

From the Cree Indians to the global environmental policy

Interview with Professor Fikret Berkes*

Professor Berkes (BSc, PhD, FRSC) is Distinguished Professor Emeritus at the University of Manitoba. Berkes is an international leader in the areas of social-ecological systems and their resilience, commons theory, and traditional ecological knowledge. He has rich experience with indigenous knowledge holders in northern Canada. He has also worked with knowledge holders in coastal Brazil, northern Norway, New Zealand, India, Bangladesh, Turkey, Thailand, Kyrgyzstan and Taiwan. Winner of the 2014 Sustainability Science Award of the Ecological Society of America (ESA), *Sacred Ecology* (now in third edition) is for many the standard book on indigenous knowledge. It is widely used by both academics and practitioners. Berkes has produced over 200 peer-reviewed scholarly publications, including ten books. His publications are widely read and cited: he has over 47,000 Google Scholar citations and an h-index (Hirsch index) of 87. He is a co-founder and a past president of the International Association for the Study of Commons and winner of the IASC Elinor Ostrom Award for Senior Scholar (2015). He has participated in the Millennium Ecosystem Assessment, the UNDP Equator Initiative on conservation-development, and the Intergovernmental Platform for Biodiversity and Ecosystem Services as UNESCO expert on IPBES Task Force on Indigenous and Local Knowledge Systems.

Kovács: When I was preparing for this interview I realized that your early work was strictly focussed on marine biology, but within a couple of years more and more interdisciplinary topics – like social-ecological systems analysis or the management of commons – emerged in your publications. Why and how did you shift from pure ecology to interdisciplinary research?

Fikret Berkes: We all have an interesting history of why we make such shifts. Although having a background in marine ecology, I took some social science courses as an undergraduate, and did a year of postdoctoral studies in a department of sociology and anthropology (Carleton University, Ottawa). I could have continued in marine ecology/biology, but there were already quite a few very good marine biologists. It was not as challenging as becoming an interdisciplinary

* The interview was carried out in Hortobágy village, Hungary on the 6th of May, 2015 by Eszter Kelemen and Zsolt Molnár. Professor Berkes visited Hungary to give a course for young scholars from Central and Eastern Europe who work on topics related to traditional ecological knowledge.

scientist and tackling problems in a way that others were not equipped to do. So the main reason for my shift was interest and challenge.

Towards the end of my PhD studies I got involved in a project which was not a university project but which required putting together some social science, natural science and medical science. We were looking at the possibility of some indigenous people getting poisoned by mercury pollution from fish consumption. Nobody seemed to have a way to figure out what was going on, but it seemed relatively easy if we could put some disciplines together. We knew how much mercury there was in the fish, the anthropologist colleague knew how much fish people were eating, so we could make some estimates on how much mercury resulted in what kind of medical effect. By doing a bit of extra study we actually found some answers on a question that seemed to puzzle everybody. It gave us a basis to issue warnings about permissible levels of consumption. We also told the pulp and paper company causing the pollution that they had better stop soon, because otherwise they were going to have very serious problems on their hands. We did not go to the government, we did not go to the press (we could have), but we did solve the problem. The company stopped, but of course there was residual pollution from the mercury that was already out in the environment.

The experience gave me a pretty good idea about the power of interdisciplinary research. It was policy oriented and also practical. We could actually make reasonably good predictions on what it would take to do somebody harm medically, and we could also give constructive advice on stopping that particular kind of pollution.

Kovács: You said in one of your first sentences that you shifted towards interdisciplinary research because of the challenges. Could you tell us more about these challenges?

FB: I think issues in the real world are not organized along disciplinary lines. For example, ethnobotanists can become proficient in policy matters or take up linguistics because the structure of real world environmental problems just does not follow isolated disciplinary silos. On the other hand, there are some costs to crossing disciplines. In my case, the compromises were pretty serious – I am no longer an ecological scientist or a marine scientist. I recently published a book on marine ecology, but it is no longer ecology, it is interdisciplinary marine and coastal science (Berkes, 2015).

