



## SUSAKI/CiSciSUSAKI MILESTONE MEETING REPORT

11TH TO 13TH OF OCTOBER 2016  
INSTITUTE OF SOCIAL ECOLOGY (SEC), VIENNA

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## PURPOSE AND AGENDA

This meeting was planned, at the midterm of the project SUSAKI, by the coordinators of the project, to bring together the researchers (from various academic institutions), including several students writing their master and doctoral theses about Samothraki, with some of the key local partners from the island. After a decline on short notice from Simron Singh (Univ. of Waterloo), Julia Huber was asked to facilitate the meeting.

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The aim of this meeting was to communicate the **main findings of ongoing research** and develop **strategic priorities** for the future.

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The focus was on reaching a shared understanding of the implications of research results so far for achieving practical improvements, and on identifying appropriate next tasks both for researchers and for collaborators from the local community. Building on the results of the meeting a strategic plan for the next years should be developed

The first day of the workshop was dedicated to explaining the strategic orientation of the meeting and to give the local partners an opportunity to present themselves, their activities and expectations for the meeting. On the second day the focus of the presentations and discussions lay on land cover change, small ruminants and the problem of overgrazing. The third day addressed the areas of health, tourism and education as well as chances for improving the patterns of communication and collaboration. In the last session of each day, the strategic priorities for each area were discussed.



## SHORT OVERVIEW OF PRESENTATIONS

**TUESDAY** 11/10/2016

Opening and strategic orientation of the meeting

### OVERALL DESIGN AND GOALS OF SUSAKI

(Marina Fischer-Kowalski, SEC, Vienna)

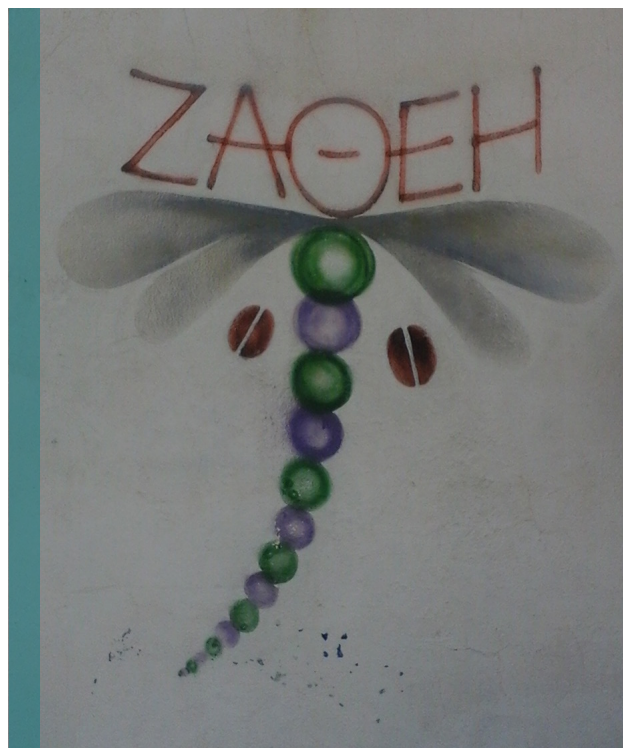
A short introduction reminded of some of the main concepts, such as sustainability and social metabolism. The socioecological system of Samothraki was graphically displayed, the relation of the different research work packages was presented and the role science can play in intervening into this system, versus the role of participant actors.

### REPORTS ON THE LOCAL SITUATION

(Carlota Marañon, Giorgos Maskalidis & Sophia Bourdanou; local collaborators and citizen scientists)

This session aimed at giving an update on recent developments on the island. **Carlota Marañon** reported on the meeting of the veterinary advisor (Prof. G. Arsenos, Aristotle University) with some of the herders in April 2016, and informed that the new olive oil cooperative, with 157 members, will start to operate at the end of October this year. The existing bee-keepers' cooperative will come to an end now, but there is a new initiative from a professional (A. Papachristou, professor at the University of Thessaloniki and member of the European Beekeepers Professional Association) to form a new association.

She also reported on an initiative from the Greek Cultural Centre in Paris to establish "cultural paths" on the island that could later be maintained by the association Sustainable Samothraki. This association is going to become fully legal by the end of this year. A relevant issue for the future may be land property rights on the island: the cadaster work done by now covers 60% of the land, with 40% unclaimed and probably falling to the Greek State.



**Sophia Bourdanou** reported on the success of the social cooperative Zathay (established by the 2014 improved Greek law on "social cooperatives") in running the café at the camping ground, selling local products and serving as a partner for the European Youth Exchange program that in 2016 brought their children participants to Samothraki.

