

## SHORT TERM SCIENTIFIC MISSION (STSM) – SCIENTIFIC REPORT

The STSM applicant submits this report for approval to the STSM coordinator

**Action number: CA16232**

**STSM title: Energy poverty alleviation in rural and peri-urban areas**

**STSM start and end date: 01/08/2018 to 29/08/2018**

**Grantee name: Dr Saska Petrova**

### PURPOSE OF THE STSM

The STSM focused on the relationship between energy poverty, local participation and natural resource use in rural and peri-urban areas. It started from the premise that energy poverty research has been disproportionately analysing situations in cities, predominantly in Western European countries, and on distinct demographic groups such as pensioners. Moreover, energy poverty has predominantly been studied in the context of energy efficiency and housing, rather than in terms of wider issues of local representation, spatial planning, and consumption of natural resources.

The STSM aimed to address present knowledge gaps by opening up possibilities for knowledge generation and exchange in how rural and peri-urban inhabitants affected by, or vulnerable to, energy poverty consume local natural resources; I also examined the governance challenges encountered in this context. The STSM took place in the Republic of Macedonia, a COST Inclusiveness Target Country that is represented in the European research sphere to a limited extent. In this sense, the purpose of the STSM was also the construction of mutual research capacity between the UK, the Republic of Macedonia, and other European countries represented in the ENGAGER network.

### DESCRIPTION OF WORK CARRIED OUT DURING THE STSMS

Thanks to the the STSM, I exchanged knowledge and insights with the Centre for Environmental Research and Information 'Eko Svest'. The Centre is based in Skopje – the capital of the Republic of Macedonia, but during August 2018 many of their activities were concentrated on the village of Vevchani, in the southwestern part of the Republic of Macedonia.

Eko Svest are leading the management of a locally-run protected area in the municipality of Vevchani. This kind of institutional and spatial arrangement is pioneering in the country and the Balkan region more widely.

During the STSM, I worked closely with Eko Svest as they undertook their activities in Vevchani. The STSM allowed me to engage directly with their outreach work with the local population, in addition to surveying the relevant secondary literature on energy poverty in peri-urban areas across Europe. I also

used the STSM to exchange knowledge and findings with energy poverty experts in the Republic of Macedonia and the Balkan region.

The STSM consisted of three components:

During week 1 (2 August – 8 August) I undertook a survey of the secondary literature about energy poverty in the Balkans, while attending several public events on energy/environmental issues in the towns of Ohrid, Skopje and Shtip. This review set the scene for understanding key research challenges in the domains of local participation and natural resource use in rural and peri-urban areas, especially in relation to the Balkan region and Southern/Eastern Europe more generally.

Week 2 and 3 (9 August – 22 August): I spent this period holding interviews/discussions with experts in Vevchani as well as other rural areas in the country. A total of 10 such encounters took place. They offered opportunities for knowledge exchange as well as surveying the insights of scientists and practitioners on the barriers to the improved participation of local and vulnerable people in energy poverty-related policy making when it comes to rural and peri-urban areas. A key theme was the reconciliation of conflicting objectives of poverty alleviation, nature protection and fuelwood use in particular.

Figure 1: Solar water heaters in the remote village of Zheleznec (photo by Saska Petrova).