My profile as a disciplinary scholar is pretty poor. A marine ecologist probably would not identify me as a marine ecologist, but a social scientist also would not identify me as a social scientist. When

I was working with Elinor Ostrom, the 2009 Nobel Prize winning economist, in that circle I played “the natural scientist” because I was the closest to that area, and when I am in a group of natural scientists, then I play “the social scientist”. But I am not really a specialist in either. So interdisciplinary person has to be comfortable with some level of ambiguity and forego some of the rewards, because academic rewards still go to the specialists in our system. In Europe, especially in Scandinavia where interdisciplinary research is increasingly more accepted, this dilemma is better resolved than in North America. But I think disciplinary boundaries are still fairly strict in much of the world, including Europe. In this context, I admire my Hungarian colleagues for doing interdisciplinary work.

Kovász: How could you manage these challenges in your early career?

FB: By being somewhat crazy as a risk-taker, I think. When I started working in social science areas, some scientist colleagues said: “*You know you are committing professional suicide*”. I just ignored them. But I think if I really thought more deeply about how I was going to get promotion and tenure and research grants, I would have worried more. I ‘managed’ basically by ignoring the complications. I think one can take calculated risks... Academics tend to be rather cautious kind of people, so taking chances is very healthy, I think!

Kovász: How did the topics related to traditional ecological knowledge (TEK) emerge within your movement towards interdisciplinary science?

FB: It developed in my postdoctoral year. I was working in eastern subarctic Canada; this area is called James Bay, which is a smaller bay of Hudson Bay. The government was building large hydro-electric projects. My postdoc work was about the impact of these large dams on estuarine fish populations. When I started working with fish, I ended up getting involved with the local people. I had a very small budget, and I could not afford to have my own equipment and sampling team, I could not hire graduate students. There was already a government team in the field with a much bigger budget doing something similar to what I was doing. So as a practical solution I started working with Cree fishermen, and I discovered that setting nets and having meals together with them was a lot more fun than going on my own. The other thing was that by working with Cree fishermen, I out-sampled the government team. I had more data, more fish from more sites, than the whole government team which had a much bigger budget, many people, their own boats and so on.

Working with the Cree gave me a sense of power. But also a sense of doing something useful because I was working with the people, and not just asking scientific questions. So increasingly I got more interested in the people and their knowledge than just the ecology. I was also amazed by the level of detailed knowledge they had. They could navigate the coastline, which was very indented with many sandy shoals and rocks. This is a glaciated area, with glacial boulders in coastal waters. Cree fishers knew where these boulders were and how to navigate around them.

On one occasion we went out to set some nets and came back when it was dark. I was wondering how in the world they were going to get back at night. It was cloudy. There were no stars, no moon, and no visible landmarks. No one carried a compass. What I found was that the Cree fishers were using a number of different kinds of cues to find the way. First of all they knew roughly which direction they had to go, but also they knew when to change course, for example, by listening to the sound of the waves hitting the shore. They were also navigating by the feel of the bounce waves from the coast. Later I discovered that the Maori and the Pacific Islands navigators also did this. The term they use is “steering by the seat of your pants”, that is, the sensation of the waves under your seat. So Cree fishers had almost no visual cues, but they were using sound cues and they were navigating by the seat of their pants. That was pretty impressive.

However, I also figured out quite quickly that not too many Cree fishers could do that – at that particular part of the coastline, there were only three or four people who could. It so happened that I was in a boat with one of them. This tells you that traditional knowledge is not evenly distributed but usually ‘owned’ by few people, and the community knows who they are.

Kovács: You mentioned that it was fun to work with the Cree people, it also provided you more data and you felt yourself more powerful, but you also said you felt yourself more useful. Why?

FB: I think probably all social and natural scientists want to do something useful, and some of them get a chance while others do not. I got a chance. On the one side you had the government and the government scientists with a multi-million dollar project building dams on the La Grande River (that the Cree call the Chisasibi River). The biggest of the dams is bigger than any dam in Europe; it is a five megawatt capacity power plant. There are now bigger dams, like the Three Gorges in China and the Itaipu in Brazil. But the Canadian ones

are still very big dams, huge amounts of money involved, huge government power, huge government technology. To the government decision-makers, the local people really did not mean very much, they could be bought up or just cast aside. So it just made sense from a social responsibility point of view to work with the local people. Anybody who did research in that area of course got involved with the local people in one way or another. My unwritten agreement with the Cree people was that I had their cooperation to work there, and I would provide information to them that they could use. But I never promised them that I would go fight for their rights. They have to fight for their own rights. But I would support them and carry on forward.

Kovász: Did not this kind of cooperative research generate expectations towards the scientist which are too high? How is it possible to manage the expectations of the local people?