Her report was reconfirmed by the discussants who voiced their admiration for well-functioning waste separation and a general atmosphere of shared concern for the camp that even prevented people from dropping their cigarette butts to the ground. For the next year, there are plans to organize a European Eco-Festival in the camp. But Sophia voiced her uncertainty about contract extension for the next years by the municipality.



Finally, **Giorgos Maskalidis** shared the newest developments in the seeding project (Biodiverse Sown Pastures, in collaboration with Terra Prima from Portugal, and Lisboa Technical University). After some initial difficulties last year, and a meeting between Marina, himself and a number of farmers organized by the vice mayor in summer 2016, now an increasing number of farmers show strong interest in participating in the experiment and promise to stick to its rules.

The camera traps project, another citizen science effort that is intended to create awareness for the threats to the Natura 2000 area by overgrazing, has produced the first pictures (not yet analyzed). The Greek Ministry of the Environment meanwhile issued a permission for these camera traps.

### NATURA 2000 AND WATER RELATED ISSUES (Anastasia Lampou, HCMR, Athens)

**Anastasia Lampou** reported on the state of the Greek Natura 2000 process that is of crucial importance for the island. Currently the Ministry of Environment plans a joint Presidential Decree for all Natura 2000 areas and discusses a new management scheme and a reorganization of management bodies. It might combine several Natura 2000 areas under one management body contracted to private companies or NGOs. The whole process is expected to take another two years, and is – so far – conceived in a completely top-down fashion, without participation from concerned municipalities or citizens. On Samothraki, the vice mayor has taken the initiative and found an agreement on zoning with the land owners concerned. Single land owners though contested this agreement successfully in court as the legal protection plan was still missing. For the potential acceptance of Samothraki as a UNESCO Biosphere Reserve this is a

crucial issue, and local bottom-up efforts should be continued. Between HCMR (Hellenic Center of Marine Research) and the Municipality of Samothraki a contract has been signed to create a “Samothraki Nature Observatory” (SNO). Beyond, the HCMR and SEC (Institute of Social Ecology) are interested in collaborating concerning the water metabolism of the island (under participation of Thakis Zacharias, University of Patras), and in establishing an LTSER (Long Term Socio-Ecological Research) platform. The joint proposal of such a platform was presented to the Greek LTSER organizing committee and at the International ILTER meeting in October 2016. Nikos Skoulikidis (HCMR) is also involved in developing a management plan for the island that complies with the European Water Directive. Meanwhile, a ministerial decision for the construction of a dam for the Xiropotamos has been taken, and a company has been contracted.

All locals reporting share the feeling that on Samothraki, processes in the right direction have gained some momentum, and express their confidence in carrying on.



## WASTE MANAGEMENT

(Dominik Noll, SEC, Vienna)

Waste management is one of the most urgent problems for the municipality, as it is difficult to organize and very costly. A qualitative waste flow map was generated by Simron Singh and Dominik Noll (as part of his PhD work) to present a first overview (see below).

According to a sampling of waste bin content in summer 2016, both in general and in recycling bins about 50% of the wastes are of organic nature. Most of these organic wastes could be used on the island as composting material or animal feed. This is a matter of organization of waste collection, information and local cultural change, to which SUSAKI could make a substantial contribution. This discussion was continued as a strategic priority.

Another waste issue was raised by Angelika Schoder. How is the waste water from the camping site disposed of? According to local information, this waste water is regularly pumped off from the camp and released in a "wastewater lake" close to Alonia. There followed a short discussion on the possibilities of constructed wetlands for waste water treatment (reed beds) and the potential need for an expert in the project who could assist with this issue.

More than 1000t household and communal wastes annually have to be deposited on the mainland at an expense of about € 200/t.

Only 8% of this wasteflow are effectively separately collected as recycling waste (and therefore less costly).

