

Global Wildfire Collective Academy



Fire Modeling Literacy Program
May 2026



Global Wildfire Collective Overview



**Wildfires &
Global Change**



**Fire Ecology
& Biodiversity**



**Fire
Management
& Policy**



**Equitable
Community Safety
& Resilience**

The GWC facilitates **scientific and strategic collaboration** among scientists, policymakers, communities, firefighters and industry to enable wildfire resilience and recovery for **ecological and social systems**

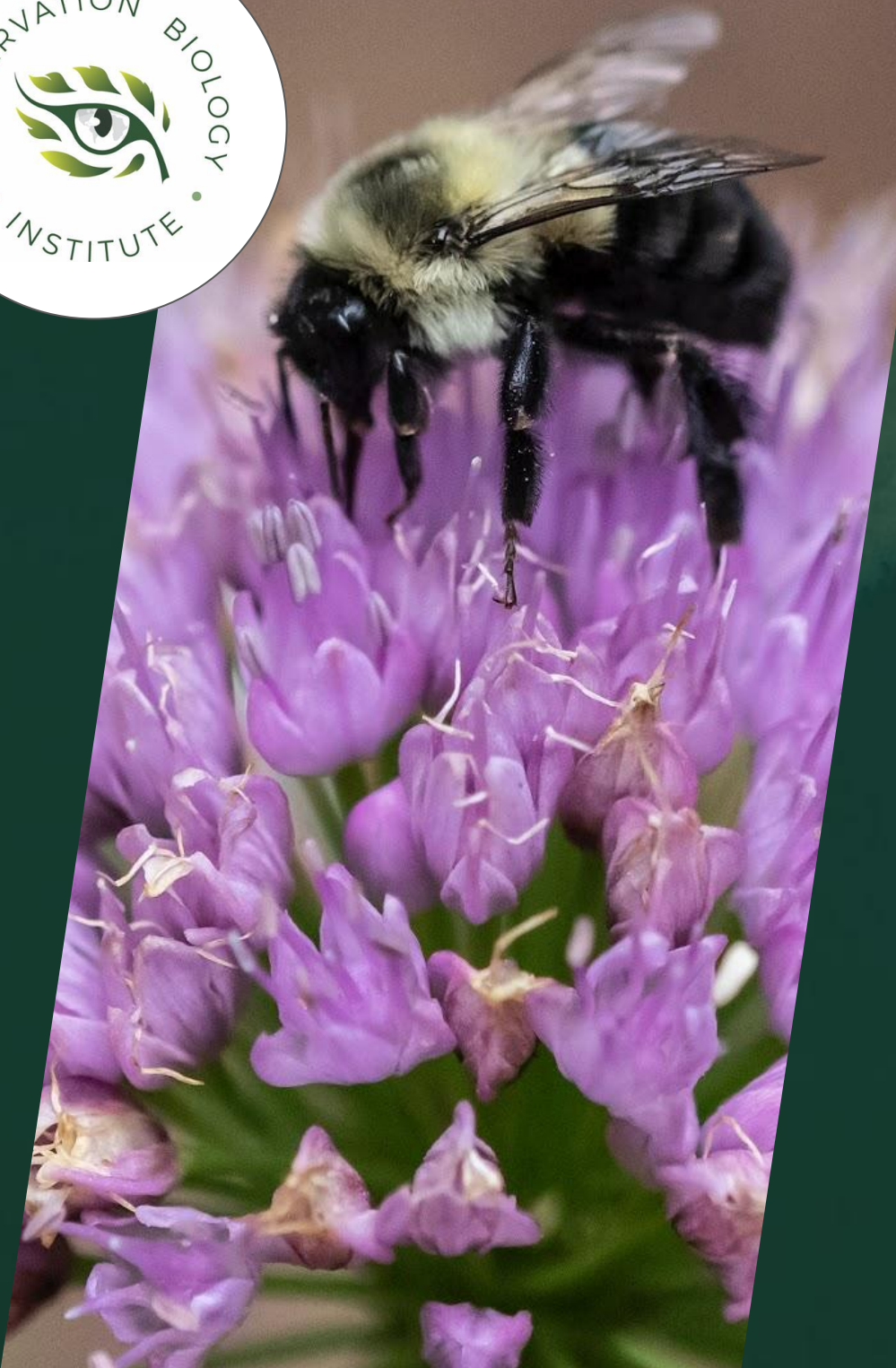
GWC and Conservation Biology Institute



The **Global Wildfire Collective** is a flagship initiative of **Conservation Biology Institute (CBI)**

