

GAP analysis of MPAs in Yellow Sea of China

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Background

GAP analysis: a **G**eographic **A**pproach to **P**rotection of biological diversity.

GAP analysis: protecting biodiversity using geographic information systems.

Gap Analysis is the process by which the distribution of species and vegetation types are compared with the distribution of different land management and land ownership classifications. This permits gaps in the protective network for biodiversity to be identified.

Gap Analysis provides a quick overview of the distribution and conservation status of several components of biodiversity.



Background

GAP analysis was used first in U.S., and then Mexico, France, Spanish, Egypt, Turkey.

GAP analysis is only used in Japan in Asia as a BD conservation tool.

Gap Analysis requires huge database for the BD distribution.

Gap Analysis is used in land PA and BD conservation in China since 1998 (LI Diqiang, 1998).

Advantage: (1) multi-species and habitat conservation, (2) ecosystem and species, (3) basic information for design a PA, (4) multiple layers and structures information.

Disadvantage: (1) lack of details (small patches), (2) unknown the habitat loss, (3) hot point identification, still need site survey, (3) not good at habitat quality and population density.

Background

Data for the coastal of Yellow Sea in China:

(1) marine function zoning for Liaoning, Shandong, and Jiangsu Province;

- Agricultural and fishery zone
- Ports and shipping zone
- Industrial and urban zone
- Mineral and energy zone
- Tourism and recreation zone
- **Marine protected zone**
- Special utilization zone
- Reserved zone