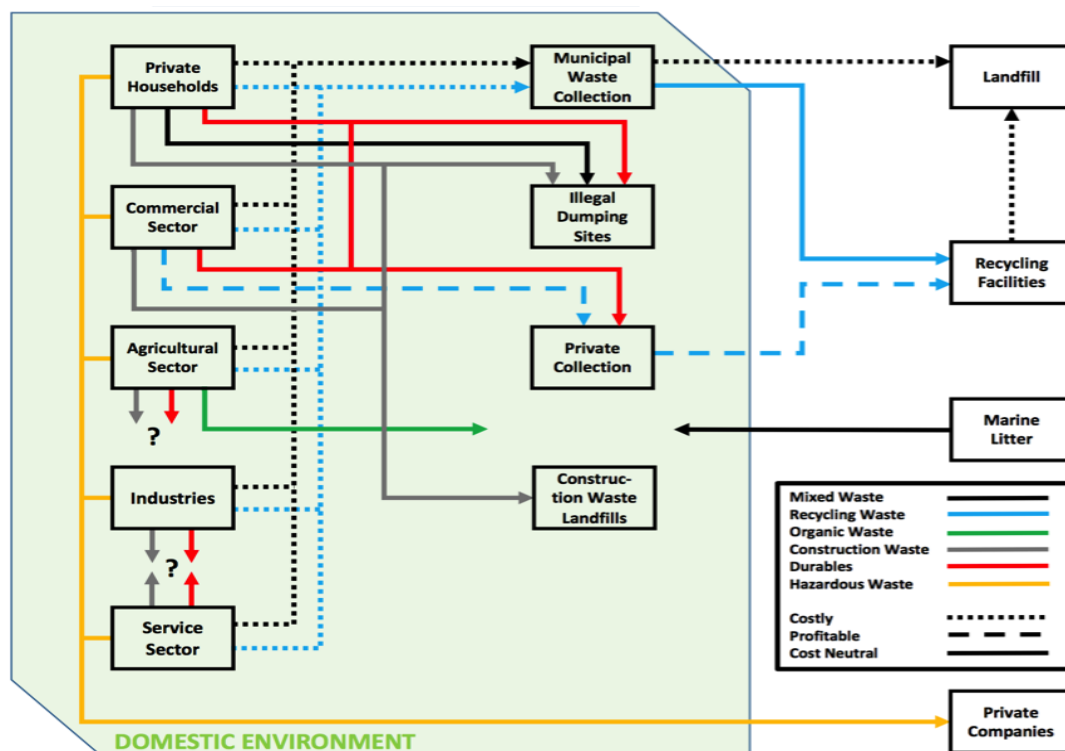


Figure 1: Waste Flow Map of Samothraki. Waste as output of 5 defined sectors is collected by municipal services (blue and black dotted lines), by private collectors, disposed to illegal dumping sites or used to level uneven landscape (construction waste). Dotted lines indicate costs to the municipality which are constituted of the collection service and exports to the mainland.

### FOREST ECOLOGY

(Georg Gratzer, Agricultural University, Vienna)

**Georg Gratzer** introduced the methodology of tree sampling and outlined how the method will be applied, with the help of citizen scientists, on Samothraki next year. Tree sampling is a useful tool, on the one hand to reconstruct forest structure as a "mirror" of past land use practices, and second, to identify critical priority areas that require immediate protection and may guide forest regeneration projects. The plan covers both the old-growth oak forests in the mountains and platanus tree growth in the river valleys. For this research, substantial citizen scientist participation will be required, and may teach concerned citizens the state of the forests on their island. In the discussion it was touched upon emission trading (i.e. "selling" the CO<sub>2</sub> storage capacity of the local vegetation) as an opportunity to generate income that could cover management costs of the conservation area.

### LAND COVER AND LAND USE CHANGE

(Tamara Fetzl & Markus Löw, SEC, Vienna)

Results from research on land cover and land use change were presented. **Tamara Fetzl** reported on her publication in preparation in which she empirically documents that in the 1990s and early 2000s, CAP subsidies targeted at animal numbers in combination with the availability of cheap supplementary feed on the world market invited farmers to increase their ruminant numbers drastically. Since then, overgrazing and the abandonment of traditional management practices have led to a declining vegetation cover and accelerated soil erosion on the island. Despite the reform of the CAP subsidy system since 2002 (e.g. a decoupling from animal numbers and the implementation of environmental standards like maximum stocking densities), soil erosion and overgrazing remained a major problem, although animal numbers since declined. A shrinking number of farmers, many of them of old age, may have abandoned the labor intensive traditional management practices (e.g. management of weeds).

The processes of bush encroachment that followed caused a loss of grazing capacity in some areas and increased the grazing pressure on the remaining land.

**Markus Löw** for his master thesis analyzed summer aerial photographs of the island since 1980, and classified pixels (local spots) according to their "green-ness". He then grouped them into types according to their trajectory across time. Most trajectories show a course inverse to the animal numbers in Fig. 2: a decline in green vegetation cover between 1980 and 2000, and then a slight recovery.

While it is good to see that some areas of the island in 2014 have been as "green" as in 1980, there is a substantial amount of spots where a most drastic decline of green in the past decades has not led to any recovery yet. The high grazing pressure and the lack of land management observed on the island is still a severe threat to its natural resources and future sustainable development.