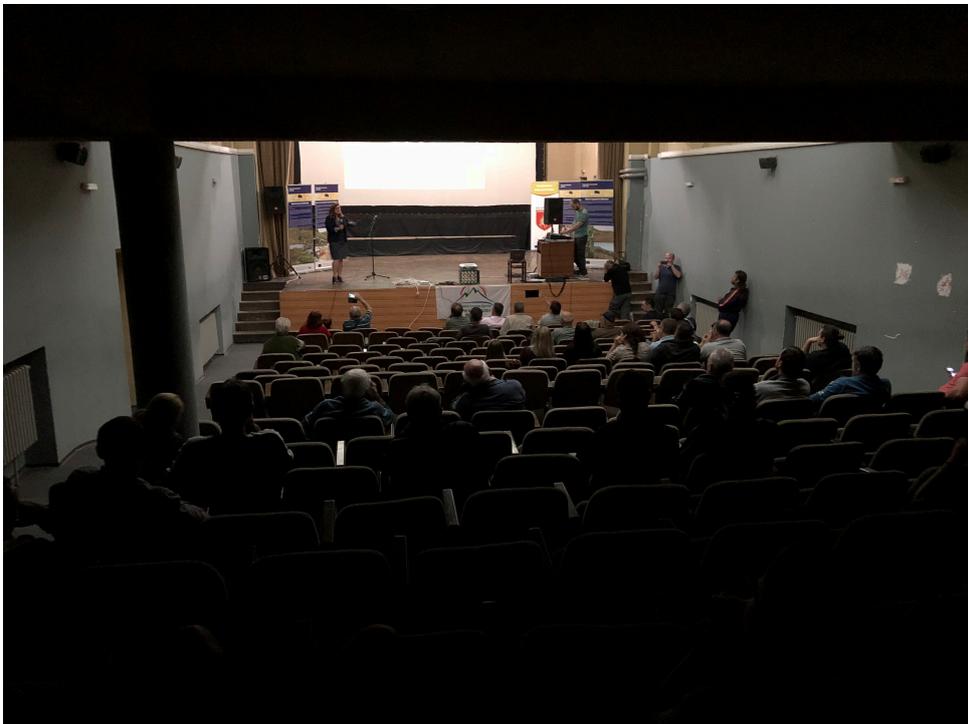
Week 4 (23 August – 29 August): On the 25<sup>th</sup> of August I spoke at a public event in the village of Vevchani, organised by Eko Svest and focusing on issues around the management of the local nature reserve. This was attended by ca 30 local people as well as the mayor, business people, and other key stakeholders. There was a video projection at the event, as well as a lively public debate around the benefits and challenges associated with the nature reserve.

I also used the last week of the STSM to write up its outcomes in the form of an academic article that will be submitted to a peer-reviewed journal.

Figure 2: Innovative forms of fuelwood use and water heating in the village of Kuratica (photo by Saska Petrova).



Figure 3: Speaking at the public event in the village of Vevchani (photo by Saska Petrova).



### **DESCRIPTION OF THE MAIN RESULTS OBTAINED**

Overall the STSM led to the following conclusions:

In the Republic of Macedonia, there is a movement towards new models of managing the country's network of protected areas, as well as establishing new nature reserves. This is unfolding against a background of rural depopulation, relatively weak and ineffective environmental protection, and conflicting political priorities at different levels of state governance.

Energy poverty levels in the country are very high (affecting approximately 60 per cent of households to varying degrees) but they do not seem to be increasing. Energy poverty disproportionately affects rural households; and access to fuelwood provides a key source of energy poverty alleviation. This is principally where the relationship between energy poverty and nature protection is reflected; although other future interactions may include limits on other forms of energy resource exploitation, influence on energy efficiency upgrades in housing located in protected areas, as well as the regulation of air pollution and other outcomes of energy consumption.

Indeed, during the period of my STSM there was a heated public debate over the construction of a gas pipeline through another protected area in the country, and one of the arguments used by the proponents of the pipeline was energy poverty amelioration.

In order to improve the state of the art in energy poverty knowledge and bring forth new methods for understanding energy poverty (ENGAGER research objectives 1 and 2) it is clearly necessary to foreground questions of rural and peri-urban infrastructural exclusion in the understanding and measurement of energy poverty. This can include a heightened role for indicator such as: number of households without access to gas or district heating; number of households using fuelwood or coal for heating; mean burden of different heating on the household budget.

Of no less importance in this context is the development and refinement of stakeholder interaction and engagement techniques. I would argue that a truly effective and inclusive energy poverty policy is one that necessarily is built 'from the bottom up' by taking into account the needs and views of local communities.

### **FUTURE COLLABORATIONS (if applicable)**

I intend to continue my close collaboration with Eko Svest – it was agreed that they will form an Advisory Board of experts to help provide feedback on their nature protection, social exclusion and public engagement work. I will assist in recruiting some of the members of the Board; and they will originate from across the world – thus helping expand the reach and scope of Eko Svest's activities.