

# 2012 MISSISSIPPI WATER RESOURCE CONFERENCE JACKSON, MS, APRIL 3, 4



The Simeto River

The Simeto Process

Research strategy

US-Italy Exchange



THE SIMETO RIVER 113 km long 4182 km basin 10 cities along its path the most important river of Sicily RURAL AREA

It is rich of BIODIVERSITY - HISTORICAL HERITAGE AGRICULTURAL PRODUCTION, ...

... design ...



NATURAL RESOURCES ...



PARTNERSHIP AMONG: ...

SERVICE LEARNING: University applies its theoretical skills and ...

PARTICIPATORY ACTION RESEARCH: Researchers enter inside practical problems and evaluate their hypothesis during the action; Participants get capabilities in raising problems and building strategies.

	INDUCTIVE	REFLECTIVE	DEDUCTIVE	Main strategy
OBJECTIVIST				Complementary strategies
CONSTRUCTIONIST				Useful tools
SUBJECTIVIST				Useful other methods of (Design/Qualitative)

MULTIDISCIPLINARY RESEARCH TEAM: cross-disciplinary investigation



Thanks to an European Scholarship on International Exchanges, Beyond Frontiers, I had the possibility to be a Short Term Visiting Scholar at Mississippi State University ...



RELATIONSHIP BETWEEN: LAYMEN/EXPERTS/NGOs/INSTITUTIONS

Defining Laymen, Experts, NGOs, Institutions



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PhD proposal

# Rethinking Environmental Management through collaborative practices.

## The Simeto River Agreement: just a crazy idea or a possible outcome?

### LAYMEN, EXPERTS, NGOs AND INSTITUTIONS IN WATERSHED MANAGEMENT

#### Advisors

Prof. Filippo Gravagno, PhD - University of Catania

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# **THE SIMETO RIVER**

## **SOME SNAPSHOTS**

# **RESEARCH APPROACH**

## **METHODOLOGY**

# **THE SIMETO PROCESS**

## **AN OVERVIEW**

# **US-ITALY EXCHANGE**

## **COMPARING FOR LEARNING**



# THE SIMETO RIVER

## SOME SNAPSHOTS



**SOUTH ITALY\_  
EAST SICILY\_  
SIMETO  
WATERSHED**

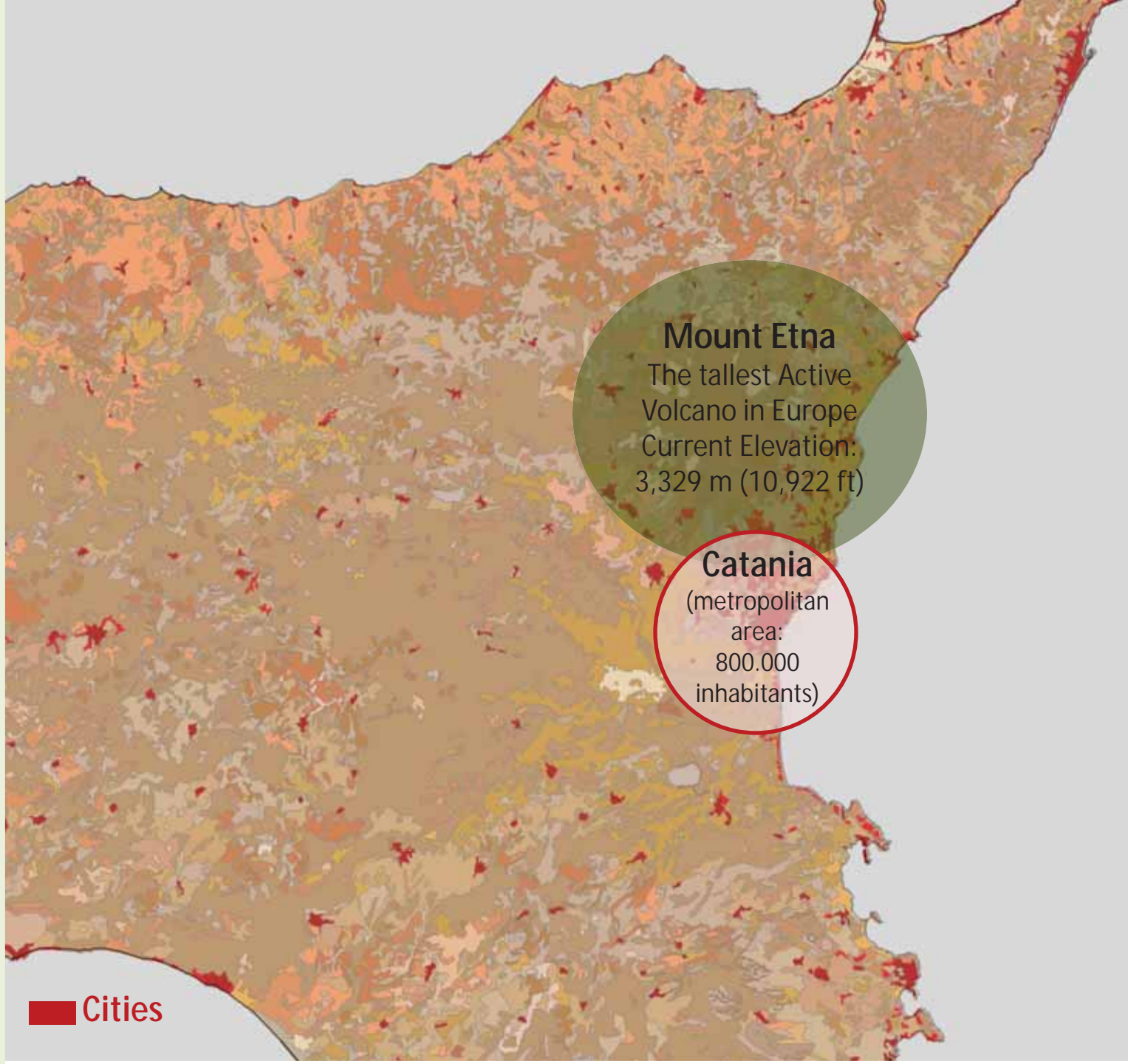
→ **Where is it?**

Which  
resources?

Which  
disturbing  
factors?

Who does  
live and work  
there?

What do  
Institutions  
plan?





# SOUTH ITALY\_ EAST SICILY\_ SIMETO WATERSHED

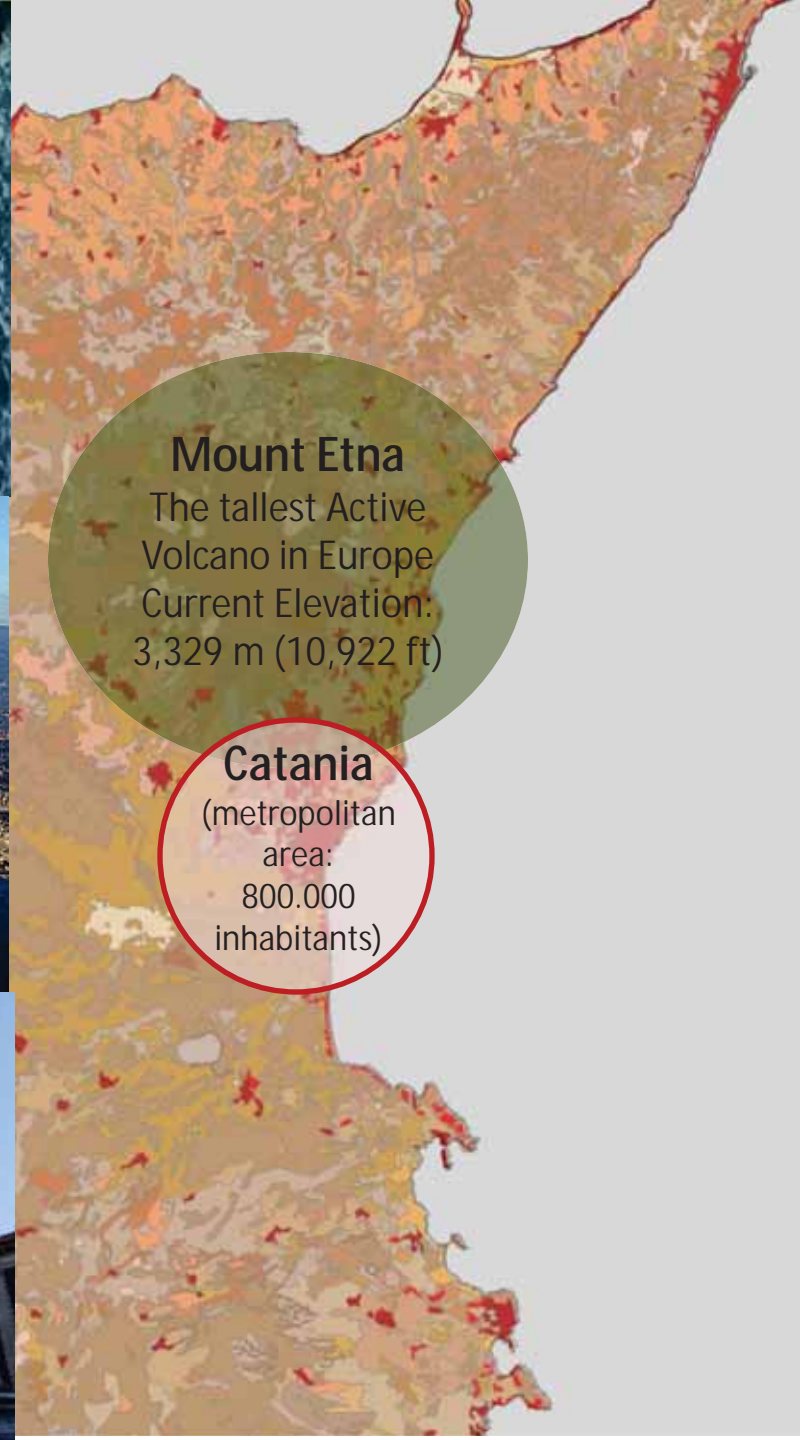
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## Mount Etna