Boundaries of YSLME covered by the UNDP/GEF YSLME Phase II Project

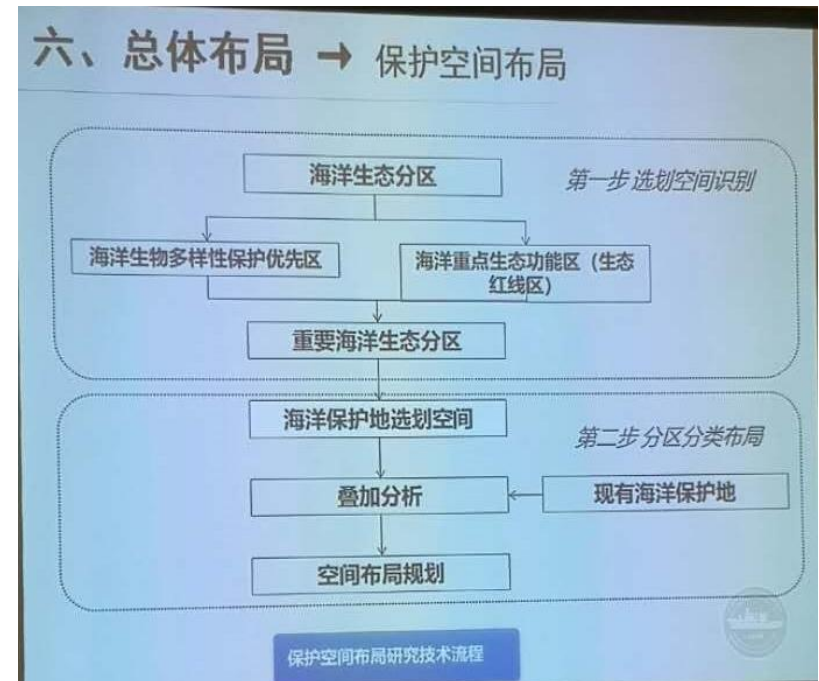


Background

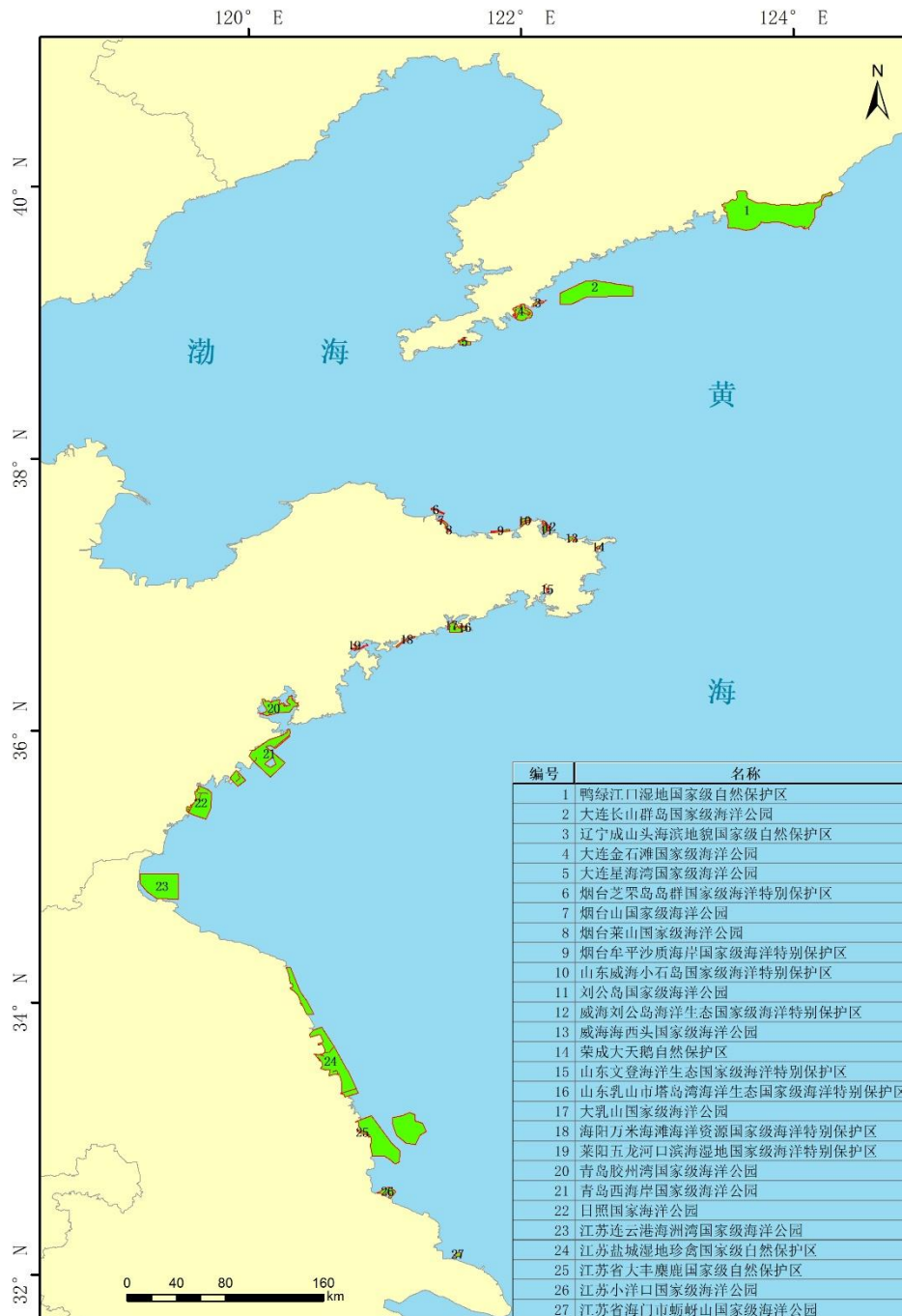
Data for the coastal of Yellow Sea in China:

(1) Marine ecological red-line scheme for Liaoning, Shandong, and Jiangsu Province;

- Marine protected area
- **Important coastal wetland**
- **Important estuary**
- Special **protection islands** and sand source protection
- Important sandy shoreline
- **Natural landscape** and cultural and historical sites
- Important tourist area
- Important fishery area



