

MAHSEER AS A COMPONENT OF FISH BIODIVERSITY IN BHUTAN



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Karma Wangchuk, Sr. LPO
National Research Centre for Riverine & Lake Fisheries
Department of Livestock
Ministry of Agriculture & Forests
Royal Government of Bhutan

Bhutan: - Small country
- High biodiversity
- Large conservation commitment



New Challenges



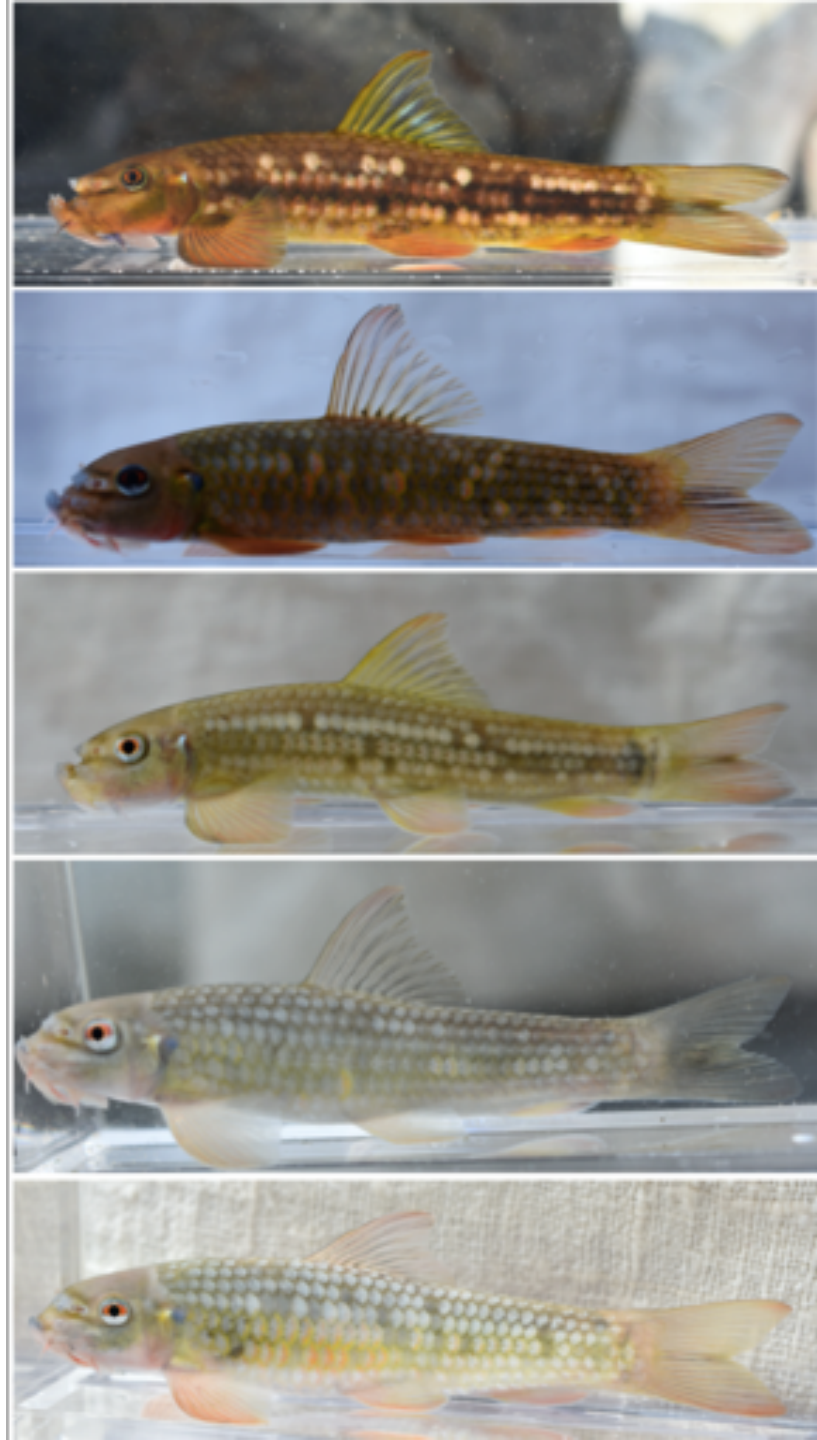
Sand mining



Hydroelectric dam

Baseline of Fish Biodiversity

- Where are the fish
- Population size
- Life history and Ecology





- NRCR&LF (National Research Centre for Riverine & Lake Fisheries)
- DoL (Department of Livestock)
- Bhutan Trust Fund for Environmental Conservation
- Fishery Database for Bhutan