CBI is a **science-based conservation** NGO/
non-profit with **three decades** of experience

CBI provides **advanced conservation science, technology, and planning** to empower partners in solving the world's critical ecological challenges





GWC Charter Members & Partner Institutions

- **42** charter members

- **14** partner institutions

- **26** countries represented

(as of May 2026)





GWC Charter Members - Secretariat



Dr. Alexandra D. Syphard
GWC Chief Scientist
Conservation Biology Institute
United States



Mr. Karl Peet
GWC Senior Global Strategist
Conservation Biology Institute
United States



Ms. Robin Jones
GWC Director
Conservation Biology Institute
United States



Ms. Jenna Sposato
GWC Communications
Conservation Biology Institute
United States



GWC Charter Members - Research (1) (selected)

Interdisciplinary Wildfire Research Scientists



Dr. Alejandro Miranda

Researcher
Department of Forest Science
University of La Frontera
Chile



Dr. David Bowman

Director Fire Centre, Professor of
Pyrogeography and Fire Science at
the University of Tasmania
Australia



Dr. Saeedeh Eskandari

Associate Professor
Research Institute of Forests
and Rangelands
Iran



Dr. Johan Sjöström

Senior Research Scientist
RISE Research Institutes of Sweden
Sweden



Dr. Stijn Erik R Hantson

Associate Professor
Faculty of Natural Sciences
Universidad del Rosario
Belgium / Colombia



Dr. Marijana Kapovic Solomun

Department of Forest Ecology,
Faculty of Forestry
University of Banja Luka
Bosnia and Herzegovina



GWC Charter Members - Research (2) (selected)

Interdisciplinary Wildfire Research Scientists



Dr. Juli G. Pausas

Professor of Research, Consejo Superior de Investigaciones Científicas (CSIC)
Spain



Dr. Sally Archibald

Professor of Animal, Plant and Environmental Sciences
University of Witwatersrand
South Africa



Dr. Mike Flannigan

BC Innovation Research Chair in Predictive Services, Emergency Management and Fire Science, Faculty of Science
Canada



Dr. Fantina Tedim

Professor
Department of Geography
Universidade de Porto
Portugal



Dr. Iokiñe Rodríguez

Senior Lecturer in Environment & Development,
University of East Anglia
Venezuela / United Kingdom



Dr. Anne Ganteaume

Directrice de Recherche
INRAE
France



GWC Charter Members - Fire Operations (selected)

Firefighting practitioners



Lt. Bernardo Lenis Duque
Institutional Development Director
Benemérito Cuerpo de Bomberos
Voluntarios de Cali
Colombia



Mr. Markristian Madariaga Pareja
Jefe Nacional de previsión del riesgo
ante Incendios Forestales
Cuerpo General de Bomberos Voluntarios
Perú



Sr. Óscar Enrique Tibaquicha Velandia
Presidente
Federación Nacional de Brigadas de
Incendios Forestal
Territorio Muisca/Colombia

Interdisciplinary team members



Mr. Steve Hawks
Senior Director for Wildfire,
Insurance Institute for Business
& Home Safety (IBHS)
United States



Dr. Arindam Roy
Climate Science Advisor
Clean Air Fund
India



Mr. Shawn Zimmermaker
Staff Chief of Law Enforcement
CAL FIRE
United States



GWC Partner Institutions (selected)



