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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

HJ 710.7-2014

**Technical guidelines for biodiversity monitoring. i nland water
fish
(English Translation)**

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Foreword

To implement the "People's Republic of China Environmental Protection Law", "People's Republic of China Wild Animal Protection Law" to regulate Our observations of biological diversity, the development of this standard.

This standard specifies the main content of inland water fish diversity of observation, technical requirements and methods.

The Standard Appendix A, B, C, D, E, F, G, H, I, J, K informative appendices.

This standard is the first release.

This standard is developed by the Ministry of Environmental Protection Science, Technology organization.

This standard is mainly drafted by. Institute of Hydrobiology, Chinese Academy of Sciences, Kunming Institute of Zoology and the environment Protection of Nanjing Institute of Environmental Sciences.

This standard MEP October 31, 2014 for approval.

This standard since January 1, 2015 implementation.

The standard explanation by the Ministry of Environmental Protection.

1 Observation techniques guide the biodiversity of inland waters fish

1 Scope

This standard specifies the main content of inland water fish diversity of observation, technical requirements and methods.

This standard applies to all observations within the scope of People's Republic of China inland water fish diversity.

2 Normative references

This standard refers to the contents of the following documents or the terms. For undated references, the latest edition of to this standard.

GB/T 7714 after bibliographic references packet rules HJ 623 regional evaluation standards Biodiversity HJ 628 genetic resources collection technical specification (Trial) SL 58 hydrographic common measurement specification SL 219 water environment monitoring standards

3 Terms and Definitions

The following terms and definitions apply to this standard.

Inland waters inland water it refers to a variety of water on the land, including rivers, lakes, reservoirs, ponds, etc.

Fertilized eggs fertilized egg it refers to a hatch from eggs and sperm-egg binding film period.

Larvae larval fish

Refers to a hatch began to appear from the individual film to complete the metamorphosis period, generally refers to a temporary organ continued disappearance of adult fish organs the developmental stage.

Juveniles juvenile fish Refers to the complete metamorphosis, larvae feature disappears into fish phenotypic characteristics has been basically formed, the individual until sexual maturity before.

Adults adult fish

It refers to reach sexual maturity after initial individuals.

Full-length total length it refers to the distance from the snout to the end of the caudal fin.

Body length standard length it refers to the distance from the snout to the end of the tailbone.

Fork length fork length it refers to the end of the snout to the fork of the deepest point in the distance.

Weight body weight

It refers to the quality of the individual fish.

3.10

Shell weight carcass weight it refers to the quality of individual fish gutted.

23.11

Gonadal development of gonad stages Based on morphological, histological and cytological features gonads and gonadal dysgenesis staging.

a) ovarian staging

Stage I. Ovarian transparent thin line; the naked eye can not distinguish between male and female, do not see the eggs, no surface blood vessels or even thin. for not reached sexual maturity younger individuals possess.

Phase II. Ovarian more Chengbian strip, there are many blood vessels in the ovary, and testis has been able to distinguish, but the naked eye can not see yet Clear eggs, which have not yet been deposited eggs yolk.

Phase III. ovarian volume increase due to the growth of eggs, ovarian vascular development, the naked eye can see the accumulation of yolk eggs, but eggs are not big enough to round and can not be separated from the ovary peeled fold.

Stage IV. ovarian eggs filled with yolk, ovarian membrane is very thin, the surface of the blood vessel is developed, the eggs from the ovary easily fold Wrinkle on falling down, sometimes squeezing the abdomen may have a small amount of eggs.

Stage V. the spawning period, the ovary has been fully mature, was soft-like, eggs from the ovary fold off, discharged into the ovary chamber (Or abdominal), the lifting or broodstock Gently press the abdomen that is mature eggs in the outflow from the cloaca.

VI of. producing eggs will survive beyond the ovary, a number of spawning fish, ovarian atrophy was deflated bladder surface vascular congestion, after Into Phase II; batch spawning fish, there are still developing ovarian oocytes third and fourth phase, and after a period of time Development of production and then the next batch of eggs. Therefore, such short-term recovery after ovary by VI of the transition to stage IV.

b) testis staging

Phase I. I ovarian characteristics and the same is not reached sexual maturity younger

individuals possess.

Phase II. linearly or thin ribbon glands, translucent or opaque surface of the vessel was not significant.

Phase III. a circular rod-shaped, extruded fish belly cut testis or no semen, when making testis section collapse; not Small fish III of testis was red meat.

Stage IV. The milky white, surface blood vessels significantly, as testis section, collapse; squeeze the belly with white semen flow the semen into the water immediately after the dissolution scattered, this time has matured.

Stage V. reproductive period, testis soft, filled with milky semen, lift the head or abdomen that is light pressure from a lot of semen Gonopore outflow.

VI period. reproductive testis after, smaller in size, appearance wilt deflated, after recovery into Phase III.

3.12

Gonad weight gonad weight the total mass of the gonads, in grams (g).

3.13

Mature coefficient of maturity or gonadosomatic index (GSI) Gonad weight refers to the percentage of body weight (generally refers gutted weight), showing the relative size of the gonad index, used to measure Gonadal development degree and body distribution ratio between the energy resources and somatic gonad.

3.14

Sex ratio sex ratio

Referring to the same survey the number of individuals of different sex ratio waters of the same species.

3.15

Survival rate Start time refers to the ratio of the number of individual fish stocks at a certain period and termination.

3.16

Stuffed fish intestine degree intestine fullness it indicates how much food in the fish intestine, divided into grade 6.

0. empty intestine;

Level 1. Food accounts for about 1/4 of the intestine;

Level 2. food accounts for about 1/2 of the intestine;