METHODS



FISH FAUNA ASSESSMENT

Preliminary Survey



SITE SELECTION

- local interview
- Field visit

Site Selection

Stratification system adapted from FAO Guide

- Rivers divided into sections of 5 km
- 1 km stretch identified for sampling



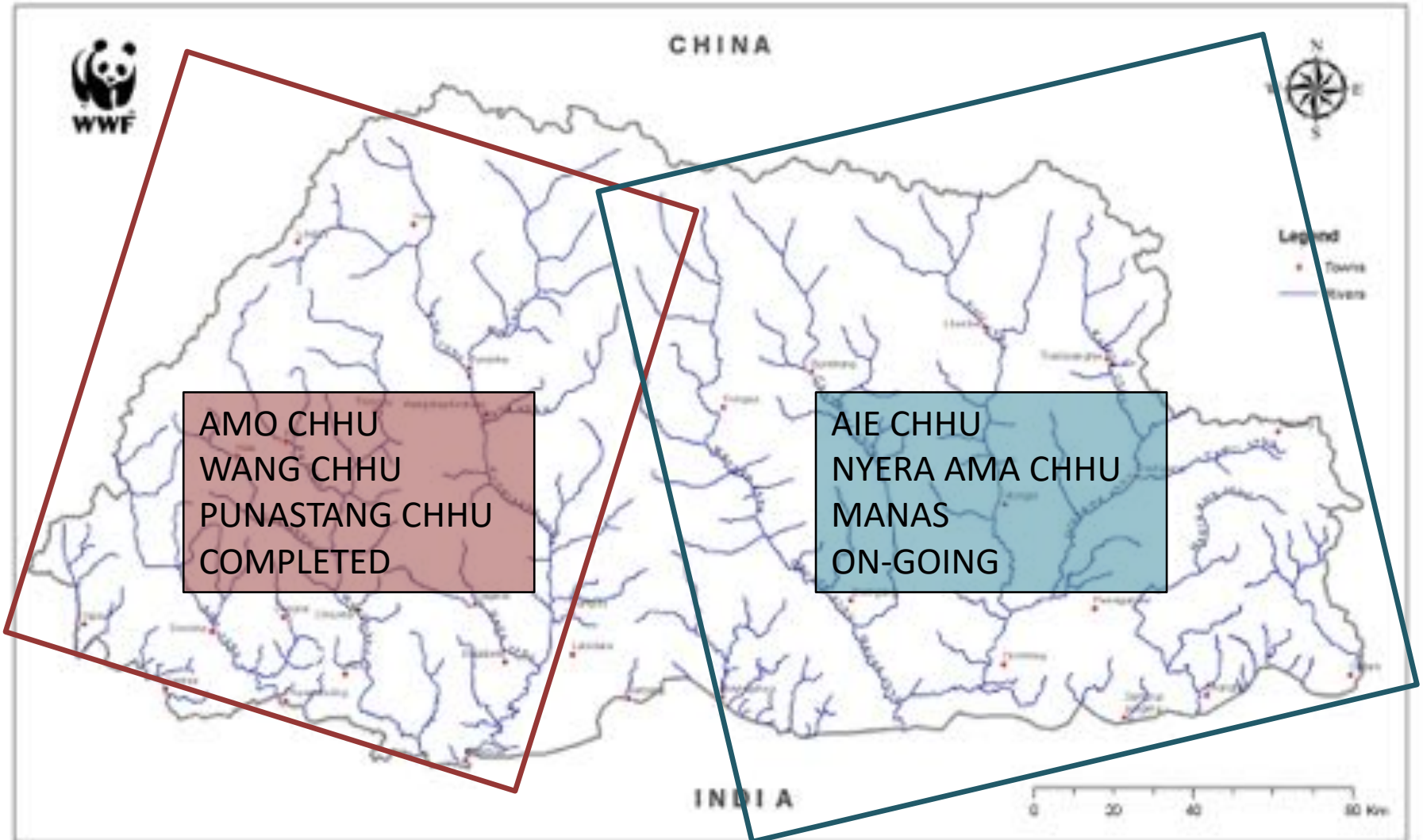
Site Selection

Criteria for Site Selection

- Must contain different habitat types (riffles, pools and run)



