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Authors: Scheurer, Thomas, Agnoletti, Mauro, Bürgi, Matthias, Hribar, Mateja Šmid, and Urbanc, Mimi

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Exploring Alpine Landscapes as Potential Sites of the Globally Important Agricultural Heritage Systems (GIAHS) Programme

Traditional agricultural landscapes give a distinct character to the European Alps and are considered part of their heritage due to their distinctive natural and sociocultural features. At a workshop jointly organized by the Swiss Interacademic Commission for Alpine Studies (ICAS), the International Scientific Committee on Research in the Alps (ISCAR), and the Research Centre of the Slovenian Academy of Sciences and Arts (ZRC SAZU), Ljubljana, experts from different European countries discussed current trends in traditional Alpine agricultural landscapes in September 2017 in Tolmin, Slovenia. The objective of the workshop was to develop options for proposing these landscapes as Globally Important Agricultural Heritage Systems (www.fao.org/giahs/en).

Landscape transformation in the European Alps

All landscapes are prone to change. However, recent changes in the European Alps have been especially rapid and profound, affecting both their form and function. These have included economic, technological, and social developments such as increasing agricultural production, urban sprawl, and conversion of land to nonagricultural uses, such as tourism, energy production, and other forms of industry, as well as land abandonment and decreasing agricultural production in economically disadvantaged areas in the European Alps. Current policies, which often conflict (mainly in their efforts to support agriculture versus the environment), will clearly not stop the degradation or modernization of Alpine cultural landscapes (workshop contribution by M. Golobič, M. Urbanc, M. Šmid Hribar, and P. Pipan). To maintain traditional

agricultural landscapes (Figure 1), a concerted, integrated effort is needed that embraces specific livelihood strategies, local knowledge, local food systems, social cohesion, biodiversity, and cultural heritage; this effort needs to be acknowledged by the international community.

GIAHS: Globally Important Agricultural Heritage Systems

The Globally Important Agricultural Heritage Systems (GIAHS) initiative—now entitled a program—was launched by the Food and Agriculture Organization (FAO) in 2002 to safeguard the world's agricultural heritagem including forestry and fishery. FAO defines GIAHS as “remarkable land use systems and landscapes which are rich in globally significant biological diversity evolving from the co-adaptation of a community with its environment and its needs and aspirations for sustainable development” (FAO no date). A similar initiative, not discussed here, is the International Partnership for the Satoyama Initiative (<http://satoyama-initiative.org/>), which promotes socioecological production landscapes and seascapes.

The GIAHS Programme is based on the insight that traditional agricultural systems—including related landscapes, biodiversity, and intangible values, such as knowledge systems and social milieus—can only be safeguarded in the long term if they evolve in a sustainable way. Consequently, the GIAHS Programme is proposing an integrated approach to sustainable development focusing on globally exceptional, traditional agricultural systems. To be designated as a

GIAHS, a site has to meet criteria in 6 realms: food and livelihood security; agro-biodiversity; local and traditional knowledge systems; cultures, value systems, and social organizations; landscape and seascape features; and an action plan for sustainability of the system. A GIAHS must contribute to the natural and cultural heritage of humankind. Applications for GIAHS status are submitted to FAO by national agricultural ministries. Until July 2017, 38 GIAHS had been designated in 17 countries. In 2017, Spain became the first European country to apply, submitting 2 proposals (for sites producing salt and Malaga raisins).

Traditional agricultural systems in the European Alps: opportunities and challenges

Today, traditional agricultural systems in the European Alps exist only in fragments. Since the late 19th century, agricultural and socioeconomic change has been continuous, to the extent that no obvious reference point exists for defining traditional agricultural systems (workshop keynote by M. Bürgi). A possible reference point could be 1945, when strong intensification of agriculture started. Against this background, the workshop aimed to identify opportunities and challenges for remaining traditional and typical land uses in the European Alps (Box 1). Findings included the following:

- Land abandonment followed by decreasing farmland and increasing woodland is a widespread phenomenon in the European Alps, as is reduced landscape diversity

FIGURE 1 Potential candidates for GIAHS nominations in the European Alps: a terraced cultural Alpine landscape (left) and traditional terraced vineyards (right). (Photos by Drago Kladnik)



when cultivation is adapted to new technologies. Traditional production systems and agricultural landscapes are best maintained in less-favored areas with limited modernization capacity (workshop contribution by M. Bürgi).

- Traditional production systems had adaptive capacity and generated traditional ecological knowledge that can be of use in climate change mitigation and adaptation

(workshop contribution by Ž. Zwitter).

- In the course of time, all traditional systems took up practices from modern agriculture; in some cases, past cultivation practices have been reactivated (eg cultivation of traditional cereal species and hemp) (workshop contribution by A. Cottini).
- Traditional farming has often been combined with production of high-quality food or agro-tourism, both

having positive effects on landscape development (workshop contributions by C. Luminati, M. Agnoletti).

- Seasonal mountain pasture systems are highly diverse in terms of their history, property arrangements, management measures, and examples of entrepreneurship (workshop contribution by Š. Ledinek Lozej).
- Conservation measures lead to conflicts with local residents and economic development. Farmers perceive landscapes as their living space, which they use continuously (workshop contribution by P. Moser). Changes to production systems must therefore be negotiated with concerned farmers.
- In some tourist destinations, such as the Dolomites in Italy, GIAHS should not increase tourism. Instead, responsible practices by tourism enterprises and tourists need to be promoted (workshop contribution by V. Ferrario).
- A recent shift in policies toward landscape diversity can be observed, also stimulated by the European Landscape Convention (workshop contributions by M. Golobič, N. Penko Seidl).