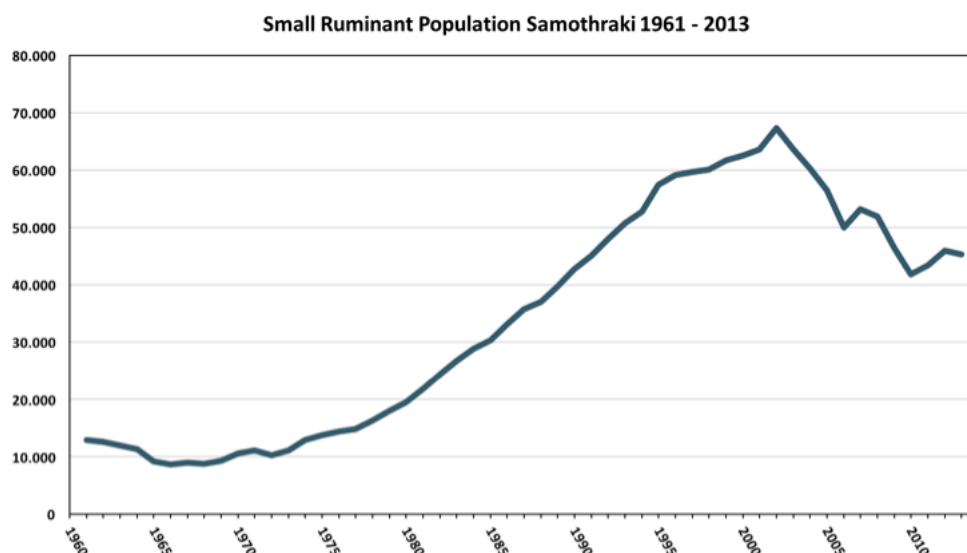


Figure 2: Population development of small ruminants on Samothraki between 1961 and 2013 (1961-1993 based on calculations by Fuchs (2014); 1994-2013 data provided by Elstat)



## LIVESTOCK SYSTEM UTILIZATION

(Dominik Noll, SEC, Vienna)

**Dominik Noll** for his thesis is trying to compare the standard outputs of a small ruminants herding system (in milk and milk products, meat, eventually wool and skin, and ultimately farmer's income) with the herding system in Samothraki. His hypothesis is that the Samothraki system is highly ineffective: the output per animal, and the farm income per animal, is substantially lower than in comparable systems somewhere else. In case the hypothesis holds, he will analyze the reasons for this: the breed? Bad nourishment? Lack of trading opportunities for milk and meat? Low technological and management standards? Which opportunities can be created to reduce livestock numbers and increase the conversion efficiency, thus enabling farmers to achieve the same or a better income with fewer animals? This is a core strategic part of the whole project, and several work packages are grouped around it.



## DISTRIBUTION OF CURRENT EU SUBSIDIES

(Christopher Baierl, SEC, Vienna)

The work of **Christopher Baierl** builds upon the new EU "Transparency Database" in which all CAP subsidies are registered by region and person. In 2015 there were about 550 farmers on Samothraki and they mainly received payments according to two titles: "single payment scheme – title III" and "smaller Aegean Islands". For farmers receiving more than €1000.-/year names are given in the database, for those receiving less an anonymous amount is listed. About 300 farmers receive more than 1.000€ per year. All farmers together received 2.84 million Euros in 2015, i.e. about € 5000.- on average, and 3 million Euros in 2014. With the help of interviews guided by the "Happy Goats App", Christopher will inquire more deeply into the links between farming practices and subsidies, and into farmers' beliefs about subsidies.



THURSDAY 13/10/2016

Collaborations and communication

## COLLABORATION

(Panos Petridis, SEC, Vienna)

The first presentation on Thursday was dedicated to improving patterns of communication and collaboration. Four critical elements for successful collaboration were highlighted: (I) to resume more organized communication within interest groups, (II) develop joint future strategies, (III) perform joint future tasks and (IV) formally set up cooperatives.

Panos Petridis also pointed out that times of economic crisis can open up windows of opportunity to collaborate and use synergies between different sectors. In particular, successful examples, such as a working social cooperative like Zathay, can strengthen the trust in the functioning of collaboration. The discussion following his presentation highlighted the need for people with entrepreneurial skills, who know how to bring people with different abilities together, as well as trainings to improve technical skills.