**Academia
National de
Bomberos de
Colombia**



**Benemérito
Cuerpo de
Bomberos
Voluntarios de
Cali**



**Centre de
Recerca
Ecològica i
Aplicacions
Forestals
(CREAF)**



**Center for
Climate and
Resilience
Research (CR2)**



**Leverhulme
Centre for
Wildfires,
Environment and
Society**



**Environmental
Defense Fund
(EDF)**



**International
Savanna Fire
Management
Initiative (ISFMI)**



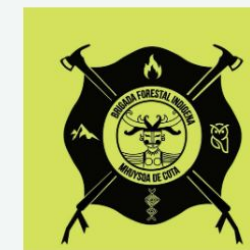
**La Unidad
Nacional para la
Gestión del
Riesgo de
Desastres
(UNGRD)**



**Universidad de
La Frontera**



**Universidad del
Rosario**



**Brigada Forestal
Indígena de Cota**



RÉPUBLIQUE TOGOLAISE

**Ministère de
l'Environnement
et de la
Ressource
Forestière
(MERF)**





GWC Activities and Services



- ❖ **GWC Academy**
Trainings, workshops & webinars
- ❖ **GWC Research Collaboration**
Cross-region & cross-discipline transferability
- ❖ **GWC Spatial Data Gateway**
Platform for data & technology exchange
- ❖ **GWC Discussion Forum**
Multilingual exchange science & practice

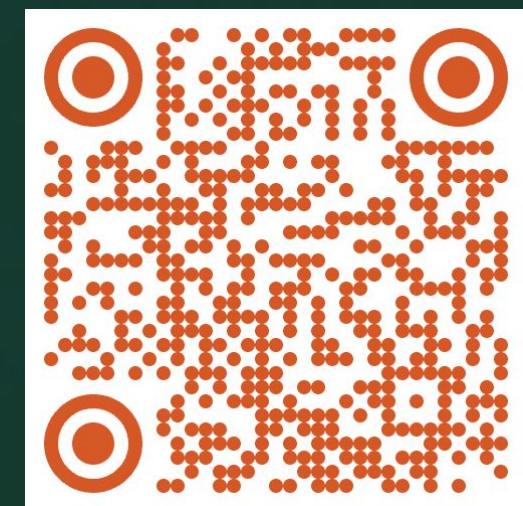


GWC Academy - Fire Modelling Literacy Program

FMLP Target Outcomes

- Establish bridges from fire modelling researchers to practitioners and policymakers
- Build applied cross-sector fire modelling literacy (e.g. utilities, insurance, agriculture)
- Equip users to interpret model outputs, make risk-informed decisions under uncertainty
- Create tiered curriculum offering professional development and certification ecosystem

