

Nishan Kafle

Graduate Research Assistant

University of Arkansas at Pine Bluff (UAPB)

Address: S.J parker Agriculture Research Centre, Pine Bluff, Arkansas

E-mail: kaflenishan25@gmail.com ;  +1-870-360-7493

EDUCATION

M.S. in Aquaculture and Fisheries

Expected 2026

University of Arkansas at Pine Bluff, Arkansas, United States

B.Sc. in Agriculture

2017-2021

Institute of Agriculture and Animal Science, Tribhuvan University, Nepal

RESEARCH INTEREST

- Aquatic Toxicology / Environmental toxicology
- Fish Stress Physiology
- Water Quality Management
- Nutrient and Metal Dynamics in Aquatic Systems

RESEARCH EXPERIENCE

Graduate Research Assistant, University of Arkansas at Pine Bluff

Jan 2025 - Present

- Investigating **stress memory as a mitigation strategy** against **iron-induced toxicity** in channel catfish (*Ictalurus punctatus*).
- Conducting **controlled exposure experiments** involving elevated waterborne iron with monitoring and managing **physicochemical water quality parameters** to assess toxicological outcomes
- Assessing **physiological, biochemical, and molecular stress biomarkers** related to metal exposure

Undergraduate Research Fellow

2021

- Conducted **land-use-based soil nutrient and chemical analysis** (N, P, K, OM)
- Applied **SPSS and GIS-based spatial analysis** for environmental data interpretation

PUBLICATION

Pant, R., Gurung, D., Bohara, B., Kafle, N., & Gairhe, J.J. (2022). *Spatial analysis of soil characteristics under different land uses in Arun and Shadananda municipalities, Bhojpur District, Nepal*. **International Research Journal of Advanced Engineering and Science**, 7(2), 229–235.

TECHNICAL SKILLS & EXPERIENCE

Aquatic Systems & Exposure Models:

- Pond systems, RAS, raceways, flow-through systems

Water Quality & Toxicant Analysis:

- DO, ammonia, alkalinity, hardness, TDS, iron, nitrogen, phosphorus

Biochemistry & Physiology

- Microplate reader, AAS mineral analysis
- Oxidative stress & antioxidant indices
- Ammonia excretion, protein, lipid & glycogen estimation

Hematology & Serology:

- Hemoglobin, Hematocrit, serum protein, albumin, globulin

Molecular & Cellular Techniques

- DNA/RNA extraction, cDNA synthesis
- Primer design, RT-qPCR, gel electrophoresis

Data Analysis & Software: SPSS, GraphPad Prism, SigmaPlot, MS Excel

PROFESSIONAL EXPERIENCE

Fisheries Technician at Shreenagar Agro Group

March 2022 – December 2024

- Provided technical support in freshwater aquaculture, emphasizing fish health, disease prevention, and stress mitigation
- Monitored and interpreted key water quality parameters to guide evidence-based pond management decisions
- Collaborated with farmers and research institutions to implement best management practices and apply research outcomes in the field

LEADERSHIP AND INVOLVEMENT

- **Secretary**, United States Aquaculture Society (USAS) – Student Sub-Unit, UAPB
- Student Volunteer, **World Aquaculture Society Conference**, New Orleans (2025)
- Student Volunteer, **American Fisheries Society Conference**, San Antonio (2025)

CONFERENCE PRESENTATION (Oral)

- Presentation of Research on the title “**INDUCTION OF STRESS MEMORY THROUGH MILD-IRON PRE-EXPOSURE ENHANCES TOLERANCE IN JUVENILE CATFISH**” at Professional Agricultural Workers Conference (PAWC), Montgomery, Alabama, November 16-18, 2025
- Presentation of Research on the title “**DIETARY BENTONITE MITIGATES HIGH IRON WATERBORNE TOXICITY IN CHANNEL CATFISH**” at American Fisheries Society Conference, San Antonio, Texas, August 11-15, 2025
- Presentation of Research on the title “**DIETARY BENTONITE MITIGATES HIGH IRON WATERBORNE TOXICITY IN CHANNEL CATFISH**” at World Aquaculture Society Conference, New Orleans, Louisiana, March 6-11, 2025

LABORATORY MANAGEMENT SKILLS

- Proven expertise in following laboratory’s Quality Assurance (QA) and Quality Control (QC) programs, Standard Operating Procedures (SOPs) and Good Laboratory Practices (GLPs).
- Equipment purchases, calibration, and maintenance, prepare reagents, and maintain inventory of supplies and equipment.
- Maintain the record book, sample registration & documentation, and prepare lab safety protocols.
- Prepare reports and present the findings in regional and national meetings.

PEER REVIEW ACTIVITIES

Reviewer for:

- Aquatic toxicology
- Fish physiology and Biochemistry
- Journal of Fish Biology

REFERENCES

Dr. Rebecca Lochmann

Former President, World Aquaculture Society & Professor, UAPB

Email: lochmannr@uapb.edu

Dr. Amit Kumar Sinha

Associate Professor, Department of Aquaculture and Fisheries, UAPB

Email: sinhaa@uapb.edu

Dr. Tracy Hudson

Associate Professor, Department of Biology, UAPB

Email: hudsont@uapb.edu