The tallest Active  
Volcano in Europe  
Current Elevation:  
3,329 m (10,922 ft)

## Catania

(metropolitan  
area:  
800.000  
inhabitants)

**SOUTH ITALY\_  
EAST SICILY\_  
SIMETO  
WATERSHED**

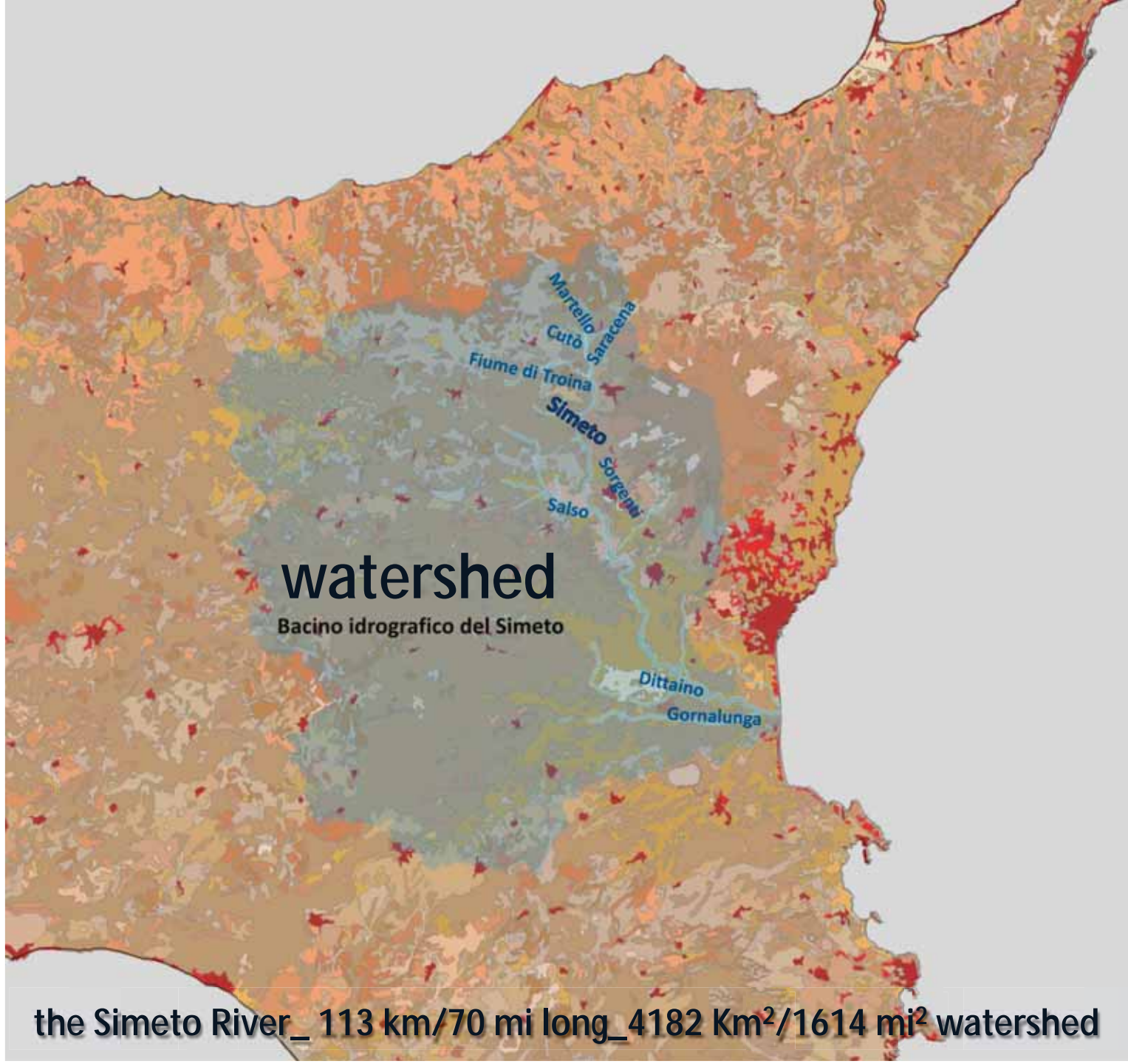
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**the Simeto River\_ 113 km/70 mi long\_ 4182 Km<sup>2</sup>/1614 mi<sup>2</sup> watershed**