FB: Do local people, such as the Cree people in my case, or herders in Hungary, expect you to become a spokesperson for them? Some might. But probably their leaders do not. They know you are sympathetic to their cause, and they may or may not be using the results you are producing. But a non-indigenous person speaking for, or on behalf of, indigenous people just does not make sense. People have to fight their own battles and their partners are just that: partners that help. We as researchers are not there to battle for them, but we are there to understand their point of view and provide material that they can use for their own fights. It is an unequal fight anyway. If I fought on their behalf, or acted as a spokesperson for the Cree, it wouldn't improve their situation. It would probably make their situation worse, because someone who is not indigenous would not be the best spokesperson. The Cree have their own good leaders, so they do not need an outsider to speak for them.

Kovász: What do you think, how can TEK research empower indigenous or local communities?

FB: As researchers, we try to understand their knowledge, understand how that knowledge works, and how that knowledge actually makes sense ecologically and culturally. Some of our explanations are not necessarily the explanations they themselves might give. In the book *Sacred Ecology* (2012) I have two chapters back to back that explain this. The chapter on caribou hunting and management tries to understand with quotations how people themselves explain things in their surroundings. This is followed by a chapter in which I explain in my scientific understanding how the

fishing system works. These two approaches are what anthropologists call the emic and the etic view; the insider view as opposed to somebody looking from the outside in. And they are different.

I think a good scholar, in the kind of interdisciplinary areas that we are interested in, should be able to do both. Understanding the insider view gives us insights that we never actually had until recent years. Many government managers do not understand herders, and probably never made much attempt to understand herders. Would we be able to educate government officials? Probably not in the short run, but perhaps in the long run. When I look at some of the conflicts between local resource users (both indigenous and non-indigenous) and their conflicts with governments and large corporations, for example, I am not very optimistic that we (as researchers and educators) can have a big impact on the current generation. But I think when a new generation of government managers come in, that will be different because we can now reach them through the education system as well. This is part of the reason I spend extra time with young scholars. (In previous years, I did summer schools with young scholars in Turkey, Brazil, Taiwan and Kyrgyzstan.)

Kovács: If I might rephrase your answer, this suggests that doing TEK research is a way of changing society. Does it also mean that indigenous communities themselves will change by doing research on them and with them?

FB: With them. I think good TEK research involves the knowledge holders as equal partners and this is something relatively new. In Western science we see nature and people as objects. But participatory research is a kind of science where indigenous knowledge holders become partners, and knowledge is co-produced as we put scientific knowledge together with TEK. I should quickly add a note here about my concept of TEK. I define TEK as a cumulative body of knowledge, practice and belief, evolving by adaptive processes. TEK is not static but dynamic, building on experiences and adapting to changes. It is locally rooted knowledge, emerging from peoples' experiences on the land and therefore a vital supplement to universalist Western science. When TEK is used along with science, we do not 'extract' local people's knowledge and put it into Western science. Rather, we can use these two kinds of knowledge as separate streams, enriching one another, and we can co-produce new knowledge (by bringing together TEK and science) to address societal problems. There was a really good example two days ago on how to bring together TEK and science. The Hungarian herder we met in the Kiskunság (apparently) knows quite a bit about veterinary medicine,

but he was very careful not to say that he tries to treat the animals. First of all, he does not own the herd, the herd is owned by a rich outsider. But he is an experienced herder and TEK holder, and he uses a range of observations to find out what might be wrong when an animal gets sick. So when there is a medical problem within the herd, he calls the veterinarian, but by the time the veterinarian comes, the herder already has a diagnosis. Probably the herder also knows the medical remedy, but it is the veterinarian who gives the medicine because he is the one who is authorized to administer it. So here we have the herder's knowledge for diagnosing the problem and then the scientific knowledge of what medicines to use for that problem. The herder does not take over the job of the veterinarian; neither does the veterinarian learn enough traditional knowledge to solve the problem. But the two approaches together result in a healthier herd.

I think that was a really good example of using the two kinds of knowledge together in appropriate and different ways, but without mixing them. The herder is doing more than half of the work: he spots the problem, he is ready for the solution. And then the Western science comes with the medicine or whatever approach needed. Both persons respect and accept each other. If the veterinarian did not accept the herder's knowledge he would have to start everything from scratch. So I presume that the veterinarian has learnt from experience that the herder's knowledge is reliable – reliable in a way that the herder's own boss apparently did neither realize or recognize so far. The herder made that point, that this veterinarian respected his (herder's) knowledge more so than did his own boss, who probably lives far away somewhere. This example also highlights that traditional, local and scientific knowledge can sometimes intermingle and hybrid knowledge can emerge.