**Further info on
GWC Academy
and
Fire Modelling
Literacy Program**



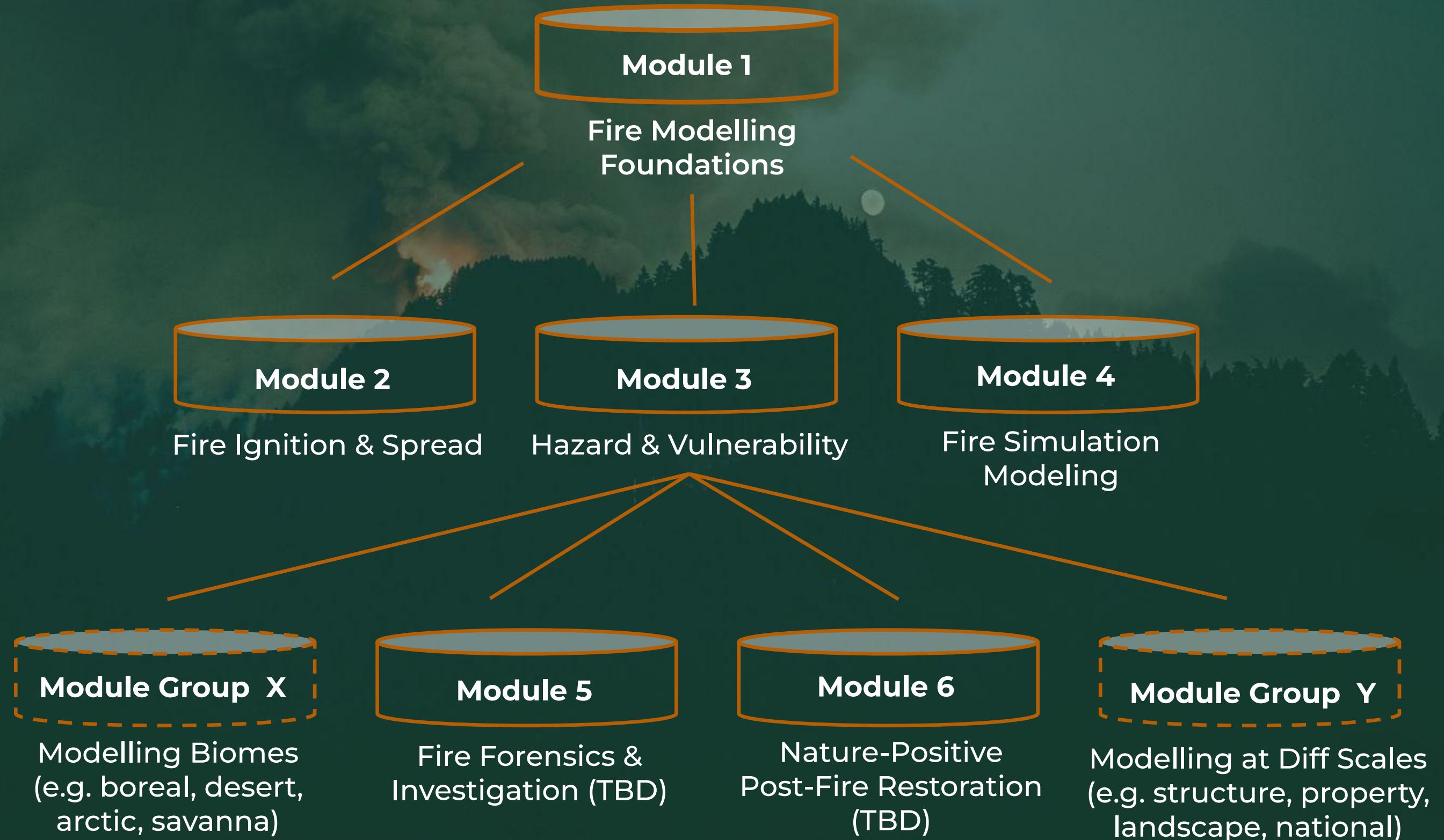


Planned FMLP Training Modules (Years 1-3)

Tier 1: Base Module
Foundation

Tier 2: Core Modules
Application

Tier 3: Further Modules
Specialisation





FMLP Module 1 - Objectives

What Module 1 will deliver:

- Establish a shared vocabulary for discussing wildfire models & contexts
- Introduce major classes of wildfire models & questions they can answer
- Build foundational understanding of assumptions, uncertainty & limitations
- Strengthen ability to interpret common model outputs in relevant contexts
- Provide framework to match modeling approaches to research & planning needs
- Prepare participants for more in-depth technical modules (forthcoming)

**Register for Module 1
live-virtual session
24-25 June 2026**



What Module 1 will not deliver:

- Detailed software instruction or platform-specific training
- Advanced mathematical or physics-based derivations
- **Operational** certification or qualification for fire modeling approaches
- In-depth sector-specific **technical** application of fire modeling



Module 1 Pt 1: Foundations of Fire Modelling Literacy

Key Objectives:

- Establish shared vocabulary for discussing wildfire models & contexts
- Introduce major classes of wildfire models & questions they can answer
- Build foundational understanding of assumptions, uncertainty & limitations

1. Opening Poll: Modeling Priorities: *Highlight diversity in decision contexts; show that different questions require different model types/methods*

2. Why Model Questions Differ Across Scale, Discipline and Region: *Show how processes/impacts change, from ignitions to global fire cycles*

