GENERAL ANALYSIS.

INTRODUCTORY

Recent Agitation for Protection of Undersized Fish
Action of the Marine Biological Association
Arrangement and Scope of present Work

PART I.

I. The North Sea Fisheries
   Extension of the term
   Importance of the East Coast Ports
   Smaller Fishing Communities
   Economic and other Relations of Fishermen at the larger Ports

II. A "Voyage" on a Steam Trawler

III. An Outline of the Rise of Trawling in the North Sea
    Migration of South Coast Fishermen Eastwards and Northwards
    The Dogger and Great Silver Pit
    Hull and Grimsby
    Boston
    Discovery of the Iceland Grounds

IV. The Introduction of Trawling at a Northern Fishing Station

PART II.

I. The Definition of an Immature Fish
   Vague use of the term "Immature"
   The Biological Standard of Sexual Maturity
   Method of distinguishing between Sexual Maturity and Immaturity
   Average sizes of Sexual Maturity for the North Sea
   Dwarf Plaice from the Baltic Sea
   Average sizes of Sexual Maturity for the South Coast
   Other suggested Standards of "Maturity"

II. The Evidence of Deterioration in the North Sea and its Alleged Cause
    Board of Trade Returns
    Suggestions for Improved Fishery Statistics
    Deterioration alleged to be due to Over-fishing by Deep-sea Trawlers
    The Small-fish Grounds of the East Shore of the North Sea

III. The Life History of North Sea Food Fishes
    Each kind of Fish requires separate consideration
    The Turbot
    The Brill
    The Sole
    The Plaice
    The Lemon Sole and Dab
    Other Flat-fish
    Round-fish
IV. An Examination, with Statistics, of the Destruction of Immature Fish

a. By Deep-sea Trawling

The Plaice

Distribution of "large" and "small" Plaice

Statistics of "large" and "small" Plaice, Grimsby, 1892–94

Statistics of Size of Plaice, Grimsby, 1893–94

Mortality in the Trawl

Length of Haul of the Trawl

Share of Steam and Sailing Trawlers in the Destruction

Lowestoft

The Sole and Turbot

The Brill, Lemon Sole, and Round-fish

The Cod

The Haddock

β. By other Methods of Fishing

Line-fishing

Inshore Trawling and Shrimp Trawling

Shove-nets

Shrimp Seine or Horse-net

"Flat-fish Nets," Seines, and Stake Nets

V. Proposed Remedial Measures

Extent to which Destruction effected by Grimsby Fisheries

(i) Prohibition of Sale of Fish under certain Sizes

Effect of adopting the Biological Standard

Effect of adopting the Trade Standard

A Size Limit of 13 inches for Plaice alone will protect the Eastern Grounds

Effect of the Recommendations of the Select Committee

Different Size Limits for different Areas not difficult

(ii) Extension of Teritorial Limit

A Perfect Plan, but Impracticable

(iii) Close Seasons

Applied to the North Sea would ruin the Trade

Possible for Limited Areas

(iv) Restriction of Mesh

Power of Fish to escape not dependent only on Size

Impracticable to enlarge it for less active Fish alone

Transverse Braiding no Permanent Assistance

Square Meshes imply Excessive Weight

A Frame at the Cod End is of some Assistance

(v) Artificial Propagation

Hatching Fish is of little Use without Rearing them also

Mr. Douglas's Suggestion

CONCLUSIONS

CHART OF THE NORTH SEA

GENERAL ANALYSIS