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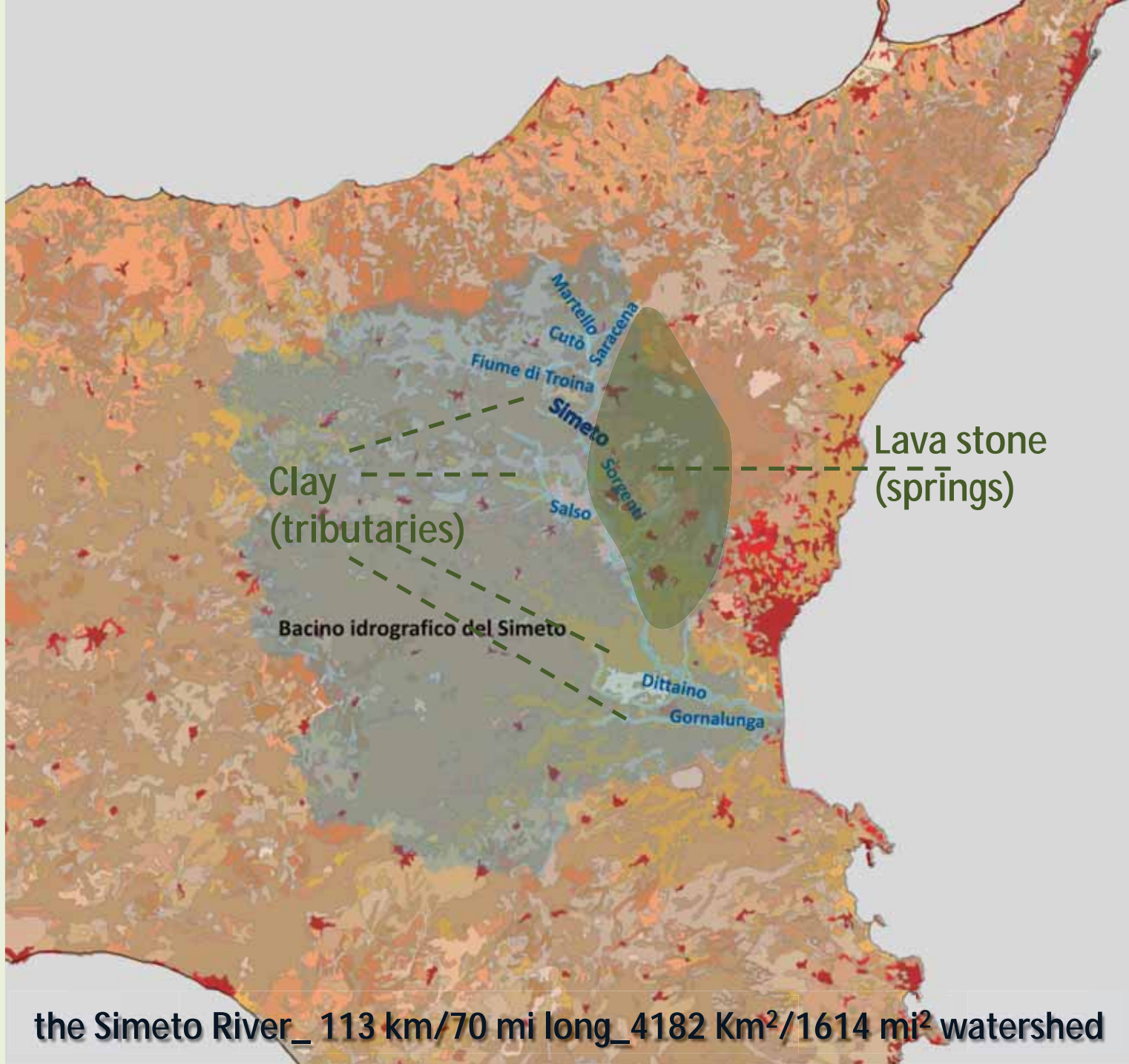
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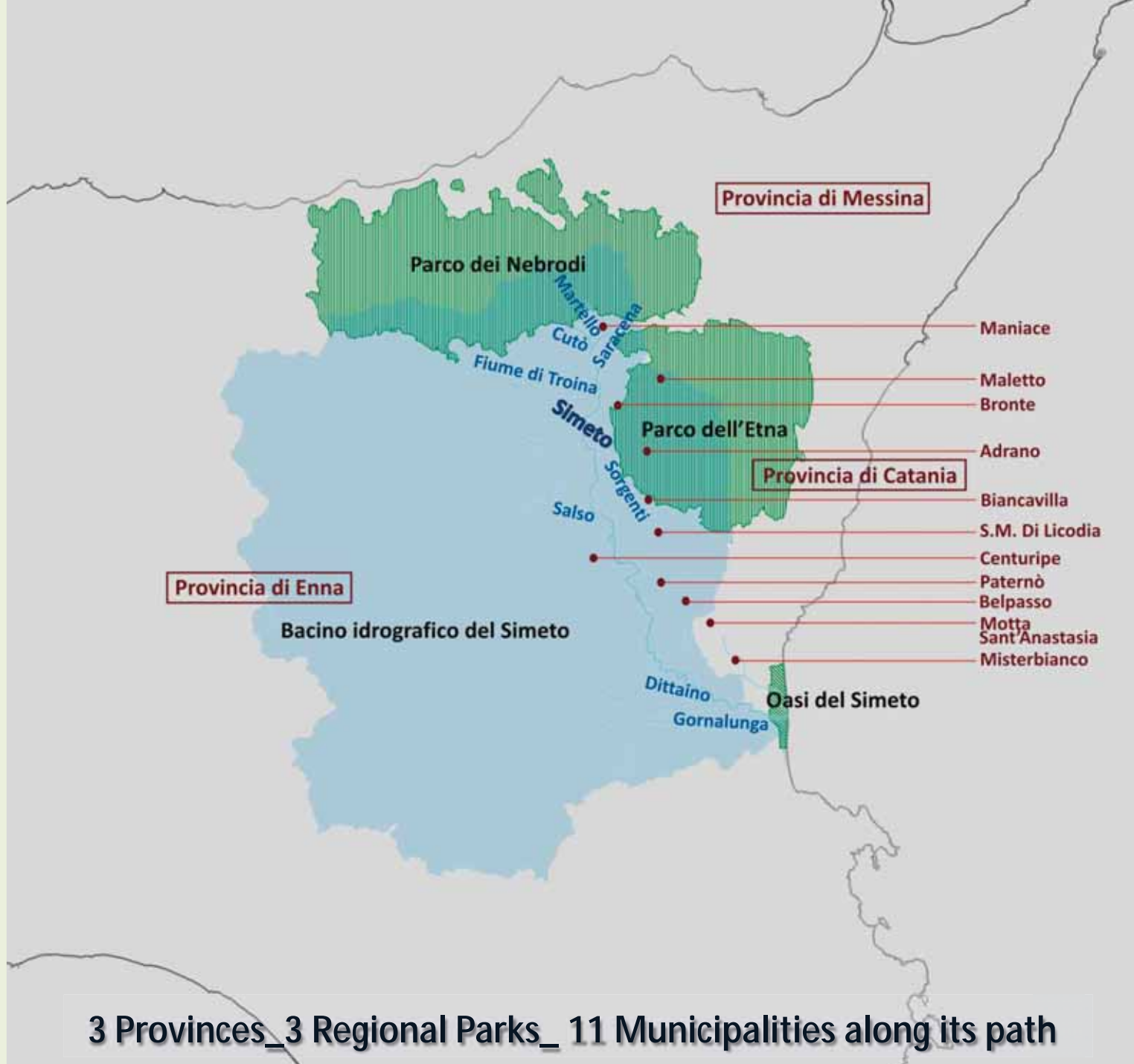
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**3 Provinces\_3 Regional Parks\_ 11 Municipalities along its path**

