DATA AND SCIENCE FOR DECISION MAKING IN TRANSBOUNDARY WATERS IN LATIN AMERICA AND THE CARIBBEAN (LAC)

Building Capacity on Scientifically Robust Tools and Methodologies for IWRM in La Plata Basin: Data Access

First edition

📅 Date
November 14th – 18th 2022

🌐 Language
Simultaneous translation available in Spanish and English.

📍 Location (Hybrid event)
In person training: Ministry of Public Works, Av. Pres. Roque Sáenz Peña 777, Ciudad Autónoma de Buenos Aires, Argentina

Link: **https://bit.ly/3DyE1Jp**

Day 1: Monday, November 14th, 2022

Introductions

9:00-10:30 · **Opening Session**
- Government of Argentina
- CIC Secretary
- CIC Member Countries
- GS/OAS
- U.S. State Department

10:30-11:00 **Break**

11:00-12:00   **Introduction to the ISAT**

Interagency Water Working Group Science and Applications Team (ISAT)

- Objectives
- Work Plan
- Software/Installation

12:00-1:00   **Lunch**

Session 1: Introduction to Hydrological Remote Sensing

1:00-2:00   **Introduction to Remote Sensing Principles**

Sean McCartney
Senior Scientific Analyst, ARSET Program
NASA Goddard Space Flight Center (SSAI)

2:00-3:00   **Overview of Land Cover Remote Sensing**

Sean McCartney
Senior Scientific Analyst, ARSET Program
NASA Goddard Space Flight Center (SSAI)

3:00-3:30   **Break**

3:30-4:30   **Accessing and Examining Land Cover**

Sean McCartney
Senior Scientific Analyst, ARSET Program
NASA Goddard Space Flight Center (SSAI)

4:30-5:00   **End-of-day Discussion**

Interagency Water Working Group Science and Applications Team (ISAT)

5:00-6:00   **Opening Day Welcome Reception**

Hotel Grand Brizo

Day 2: Tuesday, November 15th, 2022

Session 2A: Precipitation

9:00-9:15   **Welcome/Agenda**

Interagency Water Working Group Science and Applications Team (ISAT)

9:15-10:00   **GPM Mission Overview**

Dr. Venkat Lakshmi
Professor, Department of Engineering Systems and Environment
The University of Virginia

10:00-11:00 **Precipitation Analysis and Discussion**

Dr. Venkat Lakshmi
Professor, Department of Engineering Systems and Environment
The University of Virginia

11:00-11:30 **Break**

11:30-12:00 **Introduction to MODIS**

Perry Oddo
Research Scientist, Hydrological Sciences Laboratory
NASA Goddard Space Flight Center (SSAI)

12:00-1:00 **Access & Analysis of MODIS NDVI**

Perry Oddo
Research Scientist, Hydrological Sciences Laboratory
NASA Goddard Space Flight Center (SSAI)

1:00-2:00 **Lunch**

Session 2B: Soil Moisture & Evapotranspiration

2:00-2:30 **Introduction to SMAP**

Dr. John Bolten
Lab Chief, Hydrological Sciences Laboratory
NASA Goddard Space Flight Center

2:30-3:30 **SMAP Data Access & Analysis**

Dr. John Bolten
Lab Chief, Hydrological Sciences Laboratory
NASA Goddard Space Flight Center

3:30-4:00 **Break**

4:00-4:30 **Introduction to Evapotranspiration Access**

John Eylander
Physical Scientist, Engineer Research and Development Center
U.S. Army Corps of Engineers

4:30-5:00 **Access Landsat-Based ET**

John Eylander
Physical Scientist, Engineer Research and Development Center
U.S. Army Corps of Engineers

5:00-5:30 **Questions/End-of-day Discussion**

Interagency Water Working Group Science and Applications Team (ISAT)

Session 3A: Water Height / Aerial Extent

9:00-9:15 **Welcome/Agenda**

Interagency Water Working Group Science and Applications Team (ISAT)

9:15-10:00 **Introduction to MOGWAI**

John Eylander
Physical Scientist, Engineer Research and Development Center
U.S. Army Corps of Engineers

10:00-11:00 **MOGWAI Example**

John Eylander
Physical Scientist, Engineer Research and Development Center
U.S. Army Corps of Engineers

11:00-11:30 **Break**

11:30-12:00 **Introduction to AWS**

Ariel Amue
Business Development - Public Sector - Latin America
Amazon Web Services (AWS)

12:00-12:30 **Q&A**

Interagency Water Working Group Science and Applications Team (ISAT)

12:30-1:30 **Lunch**

Session 3B: Water Quality

1:30-2:00 **Freshwater Health Index**

Dr. Maíra Bezerra
Director, Healthy Watersheds
Conservation International

2:00-3:00 **Introduction to Water Quality Remote Sensing**

Dr. Nima Pahlevan
Remote Sensing Scientist, Terrestrial Information Systems Laboratory
NASA Goddard Space Flight Center (SSAI)

3:00-3:30 **Break**

3:30-4:00 **Water Quality Remote Sensing Applications**

Daniel Maciel
University of Maryland / INPE

4:00-4:30 **Q&A**

Interagency Water Working Group Science and Applications Team (ISAT)

4:30-5:00 **Questions/End-of-day Discussion**

Interagency Water Working Group Science and Applications Team (ISAT)

Day 4: Thursday, November 17th, 2022

Field Visit

8:00-12:00

INA's Laboratory and Field Visit
Meet at Ministry of Public Works 8:00 AM
(transportation will be provided)
Government of Argentina

1:00-2:00

Lunch

Session 4: Introduction to Land Surface Modeling

2:00-2:45

Overview of Global Land Data Assimilation (GLDAS)

John Eylander
Physical Scientist, Engineer Research and Development Center
U.S. Army Corps of Engineers

2:45-3:30

Summary of Surface Water Budget Components

Dr. Venkat Lakshmi
Professor, Department of Engineering Systems and Environment
The University of Virginia

3:30-4:00

Break

4:00-5:00

Access & Analysis of GLDAS Runoff

John Eylander
Physical Scientist, Engineer Research and Development Center
U.S. Army Corps of Engineers

5:00-5:30

Questions/End-of-day Discussion

Interagency Water Working Group Science and Applications Team (ISAT)

Day 5: Friday, November 18th, 2022

Session 5A: Introduction to Modeling Frameworks

9:00-10:30

La Plata Decision Support System (DSS)
CIC/Deltares

10:30-11:00

Break

11:00-12:00

Hydrologic Decision Support Tools: Introduction to SWAT-Online & NASAaccess

Dr. Ibrahim Mohammed
Senior Research Scientist, Hydrological Sciences Laboratory
NASA Goddard Space Flight Center (SAIC)

12:00-1:00   **Introduction to Land Information System (LIS) & USACE's Hydrologic Modeling System (HEC-HMS)**

John Eylander USACE
John Bolten NASA

1:00-2:00   **Lunch**

2:00-3:00   **A DSS Case Study in Peru**

Pedro Coli
Water Resources Specialist
RTI

Session 5B: Training Debrief & Future Directions

3:00-4:00   **Training Debrief:**
- Reflections on the week
- Directions for future trainings
- Data / Technical needs

ISAT/OAS/CIC

4:00   **Close Out**

ISAT/OAS/CIC