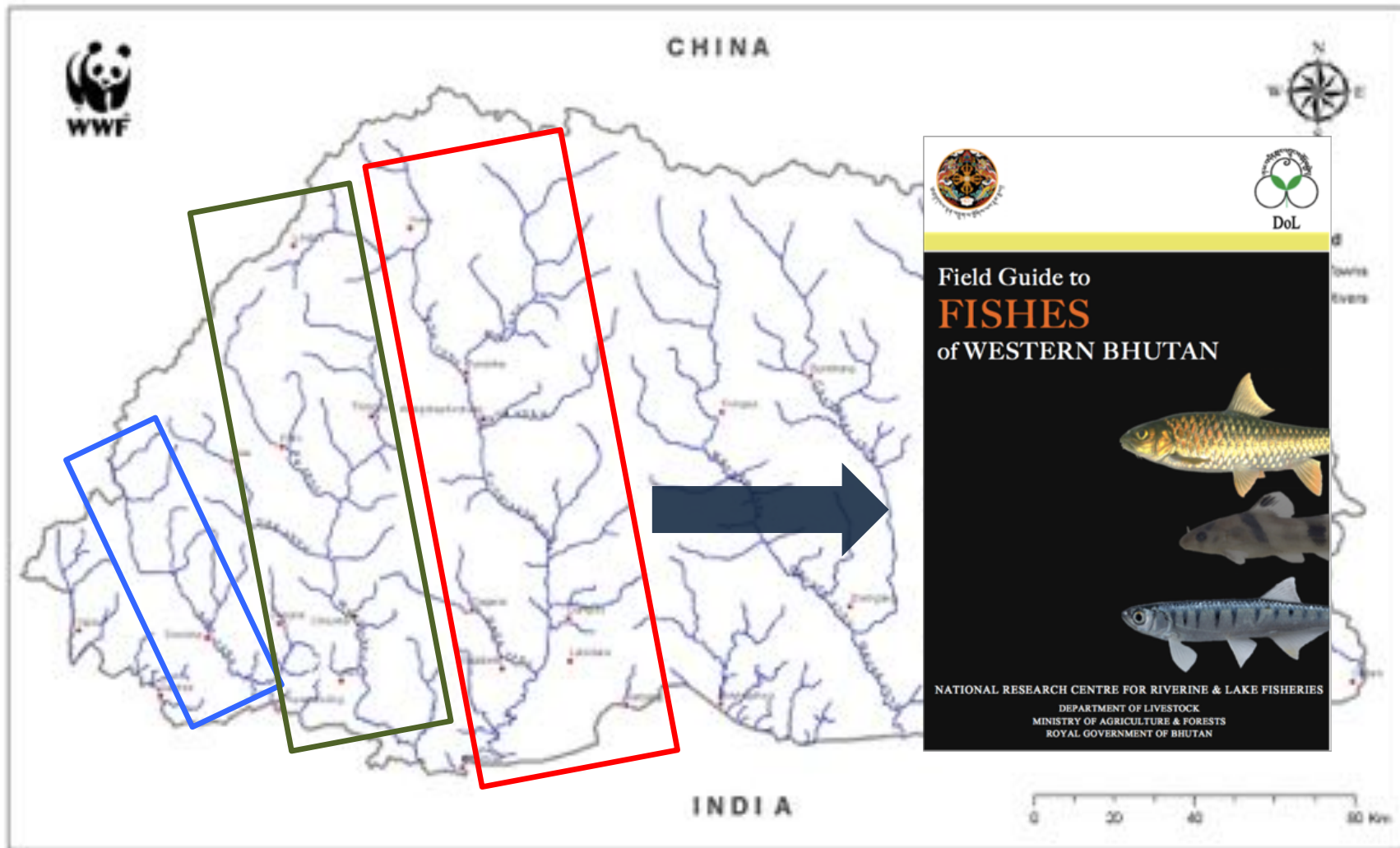
RIVERS OF BHUTAN



AMO CHHU
WANG CHHU
PUNASTANG CHHU
COMPLETED

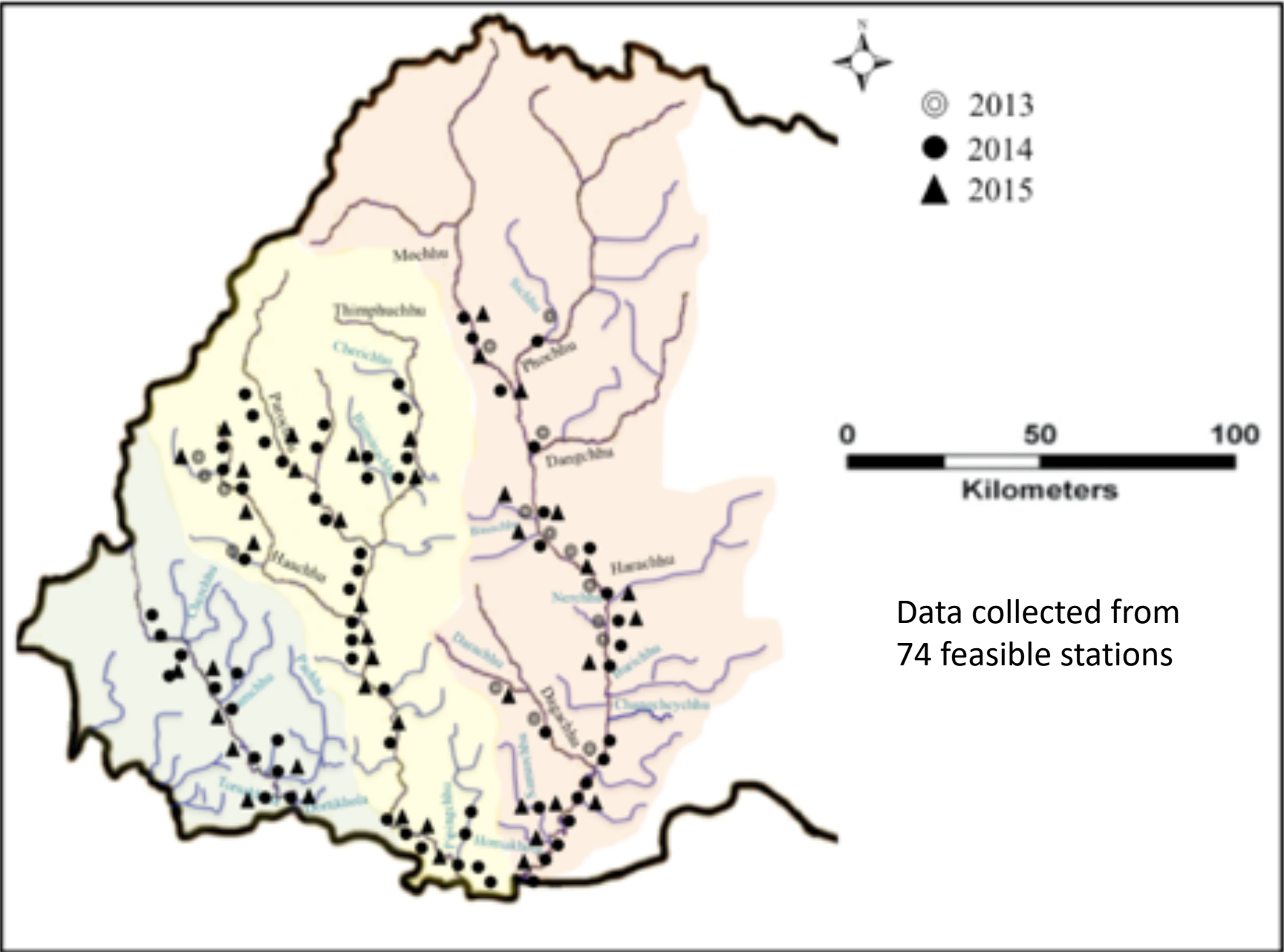