## TOURISM, HEALTH AND EDUCATION

(Nathalie Schwaiger, Olivia Lange & Stefanie Wagner, SEC, Vienna)

Nathalie Schwaiger presented results from her master thesis that is ready for submission. She has been analyzing the island's touristic infrastructure by internet search, interviews with the owners of tourist facilities, and inquiries into statistical data. For characterizing tourist demand and preferences, she uses surveys from 2008 and 2015, in both of which about 1500 persons had responded. Compared to other islands, Samothraki is not very touristic: on an average peak season day, there are just twice as many tourists than inhabitants. Between 2008 and 2015, the number of tourists has declined by about 15%, has become slightly more international, and has spread a bit into the pre- and post-season. This is beneficial as it increases the economic benefit for the local citizens while avoiding the overuse of infrastructure. Therefore, the promotion of alternative and special interest types of tourism, based on the island's natural and cultural heritage, would be helpful. The current tourist population favors well preserved nature, sees the island as very special, and shows much attachment: almost half of them have come for a second (or more) time, and more than half promise to come again.





**Olivia Lange** claimed that the health care system could become a demographic tipping point for the island. According to the impressions she got from a few interviews with health care personnel, the system shows serious deficits in regard to even basic technical and human resources. In effect, many patients that could be treated on the island under better conditions, need to spend time and money by travelling to Alexandroupolis for diagnosis and treatment. In the discussion the use of Internet based technologies for the purpose of supporting local doctors, as has become very common in other remote areas, was debated.

**Stefanie Wagner** shared her still very preliminary results from a focus group discussion with teachers. On Samothraki, there are about 300 children in school visiting age, distributed among eight primary schools and one high school. There is no vocational training. With young teachers, there is a similar system in place as with young doctors: they are rewarded with career points for spending a year in remote areas. This leads to very high turnover rates of teachers, and sometimes to low motivation. Possibly, a "Sustainable Samothraki", if communicated well, could in both fields provide an opportunity to attract qualified professionals motivated to engage.

## SUMMER SCHOOL 2017

(Marina Fischer-Kowalski & Panos Petridis, SEC; Anastasia Lampou, HCMR)

It was generally agreed that summer school events with scores of teachers and students studying diverse aspects of the island's environment and making contact with its inhabitants have been a core element of the successful course of the project. After a short discussion on timing, participating universities, subjects and teachers, it was agreed to make an effort at organizing a summer school in the second half of May 2017, with details to be further finalized between the organizers.

## FEEDBACK ROUND OF PARTICIPANTS

In a final feedback round, the participants expressed their strong satisfaction with this meeting. Students, local collaborators and scientists stated that they had learned a lot from one another, had gained stronger personal relations and were encouraged and motivated to continue with their tasks. They also confirmed that it now had become much clearer for them what their tasks actually were.





# STRATEGIC PRIORITIES

Throughout the course of the workshop nine strategic priorities were identified.

1. Facilitate a more effective utilization of small ruminants with fewer animals
2. Enable a sufficient protection of Natura 2000
3. Reduce waste and cost for waste deposition to the municipality
4. Strengthen sustainable tourism and connectivity
5. Foster effective local social communication
6. Introduce effective green water and waste-water management
7. Improve local social services
8. Enhance the provision of renewable energy
9. Improve the fisheries management



## LIST OF PARTICIPANTS

### Presenters/Contributors:

- Marina Fischer-Kowalski (emProf., SEC, Vienna): Coordination, moderation and introduction
- Carlota Mara on, Sophia Bourdanou & Giorgos Maskalidis (Samothraki citizens): Local situation on Samothraki, and organizing stakeholders
- Anastasia Lampou (PhD, UB & HCMR, Athens): Natura 2000 process and water related topics
- Georg Gratzner (Prof., Agricultural University, Vienna): The method of tree sampling and its application on Samothraki
- Tamara Fetzner (PhD, SEC, Vienna): Land use change and land cover
- Markus L w (SEC, Vienna): Ongoing master thesis on historical change of land cover
- Dominik Noll (PhD, SEC, Vienna): Livestock system - challenges and opportunities; waste
- Christopher Baierl (SEC, Vienna): Master thesis on CAP subsidies for Samothraki farmers
- Panos Petridis (PhD, SEC, Vienna): Social change in collaboration and communication patterns
- Olivia Lange (SEC, Vienna): Ongoing master thesis on the health system
- Nathalie Schwaiger (SEC, Vienna): Master thesis on tourism on Samothraki
- Stefanie Wagner (SEC, Vienna): Ongoing master on the island's education system
- Julia D sir e Huber (UN, Vienna): Moderation

### Guests (9):

Ulli Weisz (Co-supervisor of Olivia Lange), Angelika Brechelmacher (Co-Supervisor of Stefanie Wagner), Angelika Schoder (SEC PhD), Mareo Perkovic (SEC Master), Carina Heiling (Master, Agricultural University, Vienna), Manja Podovac (SEC Master), Martin Wendler (SEC Master), Armin Faymann & Doris Habeler (Kipos Film Production)