3. What Do Fire Models Do? *Define fire models as tools to represent processes, behavior, effects, risk*

4. Major Families of Fire Models: *Illustrate how families differ in scale, inputs, outputs, assumptions*

5. Choosing a Model: Fit for Purpose: *Introduce framework for choosing a modeling approach based on question, purpose, scale, and constraints*

6. Modeling as a Workflow, not a Button: *Emphasize need for iteration, judgment, subject matter expertise, not just software execution*

7. Model Assumptions, Uncertainty & Limitations *Explain how assumptions shape outputs, introduce uncertainty relative to assumptions*

8. Lessons for Interpretation: *Reinforce how inputs, assumptions, and scale strongly influence outputs*



Module 1 Pt 2: Decision-Making under Uncertainty

Key Objectives:

- Illustrate how different decision contexts require different modeling approaches
- Address human/ ecological dimensions/risk (ecosystems, communities built assets)
- Show how models can support management/ policy decisions & research questions

Case Study 1: Reserve-scale fire risk assessment and management planning for biodiversity & built assets in San Diego Zoo Safari Park and Biodiversity Reserve

Core Questions: Where is wildfire risk highest under current conditions, and what wildfire management actions should be prioritized?

Core Focus: Near-term decision-making under current landscape and climate conditions with goal to minimize fire risk while conserving biodiversity

Participation Opportunities: Explore a combination of ignition probability models, fire spread simulation models, and large fire distribution models

Case Study 2: Long-term landscape change and scenario based planning across diverse Southern California ecosystems

Core Questions: How might fire regimes & biodiversity change under different scenarios? What vegetation & land use policies can reduce human/habitat impacts?

Core Focus: Decade- to century-scale planning in a dynamic, interacting environment using a model that can account for feedback among processes

Participation Opportunities: Reflect on individual decision contexts and time horizons and identify what modeling approaches would best match those needs

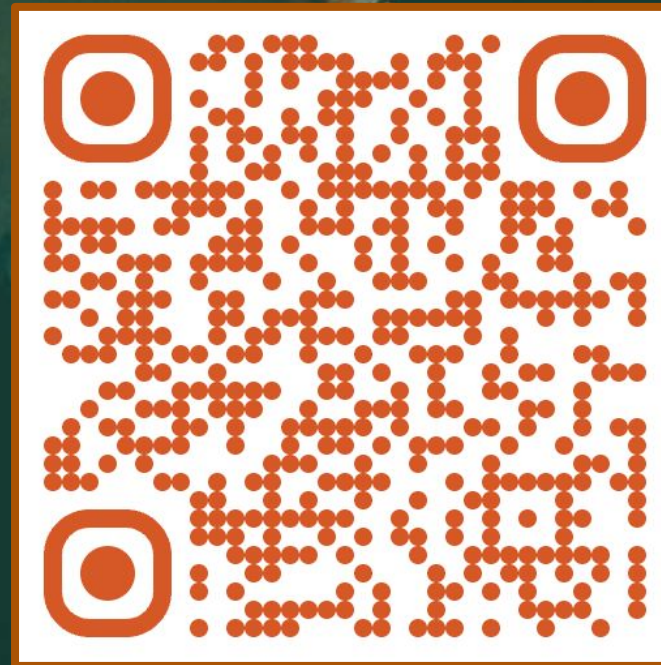


FMLP User Preference Survey

The survey is intended to help understand user needs,
decision-making contexts, levels of familiarity & training priorities
Responses will help shape **course content, format & level of detail**