**SOUTH ITALY\_  
EAST SICILY\_  
SIMETO  
WATERSHED**

Where is it?

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**MATERIAL RESOURCES**

rare elements of wilderness still  
existing

historical and cultural heritage  
places

peculiar farming systems  
Oranges and Citrus Trees; Almonds; Pistachios;  
Olives; Prickly Pears; Vegetables.

fascinating rural landscape with  
ancient buildings and infrastructures

a lot of springs from Mount Etna







# SOUTH ITALY\_ EAST SICILY\_ SIMETO WATERSHED

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## DISTURBING FACTORS

water and ground pollution

- Cities' depuration plants don't work
- Waste management system don't work
- Some polluting factories

derelict lands

Crisis local agricultural market → many young people don't want  
to work into the local farms anymore → they leave farms →  
landscape is changing

inefficient and useless hydraulic  
infrastructures

Illegal pumping







# SOUTH ITALY\_ EAST SICILY\_ SIMETO WATERSHED

Where is it?

Which  
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Which  
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factors?

→ Who does  
live and  
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What do  
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## Urban People

Some of them still have little farms near the River, “just to remember their grandparents” (and to have fun on holidays); some of them don’t know anything about the River (young generations: some escape from Sicily as they don’t have an employment); some of them still enjoy the River.

## Traditional Farmers

They want to be competitive in the global market, producing as much as they can (also using pesticides). They use a lot of water for citrus plants and vegetables.

## Organic Farmers

Still a minority group, they try to be respectful for the environment.

## Factories

Some of them transform rural products. Others produce material for buildings’ constructions (bricks, plasters...) and are a source of pollution.

## Tourism operators

They want to promote the River system as a beautiful place to visit.

## Shepherds

They use the River’s banks to graze.

## Little groups of fishers

Just to practice sport.

## Grassroots associations

Urban people, some organic farmers and some hosts, that spend their free time to improve the River system. Some of them have specific interests to work in a more attractive place; some of them just want to leave a better place to their children.



**SOUTH ITALY\_  
EAST SICILY\_  
SIMETO  
WATERSHED**

Where is it?

11 Municipalities + 2 River authorities + 3 Heritage Authorities + 3  
Provincial Authorities + Regional Authority:  
THEY DON'T TALK EACH OTHER!

Which  
resources?

They do different plans but plans are different from the real world.

Which  
disturbing  
factors?