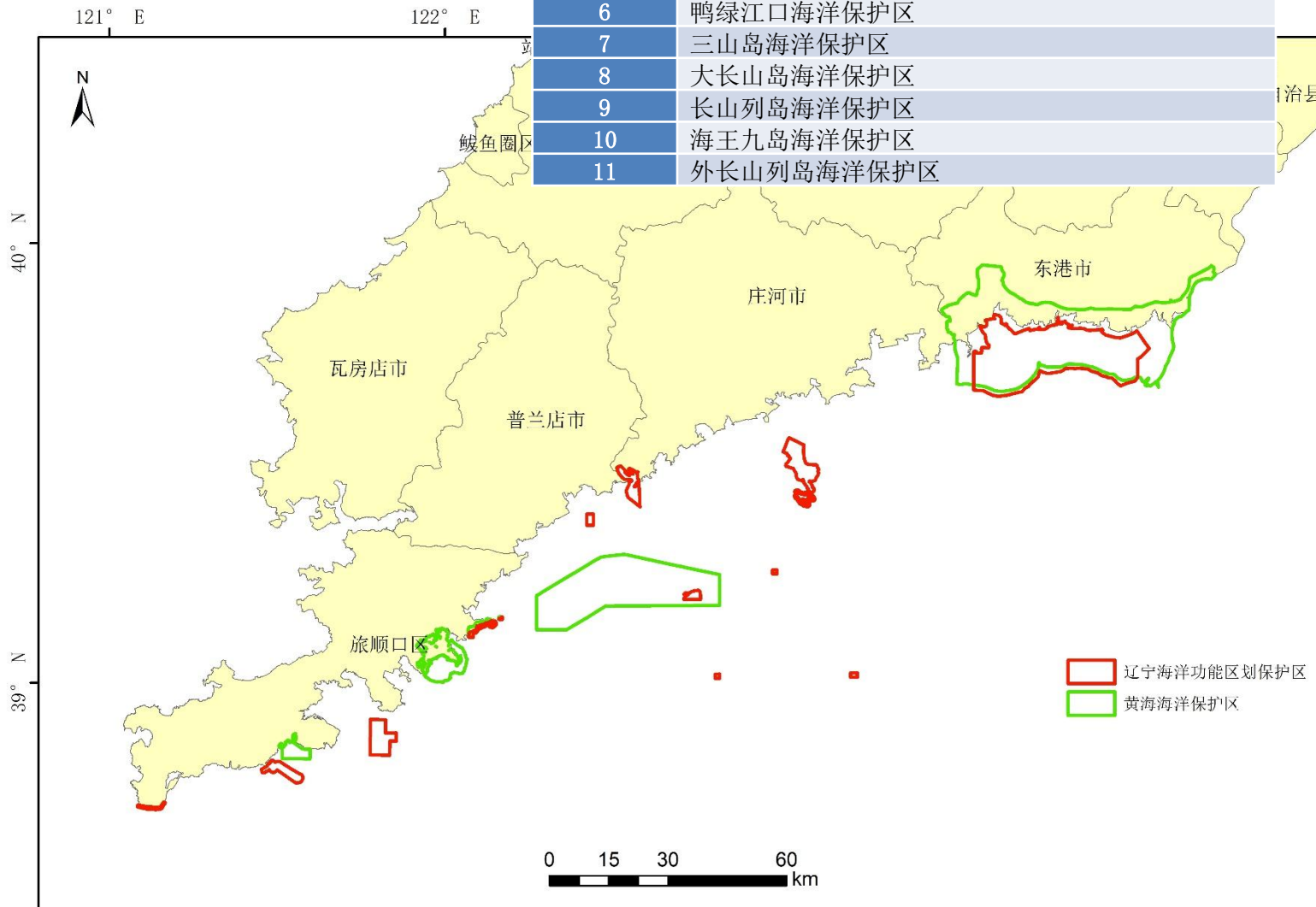
Results





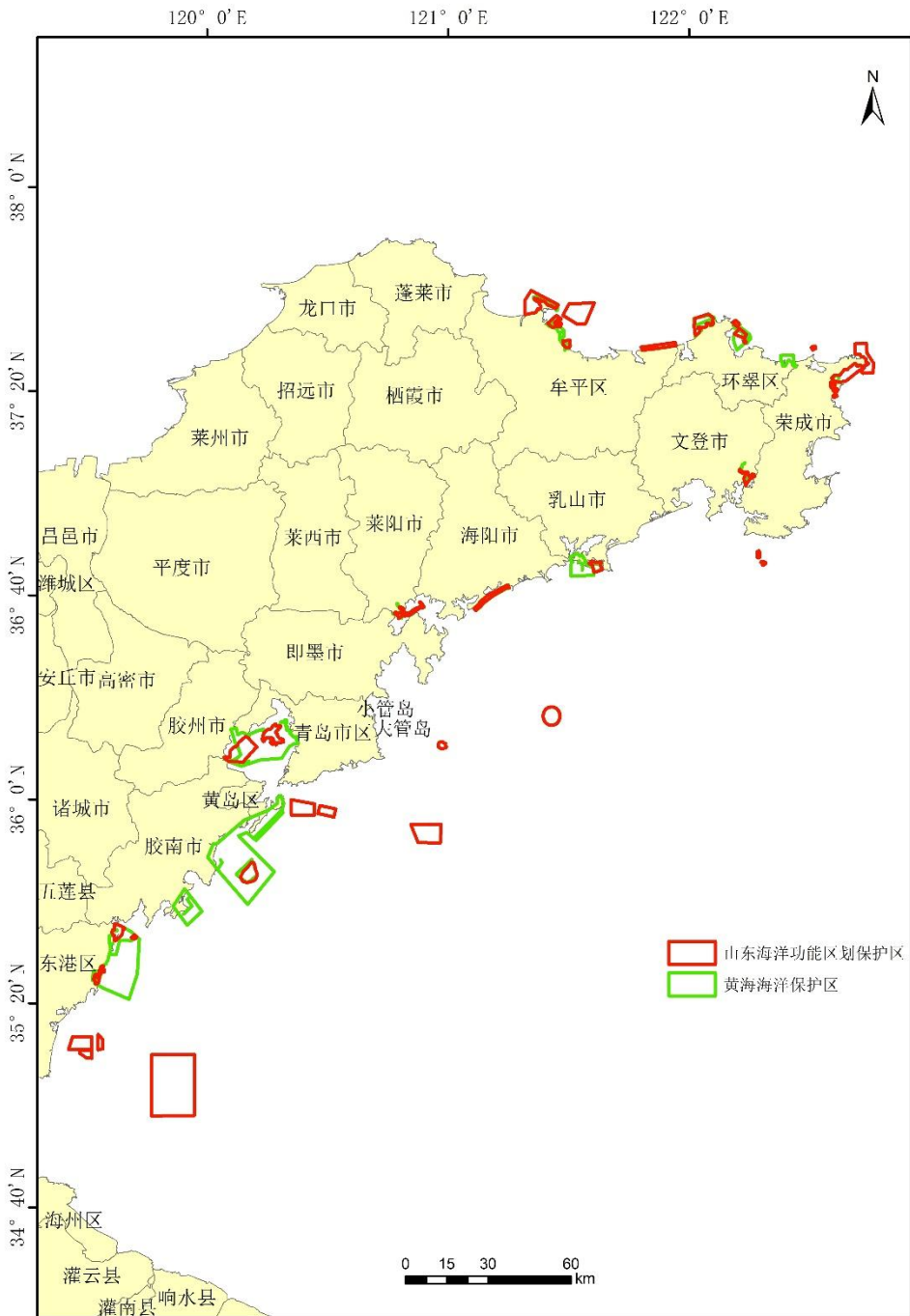
Results

编码	name
1	老铁山海洋保护区
2	老偏岛、玉皇顶海洋保护区
3	城山头海洋保护区
4	马牙岛海洋保护区
5	碧流河口海洋保护区
6	鸭绿江口海洋保护区
7	三山岛海洋保护区
8	大长山岛海洋保护区
9	长山列岛海洋保护区
10	海王九岛海洋保护区
11	外长山列岛海洋保护区