AIE CHHU
NYERA AMA CHHU
MANAS
ON-GOING

RIVERS OF BHUTAN



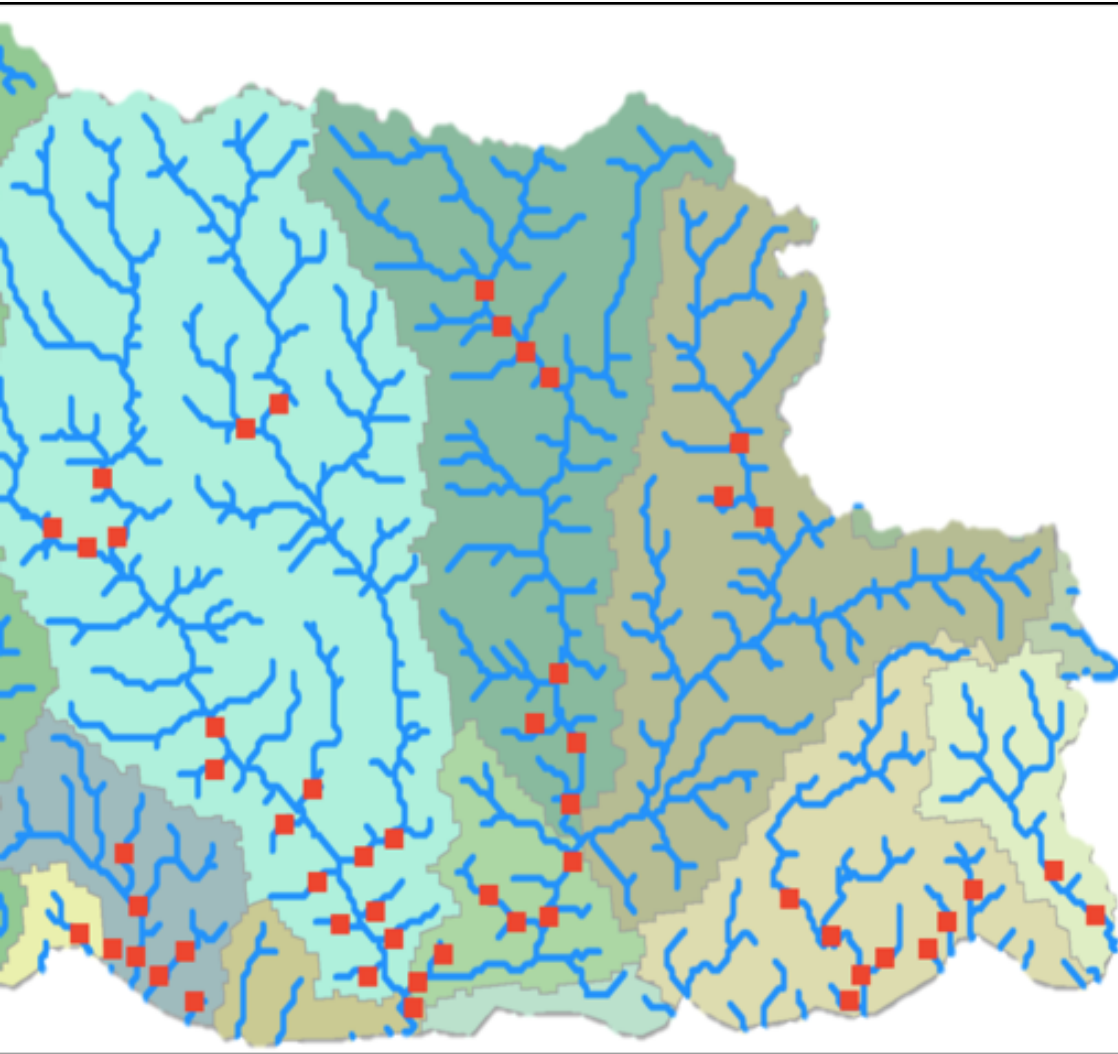
PHASE 1: Amochhu, Wangchhu & Punastanchhu

