far out at sea in times of bad weather.

The Xianying Palace, built in Changdao nearly 900 years ago, is reportedly the oldest and largest Matsu temple in the northern region of China. Every April it hosts a grand ceremony of Matsu worship.



High value fruits of the blue economy: tasty sea cucumbers.

Ju Chuanjiang

To date, the Changdao temple has established friendly ties with more than 30 Matsu temples at home and abroad, some of which are based in Macao and the Chinese Taiwan province. Through this common cultural heritage, Changdao has developed a cultural exchange network across a wide number of regions.

Resource-rich island

Boasting rich marine resources, Changdao is home to at least 200 species of seaweed and 30 species of fish. It has been designated as one of China's key production centers for abalones, scallops and kelp.

The Changdao islands are also a paradise for birds. Every year, in spring and autumn, more than 320 varieties of birds use the islands as a stopover point during their long, annual migratory flights.

Among the islands, Gaoshan is particularly well known as a seagull habitat. Between April and July, tens of thousands of the birds fly to the island to give birth and raise their offspring. Changdao is also renowned for its transient seal population,

with some 400 of them enjoying a summer vacation on its beaches.

In addition to its flora and fauna resources, the county is also well-known for its unique landscape. As the only national island geo-park in China, Changdao is rich in a number of singular geological features, including breathtaking cliffs, caves, reefs, boulders and distinctly-colored pebbles.

Another factor that continues to attract tourists is the unique opportunity to share in the traditional lifestyle of the islands' fishermen. Since 1999, visitors have been able to live and eat with a typical fishing family. They also have the opportunity to sail with the fishermen and participate in the daily catch.

Participants can also enjoy the delights of fish farming, yachting and simply listening to the locals regale them with anecdotes, folk stories and area's traditional working songs.

The high uptake of the initiative led to Changdao was being listed as one of China's leading model agricultural tourism destinations in 2004.

Island treasures: three days to travel around Changdao

WANG Xiantao

Tourism chiefs in Changdao, an island county in Shandong province, have now devised a number of tours aimed at showcasing the mysterious charm of the area and attracting visitors to experience life in one of its many fishing villages. The following represents a typical itinerary for visitors.

For the first day, take a tour to the Nine-Fathom Cliff, the Crescent Moon Bay, the Amah Reef and the Fairyland Park. In the evening you may then take a walk around the Pearl Square and enjoy local seafood at the nearby sidewalk snack booths.

On the second day, go fishing on the sea and get to know how it feels to be a real fisherman netting fish day after day. After returning to dry land, tour the Forest Park and the Bird Exhibition Hall in Fengshan, the highest point in the county. At night, you can attend a bonfire party on the beach and appreciate the unique flavor of the local songs and dances.

On the last day, sail to Miaodao (or "Temple Island") to visit the thousand-year-old Matsu temple, and feast your eyes on the beautiful scenes of the Pagoda Reef, the "stone forest on the sea" whilst watching flocks of birds chasing after boats.

During the three-day tour, tasting delicious seafood is a can't-miss item on the itinerary. As a key national aquatic product center, Changdao is home to a variety of fish and shellfish, including shrimps, crabs and sea cucumbers.

Locals like to make dumplings filled with aquatic vegetables and Jiaozi stuffed with mackerel. Both are local specialties.

The pleasure of paddling in the sea is another temptation that cannot be resisted, as is sailing to the Bird Island for the sight of flocks of birds spreading their wings, watching seals frolicking in the water, sunning yourself on

large rocks or renting a boat to go out fishing in the sea.

If you get tired after so much exertion, it is not a bad idea to chill out at a fisherman's home. Local tourism authorities have franchised the home hotel service named "Yujiale" — mean-

ing "experiencing happy time at a fisherman's home" — to hundreds of locals.

Currently more than 30 daily liners shuttle between Penglai, the nearest city in the Jiaodong Peninsula to Changdao, and the island county.



Migrating birds making one of their twice-yearly island visits.



A glimpse of the magical Pagoda Reef stone forest at dusk.



Sunbathing seals: regular visitors to the islands' coastlines.

Photos by Yuan Keting