An example from our work in Turkey gives some additional insights. We were working with Turkish scholars from Balikesir University in a Turkish national park, and we got into an argument with a park ranger. The dispute was about local grazing rights within the park. We were saying: *“You realize traditionally there was grazing in the park. If you eliminate grazing, sure you get the goats out (which is a good thing) but you are also going to lose the forest gaps, the meadows within the forest, and therefore habitat diversity.”* She was saying: *“Do not tell me stuff that I already know!”* And then what she said came as a surprise: *“Of course I know about local uses and implications for habitat diversity, because not only I have been here for a long time but my father was also a ranger in the same area.”* She was bringing some of the knowledge from the previous generation to understand what is going on at present. That was interesting, ranger's traditional

knowledge, and yes she seemed to know her stuff too. (However, she still opposed grazing because it was against the law.)

Kovács: When you talked about your first interdisciplinary research projects you mentioned that these projects were already related to policy making, although carried out mainly at the local level. I know that you have been involved in various global science-policy initiatives like the Millennium Ecosystem Assessment (MA) or the Intergovernmental Platform for Biodiversity and Ecosystem Services (IPBES). How do you see the future of human-nature relationships in the light of these global science-policy interfaces? Can these programs contribute to the solution of today's socio-ecological problems?

FB: Policies are made and implemented at multiple levels, from local, regional and national to international. I love the local level, that is where most of my work has been done, but we have to have a national level because we have nation states, and we have to have an international level, which is now organized around the UN. These various international initiatives are what we got for climate change (IPCC) and now for biodiversity conservation (IPBES). The MA (Millennium Ecosystem Assessment) was a very good initiative, but it was a one shot deal. It took place over a five year period and it produced a whole bunch of very good outputs. But scientists and governments have not 'digested' the results yet, neither do the findings show up in policies. So I am not sure how effective MA was. In the case of IPCC (Intergovernmental Panel for Climate Change) there are still controversies over how to implement the findings. Only Europe basically accepts and follows IPCC findings; China and the US is showing some signs of following. Despite the questionable effectiveness of these programs and the impediment of a lot of bureaucracy at the international level, we need these international programs because we do not have anything better. We have to make them work.

Kovács: The Intergovernmental Platform for Biodiversity and Ecosystem Services seems to me a bit different from the MA and the IPCC, because it explicitly emphasizes the role of indigenous local knowledge.

FB: Yes, and it recognized TEK from the outset. We have to remember, IPCC did not even include social science, let alone indigenous knowledge, up until the last (2014) assessment. If you look at

the next to last IPCC report from 2007, you can find one adaptation section by Neil Adger's group from the UK, and that is all for social science. In the current IPCC assessment (2014) there is more social science, but it came very late. Biodiversity assessment is going to be probably less politically contentious than climate change, but it is still political to some extent. Consider the question of who gets the benefits and who receives the costs of biodiversity conservation. The role for scientists and scholars like us is to make sure that the costs do not all go to the poor people such as the indigenous and local people, the herders and the fishers. To this end we have to diversify the knowledge base to make sure that local understandings and local values enter the decision-making process.

Kovász: You mentioned that it is a must to diversify the knowledge base of these policy decisions, but how can TEK be made as adequately acknowledged or having the same weight as scientific knowledge?

FB: Traditional ecological knowledge and scientific knowledge will never be given the same weight, but TEK still has to be recognized as legitimate and important. I am thinking progress is being made, and can be made, through four steps. The first step is to identify and document traditional knowledge – so far this is what we have been doing. The second step is to show the importance and relevance of that knowledge – this is just started, but I think Hungarians are doing a really good job in this area. The third step is to get traditional knowledge into policy. We are just approaching this phase at the international level in the case of IPBES. Getting TEK into national policies will actually be harder, but it is still necessary and to some extent already going on, because we have co-management agreements in several countries where indigenous people have quite a bit of power through legislation and through the courts. These countries include Australia, New Zealand and Canada, but not European countries (except Norway). Whether the EU can be pushed through the legal system to recognize TEK in policy, I don't know.