Sampling Sites and Schedule



Data collected from 74 feasible stations

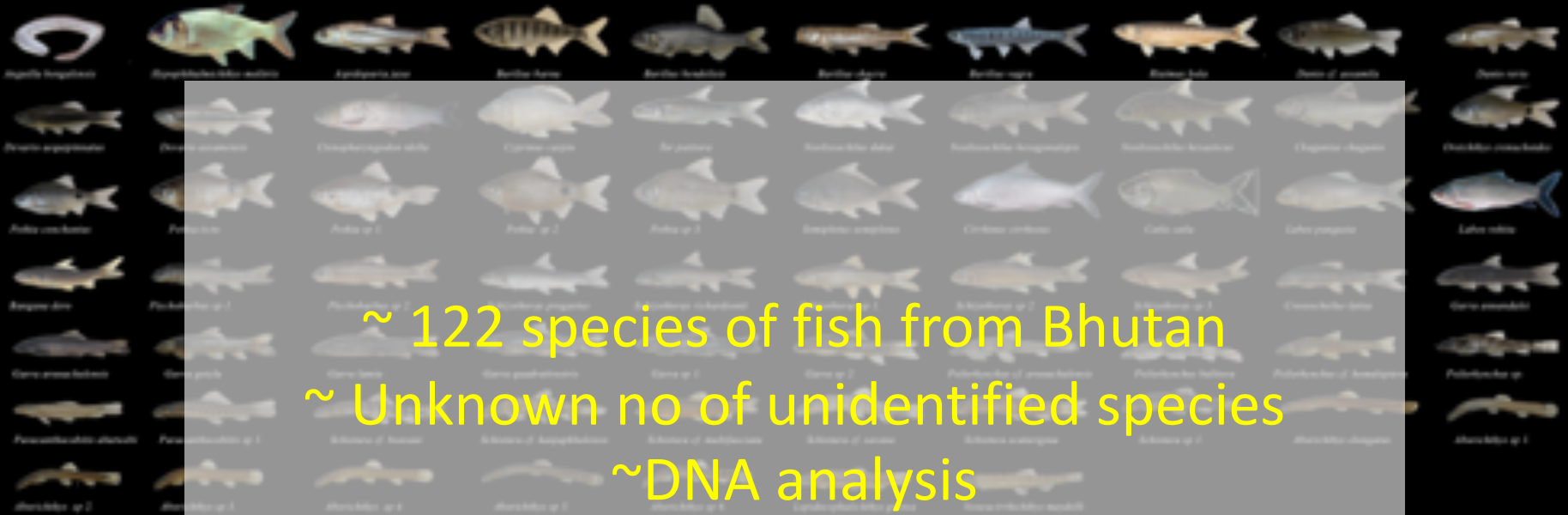
Sampling sites in Eastern Bhutan



- Sampling completed in 53 stations across 9 districts and 3 major river basins
- 18 new species collected in this study