2 Regional Parks and a lot of Wilderness Refugees:  
JUST PROHIBITION, NO ACTIVITIES!

Who does  
live and work  
there?

According to the European Directive on Strategic Environmental  
Assessment (SEA), they should involve the "Public" into the decision  
making process, but collaborative approach is not still an effective  
practice.

No vision, No projects, No economic strategies  
(just EU fundings, that probably will stop in 2013)

→ **What do  
Institutions  
plan?**



# RESEARCH APPROACH

## METHODOLOGY



## Research questions

**Which are tools, practices, and preconditions for different stakeholders' collaboration?**

RESEARCH  
APPROACH

→ Questions

Paradigm

Participatory  
Action  
Research

Cross  
Disciplinary  
Investigation

Service  
Learning



## RESEARCH APPROACH

→ Questions

Paradigm

Participatory Action Research

Cross Disciplinary Investigation

Service Learning

## Research questions

Which are these tools, practices, and preconditions for different **stakeholders'** collaboration?



**Laymen:** inhabitants and users of a land, with their direct experience of the land due to their everyday life; according to André Gorz, their experience is called *local knowledge*.

**Experts:** inhabitants or users of a land, or external people, with a specific kind of scientific knowledge; among them, researchers are experts with scholar skills, and they have the responsibility of producing innovation in order to improve society.

**NGOs:** groups of laymen, with distinguishing interests on their land.

**Institutions:** laymen or experts with high responsibilities for land management.

## Research questions

**Is it possible to establish a collaborative strategy in managing water resources, and which are its characteristics?**

### RESEARCH APPROACH

→ Questions

Paradigm

Participatory Action Research

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RESEARCH  
APPROACH

→ Questions

Paradigm

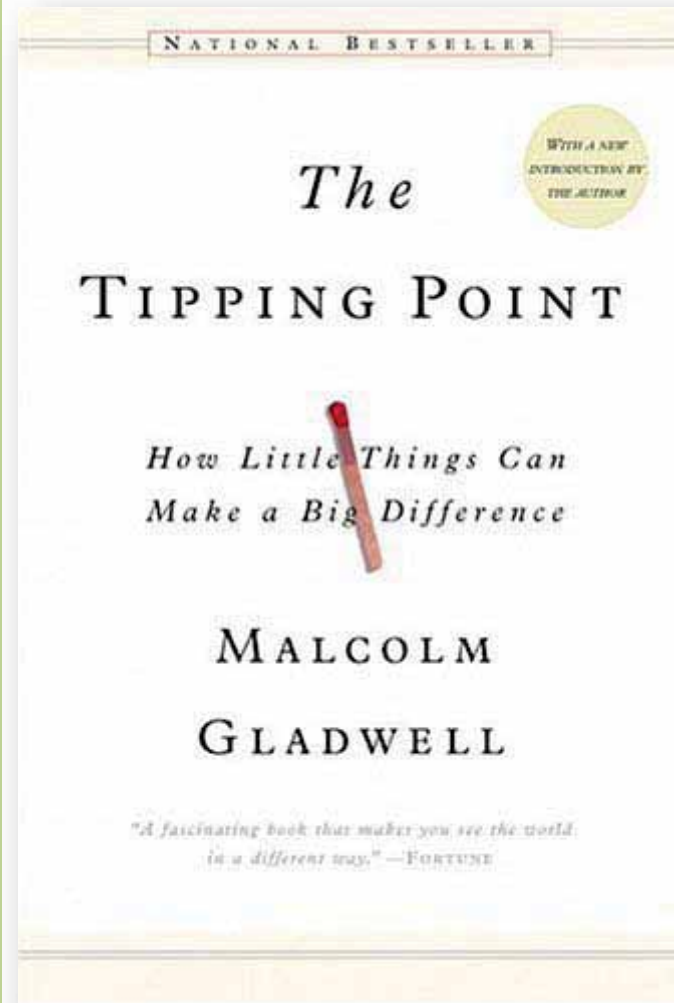
Participatory  
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Research questions

Is it possible to establish a collaborative strategy in managing water resources, and which are its characteristics?



In Sicily collaborative strategies are not so common and successful, so I am looking for the **STICKINESS FACTOR**



# Some “referenced key-words” for collaborative practices in environmental management

RESEARCH  
APPROACH

Questions

→ Paradigm

Participatory  
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Cross  
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ACTIVE PRESERVATION/  
ADAPTIVE PROCESSES

McHarg

LOCAL KNOWLEDGE

Gorz

DEMOCRACY/EXPERTISE

Fisher

RESPONSIBILITY

Jonas

COMMON GOODS

Ostrom

# Research strategy

## Participatory Action Research

subjective and inductive for theory building, also taking into account some methods from other subjective and constructionist strategies.