Box 1: The Tolmin Workshop

A workshop entitled “Exploring Alpine Landscapes as Potential Agricultural Heritage Systems and Their Contribution to Human Wellbeing” was held in Tolmin, Slovenia, in September 2017. The workshop was organized by the Swiss Interacademic Commission for Alpine Studies, the International Scientific Committee on Research in the Alps, and the Anton Melik Geographical Institute, Research Centre of the Slovenian Academy of Sciences and Arts, with participants from Germany, Italy, Slovakia, Slovenia, and Switzerland. Participants (in alphabetical order) were Mauro Agnoletti (Italy, keynote), Matthias Bürgi (Switzerland, keynote), Sonja Bürgi (Switzerland), Andrea Cottini (Italy, contribution), Marta Dobrovodska (Slovakia), Viviana Ferrario (Italy, contribution), Matej Gabrovec (Slovenia), Primož Gašperič (Slovenia), Mojca Golobič (Slovenia, contribution), Sandra Kiesow (Germany), Drago Kladnik (Slovenia, contribution), Špela Ledinek Lozej (Slovenia, contribution), Cassiano Luminati (Switzerland, contribution), Peter Moser (Switzerland, contribution), Hiroyuki Ono (Food and Agriculture Organization, contribution), Nadja Penko Seidl (Slovenia, contribution), Primož Pipan (Slovenia, field trip), Engelbert Ruoss (Switzerland, contribution), Thomas Scheurer (Switzerland), Mateja Šmid Hribar (Slovenia, contribution), Chiara Spigarelli (Italy), Jana Spulerova (Slovakia), Andrea Turato (Italy), Mimi Urbanc (Slovenia, contribution), and Žiga Zwitter (Slovenia, contribution). The presentations can be accessed at www.iscar-alpineresearch.org/workshops/workshop2017/.

Potential GIAHS proposal and priorities

At the end of the workshop, participants identified the following

typical traditional production systems and prioritized them for consideration as potential GIAHS:

- Transhumance (linking meadows in valleys with alpine pastures, combining private and collective use, using different types of houses);
- (Collective) irrigation systems (mainly in dry inner Alpine areas);
- (Seasonal) forest-tree use in combination with agriculture or food production (grazing in larch forests, chestnut groves);
- Terrace cultures (vineyards, crops, irrigation, reuse of terraces);
- The production system of Walser communities adapted to high mountain areas;
- Specific cultivation or livestock systems, such as truffle-tree production, wild haying, saffron production, black-nose sheep farming, orchard meadows, and sheep transhumance.

Each of these agricultural production systems demonstrates the rich diversity of landscapes in the Alps, shaped by different natural endowments, societies, and cultures. Consequently, a procedure should be developed for taking account of such rich diversity when evaluating GIAHS sites. This is especially important today in Europe, as agricultural land use is becoming increasingly uniform.

Conclusions

The experts who attended the Tolmin workshop are convinced that GIAHS is an appropriate initiative to promote the safeguarding or reactivation of traditional farming

systems in the European Alps. Whenever possible, the GIAHS label should be combined with existing protected-area labels to benefit from existing governance and infrastructure measures and avoid designating additional protected sites. UNESCO World Heritage sites, Intangible Cultural Heritage practices, and Biosphere Reserves offer good opportunities, as shown by V. Ferrario and E. Ruoss for the Dolomites in Italy, Jungfrau-Aletsch in Switzerland, and vineyard landscapes in the Lavaux (Switzerland) and Piedmont (Italy).

Even though GIAHS sites must be nominated by national agricultural ministries, the evaluation of these nominations should be conducted from a pan-Alpine perspective rather than a national one. Only in this way will it be possible to gain a complete overview of traditional Alpine agricultural systems and to evaluate them from a pan-Alpine perspective. The list of potential GIAHS categories presented earlier needs to be completed, and specific criteria should be jointly developed, with the aim of establishing an inventory of outstanding sites representing the main land-use systems and traditional practices of the Alpine Arc.

It will be very important to integrate local stakeholders in this process from the beginning to raise awareness of the values at stake. Such a process could be initiated and guided by the Mountain Agriculture Platform and the Mountain Forests Working Group of the Alpine Convention, with the scientific support of the International Scientific Committee on Research in

the Alps. Such an Alps-wide approach could benefit from an Alpine Space project addressing GIAHS-related topics and from current scientific research.

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WEBSITES

Globally Important Agricultural Heritage Systems: www.fao.org/giahs/en/
The International Partnership for the Satoyama Initiative: <http://satoyama-initiative.org/>
The Tolmin Workshop, 2017: www.iscar-alpineresearch.org/workshops/workshop2017/

AUTHORS

Thomas Scheurer^{1*}, Mauro Agnoletti², Matthias Bürgi³, Mateja Šmid Hribar⁴, Mimi Urbanc⁴

* Corresponding author: thomas.scheurer@scnat.ch

Other authors: mauro.agnoletti@unifi.it; matthias.buergi@wsl.ch; mateja.smid@zrc-sazu.si; mimi.urbanc@zrc-sazu.si

¹ Swiss Interacademic Commission for Alpine Studies (ICAS), Laupenstrasse 7, 3001 Bern, Switzerland

² Università degli Studi Firenze, Via San Bonaventura 13, 50145 Firenze, Italy

³ Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Zürcherstrasse 111, 8903 Birmensdorf, Switzerland

⁴ Research Centre of the Slovenian Academy of Sciences and Arts, Novi trg 2, 1001 Ljubljana, Slovenia

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