FINDINGS

CYPRINIFORMES



SILURIFORMES



SALMONIFORMES

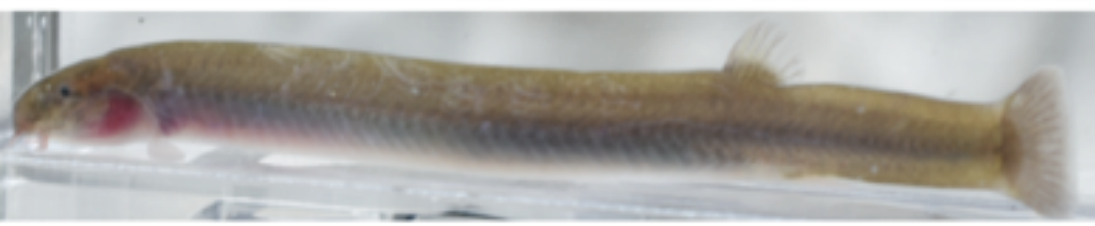


SYNBRANCHIFORMES



PERCIFORMES





- 18 new species
collected from Eastern
Bhutan

ELECTROFISHING







Additional Sampling Methods



FISH FAUNA ASSESSMENT



Electroshocking

FISH FAUNA ASSESSMENT

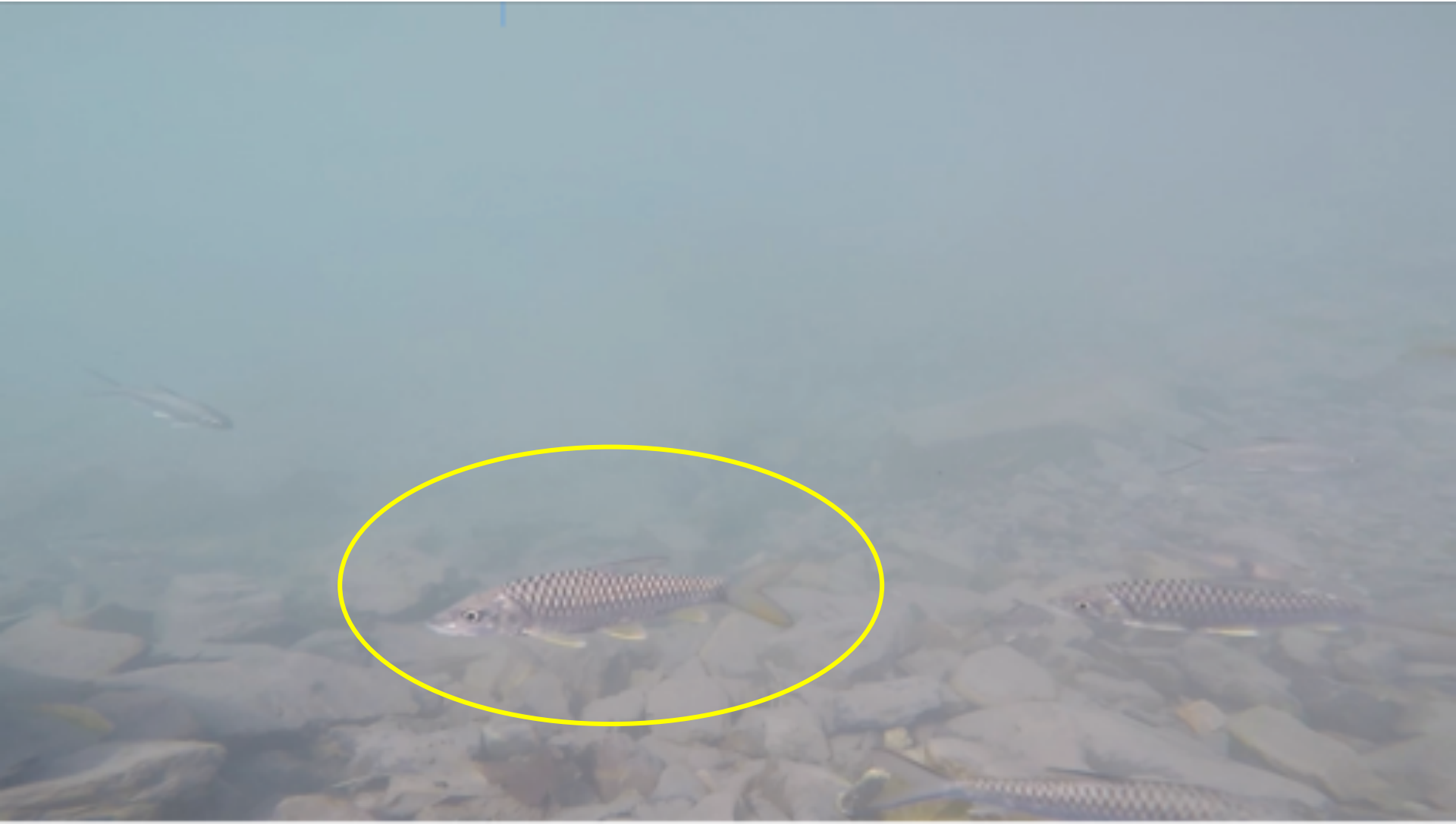
Sampling Challenges



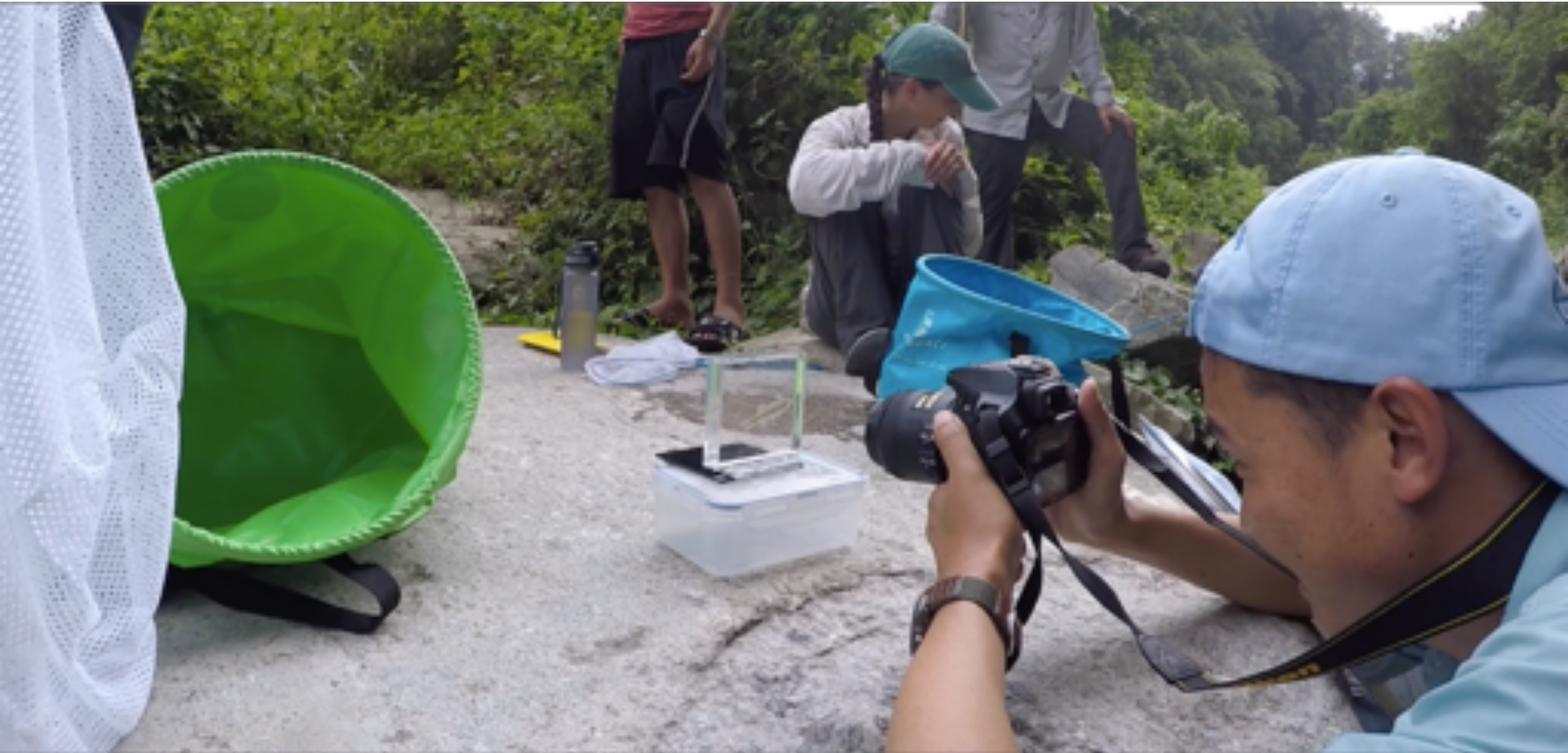
FISH FAUNA ASSESSMENT



FISH FAUNA ASSESSMENT



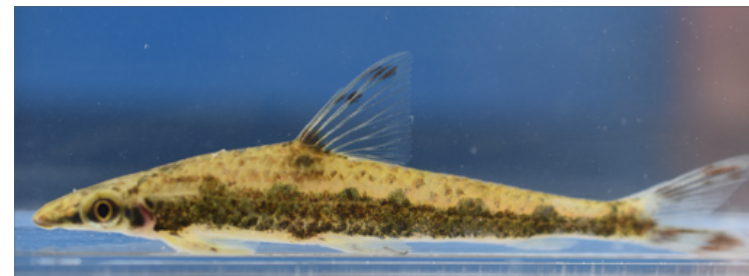
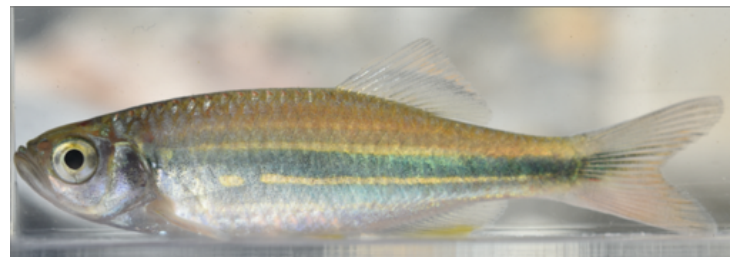
Fish Photographs