RESEARCH  
APPROACH

Questions

Paradigm

→ Participatory  
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Service  
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	INDUCTIVE	REFLEXIVE	DEDUCTIVE	Main strategy
OBJECTIVIST				Complementary strategies
CONSTRUCTIONIST				Useful tools
SUBJECTIVIST				

*classification matrix of  
Deming&Swaffield*

### Mixed Research Team

- researchers enter inside practical problems and evaluate their hypothesis during the action;
- participants get capabilities in raising problems and building strategies



# SCHOLARS' TEAM



RESEARCH  
APPROACH

Questions

Paradigm

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→ Cross  
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Service  
Learning

## TRANSIDCIPLINARY RESEARCH (Wiesmann et al.)

“Transdisciplinary research is research that includes cooperation within the scientific community and a debate between re-search and the society at large. Transdisciplinary research therefore trans-gresses boundaries between scientific disciplines and between science and other societal fields and includes deliberation about facts, practices and values.”



# SERVICE LEARNING

PARTNERSHIP BETWEEN:  
**UNIVERSITY OF CATANIA**  
(ARCHITECTURE DEPARTMENT)

+

**NETWORK OF GRASSROOTS ASSOCIATIONS**



*Università degli Studi di Catania*



RESEARCH  
APPROACH

Questions

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Participatory  
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# SERVICE LEARNING

## RESEARCH APPROACH


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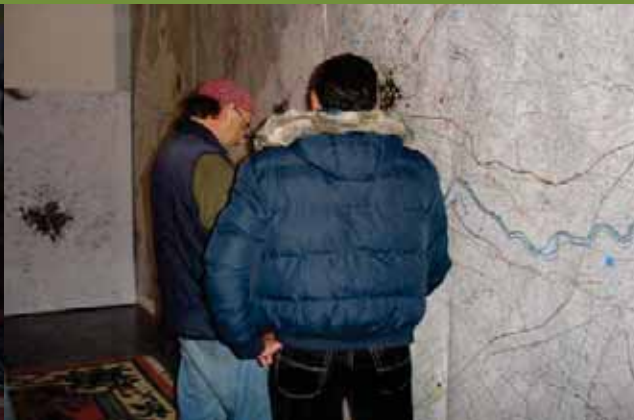
→ Service  
Learning

- 
- **University apply its theoretical skills and contribute directly to local development;**
  - **Associations learn and improve their action;**
  - **Institutions innovate themselves.**



# THE SIMETO PROCESS

## AN OVERVIEW





# THE SIMETO PROCESS

→ Starting  
point

Community  
Mapping  
(values and  
identity)

Community  
Design  
Workshop  
(strategic  
plan)

The River  
Agreement

Pilot Actions

**NO** TO THE BIG INCINERATOR INSIDE a

Special Area of Conservation  
(European Directive: Habitat)!

**NO** TO THE WASTE MANAGEMENT PLAN

BY SALVATORE CUFFARO - 2002

(Sicilian Governor, condemned for mafia  
some years later)

**YES** to more sustainable

**Communities!**

## THE SIMETO PROCESS

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**WHICH PROPOSALS?**  
BY SALVATORE CUFFARO - 2002

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# THE SIMETO PROCESS

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# COMMUNITY MAPPING



**What do you like?**  
**What do you not like?**  
**Which memories do you have?**  
**What is disappearing and you would like to save?**  
**Which are your proposals to help the River?**  
**What about the water?**  
**My fieldwork for my master dissertation**  
**500 people involved in four municipalities**  
(from december 2009 to april 2010)





# THE SIMETO PROCESS

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# COMMUNITY DESIGN WORKSHOP – 6 topics

**Energy and resources**

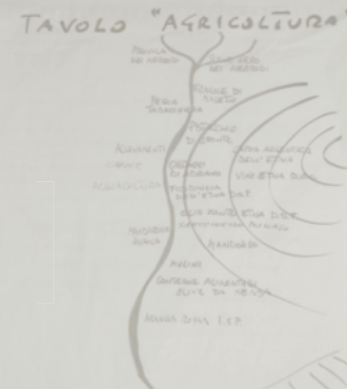
**Environmental  
Regeneration**

**Sustainable  
Housing**

**Responsible Tourism**

**Water quality**

**Sustainable Agriculture**



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**THE RIVER AGREEMENT \_FIRST DOCUMENT**

Environmental protection      Sustainable Housing

**What does we know about the river?**

**What does we want for the river?**

**How to make something for the river  
concretely? When? Who?**

Responsible  
Tourism

**What can every subscriber really do for the river?**

Water

Agriculture

# THE SIMETO PROCESS

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## VERSO UN PATTO PER IL FIUME SIMETO TRA ISTITUZIONI E COMUNITA'

dicembre 2009-maggio 2010

materiali elaborati nell'ambito del progetto  
MAPPARE LA COMUNITA' DEL SIMETO

promosso da



Università degli Studi di Catania  
Dipartimento di Architettura e Urbanistica

# PILOT ACTIONS



Planting and adopting trees in a  
derelicted area



Creative school-community garden  
in an abandoned public space



## THE SIMETO PROCESS

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→ **The River  
Agreement**

# IT IS TIME TO DEFINE A FRAME WITH A NETWORK OF INSTITUTIONS



Planting and adopting trees in a derelicted area



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→ The River  
Agreement

**IT IS TIME TO DEFINE A FRAME  
WITH A NETWORK OF  
INSTITUTIONS**



**THE SIMETO RIVER AGREEMENT**  
Involving Institutions to define  
**the River Community Statement**  
and  
a system of actions to revitalize  
**spoiled contexts**