English



Español

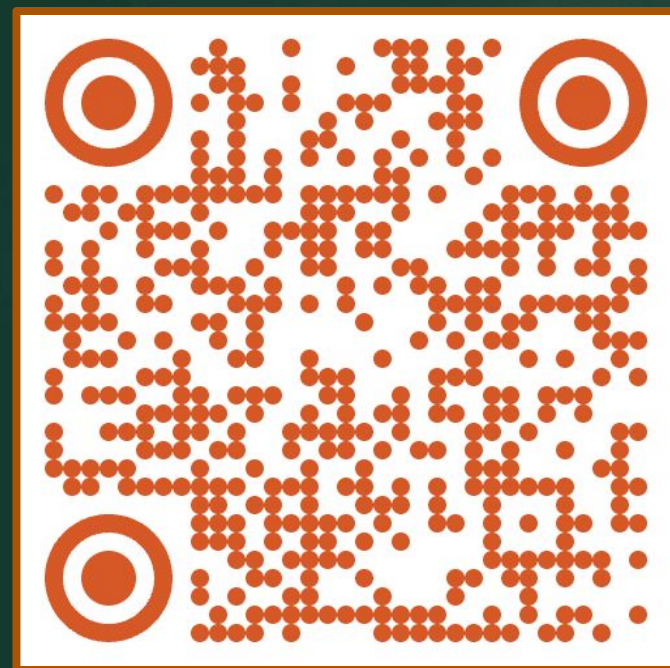


Français

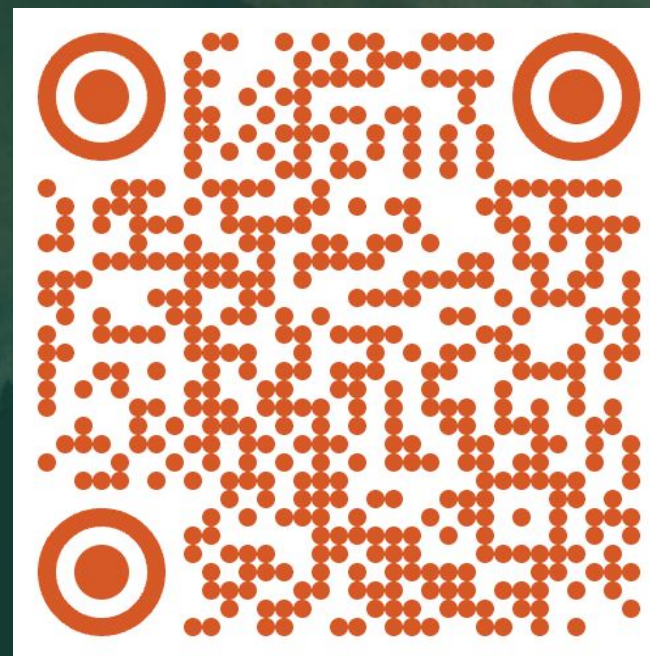


Engage with the GWC Academy

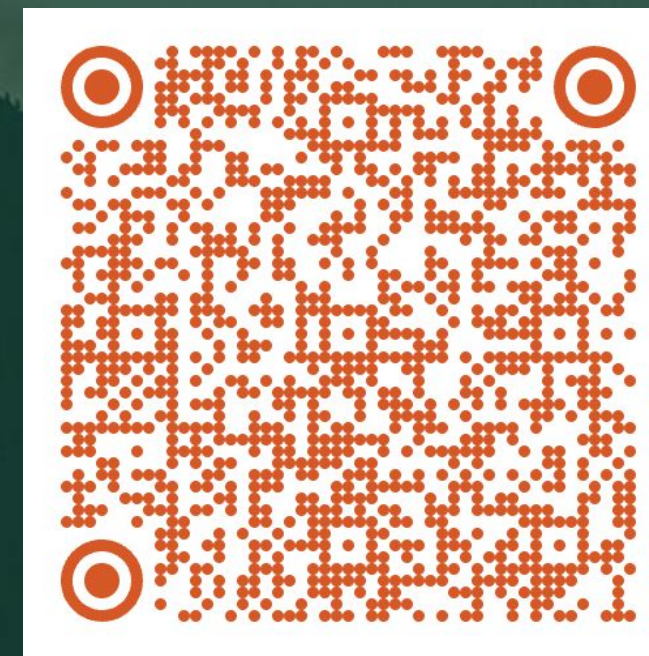
Use these links for further background, recent and upcoming events, and training registration



Global
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Collective



GWC
Academy
Overview



24-25 Jun 2026
FMLP Training
Registration