Old fish photographs from the book



New photographs



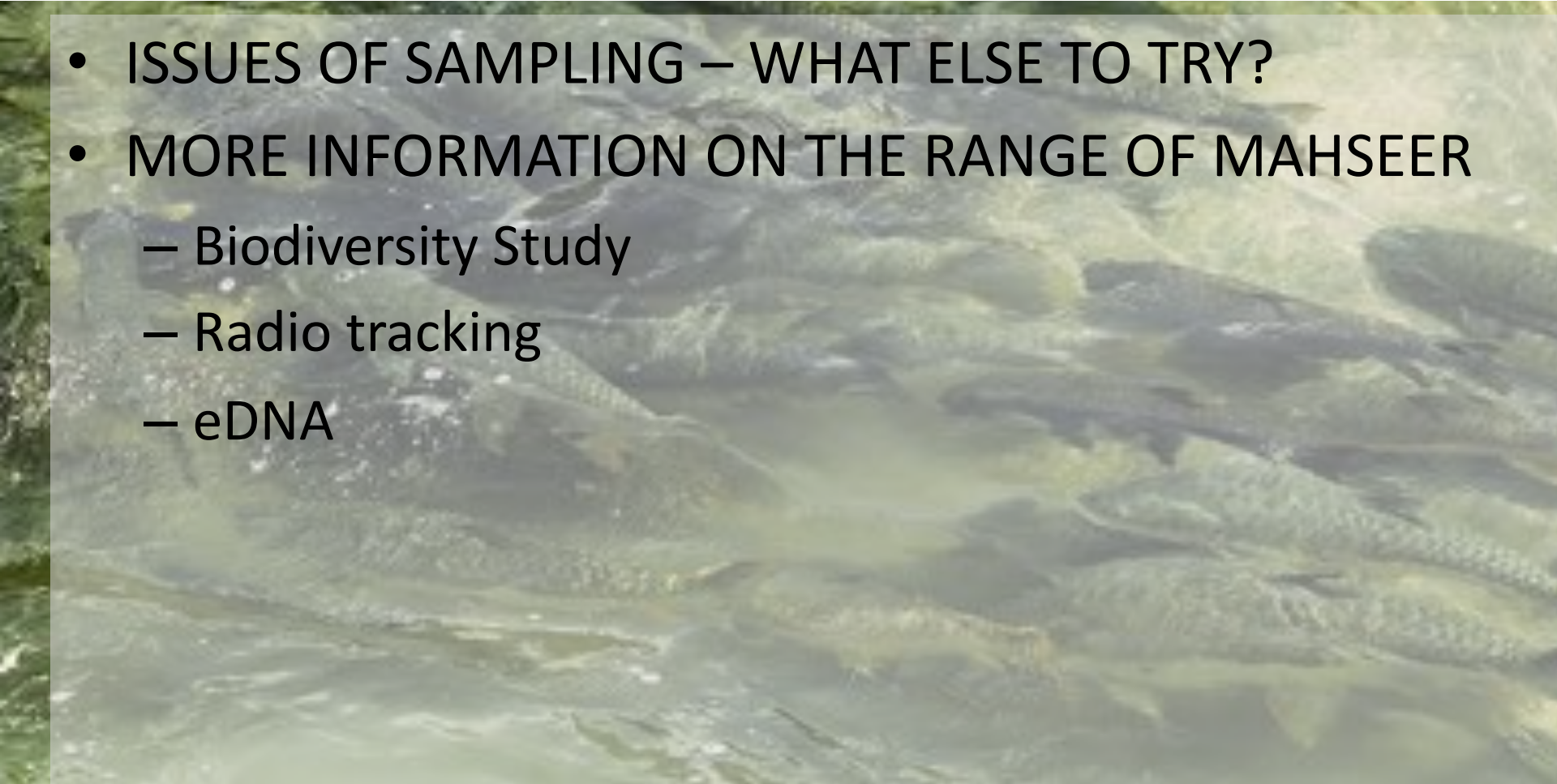
BUT WHAT ABOUT MAHSEER?

- Very few samples collected
- Less plentiful and difficult to catch



BUT WHAT ABOUT MAHSEER?

- ISSUES OF SAMPLING – WHAT ELSE TO TRY?
- MORE INFORMATION ON THE RANGE OF MAHSEER
 - Biodiversity Study
 - Radio tracking
 - eDNA





A DAY SPENT SAMPLING IS A DAY
WELL-SPENT!
THIS IS OUR STORY, HOPE YOU LIKED
IT.

THANK YOU



Field Guide to
FISHES
of WESTERN BHUTAN



NATIONAL RESEARCH CENTRE FOR RIVERINE & LAKE FISHERIES

DEPARTMENT OF LIVESTOCK
MINISTRY OF AGRICULTURE & FORESTS
ROYAL GOVERNMENT OF BHUTAN

Copies available at NRCR&LF,
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