# THE SIMETO PROCESS

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## THE PARTNERSHIP IS GOING TO EXPAND

Involving Municipalities, Regional Authorities,  
Environmental and Heritage Agencies

**Problem posing:** In Sicily, Institutions are not used to collaborate with other stakeholders. Some of them just decided to experience the collaboration

**Next step: April, 26**  
**TO SIGN A FIRST DOCUMENT OF AGREEMENT**







# US-ITALY EXCHANGE

## COMPARING FOR LEARNING

# THE US – ITALY EXCHANGE

→ Why

Research  
design

Criteria to  
select the  
Case-Study

Harris Bayou

A preliminary  
lesson



**TO SELECT A SET OF BEST PRACTICES  
IN ORDER TO IMPROVE THE PROCESS**

# THE US – ITALY EXCHANGE



Beyond Frontiers  
EU Exchange Program

→ Why

Research  
design

Criteria to  
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A preliminary  
lesson

Contact Professor: Prof. Sadik C. Artunç, FASLA, Professor and Head Department of Landscape Architecture - College of Agriculture and Life Sciences

Local Advisor: Prof. Wayne Wilkerson, ASLA, Associate Professor at Department of Landscape Architecture, Director at Mississippi Water Resources Research Institute

**OBJECTIVE:** CASE-STUDY TO SHARE WITH *THE SIMETO PROCESS* PARTICIPANTS THROUGH FOCUS GROUPS, PUBLIC PRESENTATIONS AND A WEB SITE UNDER CONSTRUCTION

**TO SELECT A SET OF BEST PRACTICES  
IN ORDER TO IMPROVE THE PROCESS**



# THE US – ITALY EXCHANGE

Why

→ Research design

Criteria to select the Case-Study

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A preliminary lesson



Tools to Collect Data	Tools to process Data and for a Collective Learning Process
Informal interview	REPORTS TO SHARE WITH PARTICIPANTS
Focus Groups	
Individual Research (Case-Study) (research in Italy and at MSU)	REPORTS TO SHARE WITH PARTICIPANTS PUBLIC PRESENTATION WEB SITE
Community design workshop (fieldwork in Sicily)	WRITE REPORTS TO SHARE WITH PARTICIPANTS; WEB SITE
Asset Based Techniques (fieldwork in Sicily)	

The Case Study Method is a useful tool for PAR processes, to help participants in visualizing possible alternatives (Francis 2001)

# THE US – ITALY EXCHANGE

Why

Research  
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→ Criteria to  
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**ACTIVE PRESERVATION AND LEARNING BY DOING**

**RELATIONSHIP AMONG: LAYPEOPLE/EXPERTS/NGOs/INSTITUTIONS**

What are preconditions and methods to implement this relationship?

**PARTNERSHIP PUBLIC/PRIVATE IN MANAGING COMMONS**

Which form of agreement? How to build and manage them?

# THE US – ITALY EXCHANGE

Why

Research  
design

Criteria to  
select the  
Case-Study

→ Harris Bayou

Some  
preliminary  
results

## Case-Study selected:

Watershed Implementation Plan for Harris Bayou – Mississippi State – USA – Mississippi Delta Nutrient Reduction Strategy

## Source of Information (YIN, 1994)

Reports; first set of questions with key – informant interviews (in progress)

## Output

- A Scientific Article
- A Communicative tool



## Why this Case

“The Mississippi Delta nutrient reductions strategy development process began with a visioning exercise with key partners and stakeholders to ensure a consistent approach, promote leveraging of resources, and foster stakeholder buy-in”

Voluntary, incentive – based, practical, cost-effective action; Use existing programs.

→Use collaborative teams of stakeholders, governmental agencies, NGOs, academia, business, agricultural producers to develop the nutrient reduction strategy.



# THE US – ITALY EXCHANGE

Why

Research  
design

Criteria to  
select the  
Case-Study

Harris Bayou

→ A preliminary  
lesson

## THE SIMETO RIVER PROCESS

- It started without institutional support
- It is the process to build a frame
- It is going to define pilot actions inside the frame

## THE HARRIS BAYOU IMPLEMENTATION PLAN

- It started with institutional support
- It has a frame (Delta Nutrient Reduction Strategy)
- It is going to be implemented

# THE US – ITALY EXCHANGE

Why

Research design

Criteria to select the Case-Study

Harris Bayou

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**NEXT QUESTIONS TO INVESTIGATE**  
**WHAT MAKES THE HARRIS BAYOU SUCCESSFUL?**  
**WHAT IS HAPPENING IN THE FIELD?**

**THANK YOU**