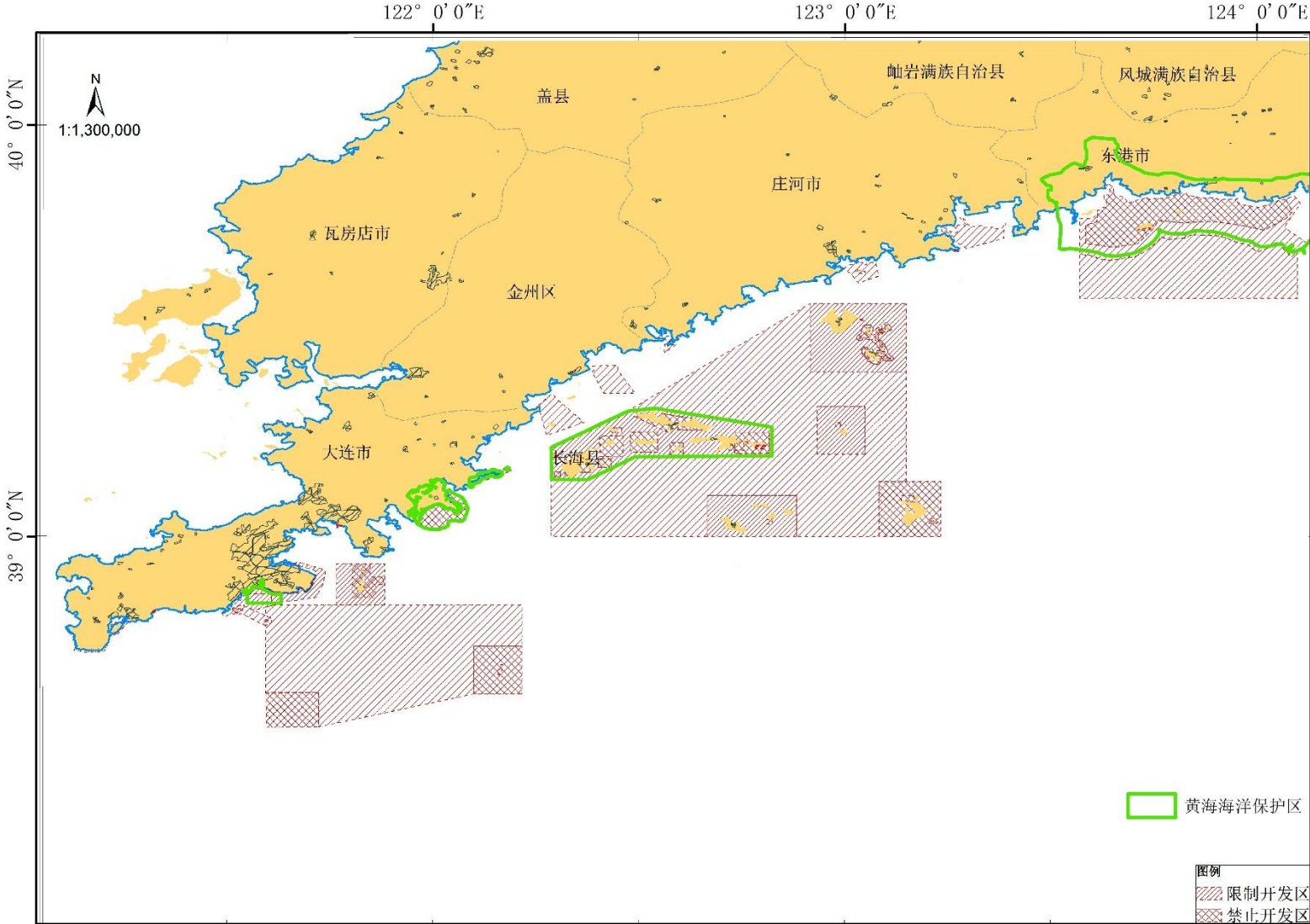


Results

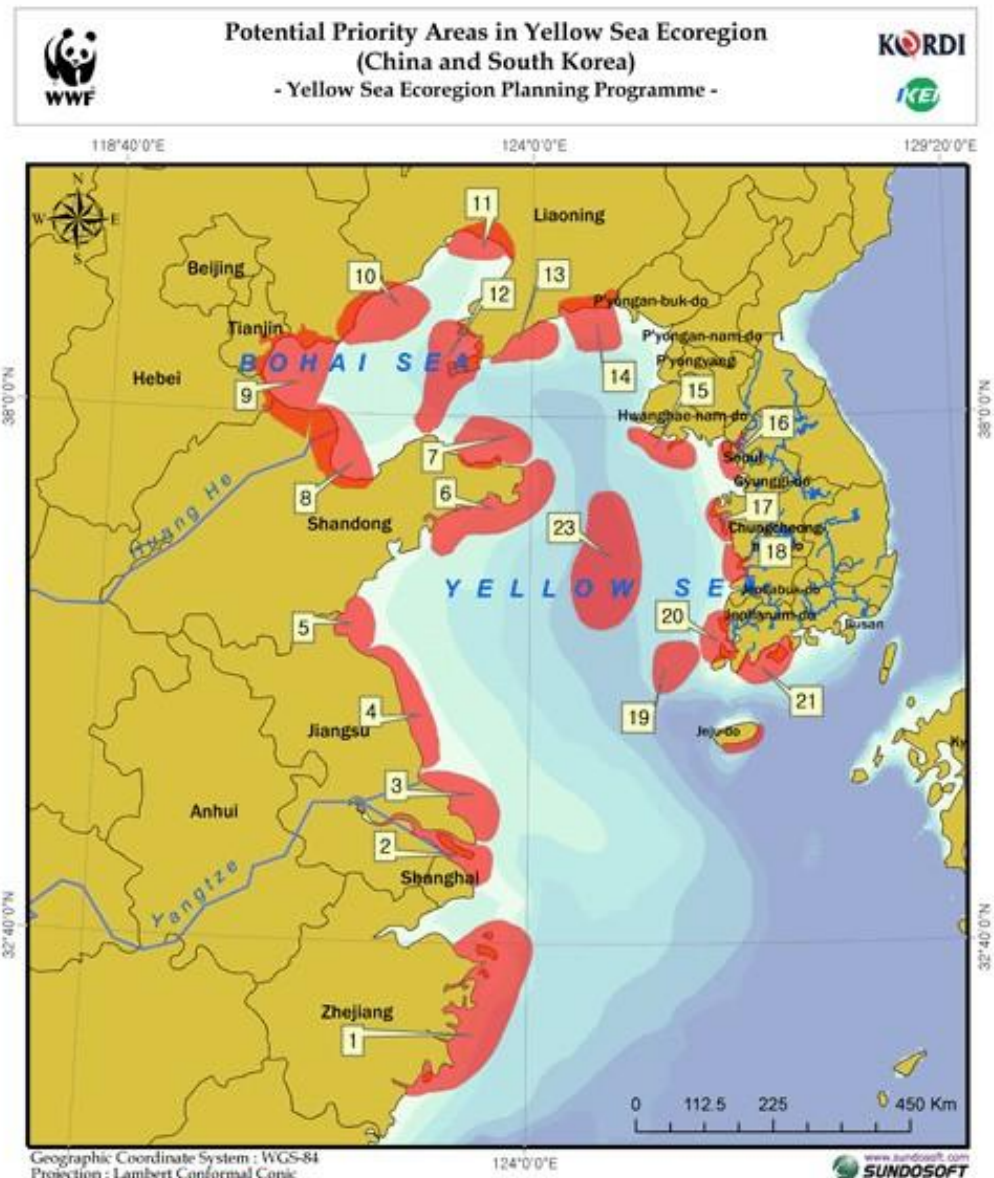
编码	name
1	芝罘岛岛群海洋保护区
2	烟台山生态海洋保护区
3	烟台崆峒列岛海洋保护区
4	烟台逛荡河口海洋保护区
5	牟平沙质海岸海洋保护区
6	威海小石岛海洋保护区
7	威海黑岛海洋保护区
8	威海刘公岛海洋保护区
9	威海日岛海洋保护区
10	威海鸡鸣岛海洋保护区
11	荣成成山头海洋保护区
12	荣成大天鹅海洋保护区
13	花斑彩石海洋保护区
14	荣成苏山岛海洋保护区
15	荣成二山岛海洋保护区
16	青龙河口海洋保护区
17	乳山塔岛湾海洋保护区
18	乳山汇岛海洋保护区
19	海阳万米海滩海洋保护区
20	五龙河口海洋保护区
21	胶州湾滨海湿地海洋保护区
22	日照两城河河口海洋保护区
23	日照市西施舌海洋保护区
24	日照桃花岛海洋保护区
25	日照太公岛海洋保护区
26	日照梦幻沙滩海洋保护区
27	日照万平口瀉湖湿地海洋保护区
28	日照岚山海上石碑海洋保护区
29	千里岩海洋保护区
30	长门岩岛群海洋保护区
31	青岛文昌鱼海洋保护区
32	青岛大公岛海洋保护区
33	青岛朝连岛海洋保护区
34	胶南灵山岛海洋保护区
35	日照大竹蛭海洋保护区
36	日照文昌鱼海洋保护区
37	日照金乌贼海洋保护区
38	日照前三岛海洋保护区



Results



Further Analysis



Bathymetry

- Under 200m
- 200m - 100m
- 100m - 90m
- 90m - 70m
- 70m - 50m
- 50m - 30m
- 30m - 10m
- 10m - 0m

Potential Priority Area

No	Area Name of PPAs	No	Area Name of PPAs	No	Area Name of PPAs	No	Area Name of PPAs
1	Zhoushan Archipelago	7	Yonsei	13	Changshando Islands	19	Hukuando Island
2	Wetland in Yangtze Estuary	8	Huanghe-Lalshouan	14	Yalujiang Estuary	20	Yeongsung Estuary
3	Southern Jiangsu Coast	9	Buhakian	15	Baengnyeongdo-Yeongpyeongdo Islands	21	Beseong-Yeosu Bays
4	Northern Jiangsu Coast	10	Qinghuangdao	16	Gyeonggi Bay	22	Jeju Island
5	Haitou Bay	11	Liaohu River Estuary	17	Cheonju Bay	23	Yellow Sea Cold Water Mass
6	Qing-Si	12	Hwanghae - Changgang Islands	18	Ganggang-Manggyeong-Donggang Estuaries		

Thanks!