The fourth and final step is to implement these new policies, but we are not there yet. This four-step process is a big battle; it is not a short term project. I keep telling this to my students. What they have to remember when they get impatient or disappointed by what is going on right now, is that thirty years ago we did not even document this knowledge. Few anthropologists, few ethnobiologists knew some of the stuff (TEK) but we did not really put it in the mainstream knowledge to any extent. It really was a mix of romantic feelings and very esoteric knowledge at that point. Today there is nothing esoteric about

TEK. These guys – indigenous and local people – do know their species, habitats and ecosystems; this is well documented and accepted.

Kovács: If I understand correctly, during this four-step process local knowledge enters global politics so it gets globalized to some extent. Could you tell a bit more about local knowledge and globalization, and how these two can be co-produced?

FB: My first visit to Norway was in 1994 to one of the IASC Commons conferences (<http://www.iasc-commons.org>). We met in Bodø which is right on the 60th parallel, the Arctic Circle. One of the talks at that meeting was by Ole Henrik Magga who was the head of the local Saami association (which later became the Saami parliament). The Norwegian government people at the Commons meeting became very dismissive and upset that Ole actually spoke to an international audience about Saami rights. To me, he sounded just like the Canadian Cree leader Matthew Coon Come. I was thinking to myself, how in the world that the Saami leader was using some of the same concepts and language as the Cree leader...

Several years later (2008) I was invited to visit the Saami and give the opening talk at their TEK conference in Kautokeino, Norway. I spent some time with Ole Henrik Magga, and had a chance to ask him about his speech in 1994. He laughed and said some of the language was similar because he had been working with Canadian Cree and Inuit leadership. He studied their land claims agreements and particularly the one called the James Bay Northern Quebec Agreement. Based on these studies, the Saami launched a similar land claims case in Norwegian courts and (much to their amazement) won the case. The judge who made that decision became a hero for the Saami. Finnmark County, which is a large part of northern Norway with a high concentration of Saami people, is now under an agreement which has similarities to the James Bay Northern Quebec Agreement, in that it gives local autonomy and decision making powers to the Saami, even though in fact the Norwegian population in the area outnumber the Saami.

This case shows how northern indigenous leaders are learning from one another across continents, but it goes even further. When I was giving my talk at the Saami TEK conference, a young woman came and introduced herself as the only other Canadian at this conference besides me. I asked her what she was doing there, and it turned out that she was a student at the University of Tromsø. And then she mentioned her name (Richardson), and she said something about British Columbia. So I asked if she was from the Richardsons

of the Haida Nation of British Colombia. She said yes. So it turned out that, not only the Saami and Canadian indigenous people were learning from one another, but they were also exchanging their young people to make relationships in a way that perhaps Huns and their allies may have done a thousand years ago! There is a lot going on that academics and governments do not catch on. Indigenous people are learning from one another, they are networking, they got emails, internet, websites, and finally they are helping one another to get empowered. They are turning globalization to their advantage.

Kovász: In the last two weeks you gave various lectures and participated in field visits during a course organized in Hungary for young scholars from Central and Eastern Europe. I would like to ask you about your most recent Hungarian experiences. What do you think about the state and trends of TEK research in this region?

FB: Well, much of what I saw in Hungary is new to me but of course not to my hosts. What we know is mostly about herders in Hungary, this is a really well documented area – it is probably the richest literature in the world, along with the studies on Mongolian and East African herders. Many Hungarian scholars working with herders have been back and forth to Central Asia and Mongolia and I think herders' TEK is an area of strength in Hungary. However, I did not come across literature on other kinds of TEK in Hungary. There probably are areas of TEK yet to be studied and documented, for example, farmers' knowledge of traditional agriculture. According to our young scholar at the summer school from Poland, some of that agricultural traditional knowledge is now being transformed into organic agriculture and small scale agriculture. In Hungary, we heard of barter systems in place, so there is an informal economy as well. Additionally, there are still some unexplored areas, some exciting findings to be discovered here with fishers, forest users and medicinal plants collectors. I am very excited about what is going on in Hungary and that is why I am here. I would like to work with your fishers too as well as herders.

Kovász: Do you have any field specific experiences from the last two weeks? What was the most impressive case or person to you during your visit in the Bakony, Kiskunság and Hortobágy?

FB: My most striking impression is that TEK is alive and well in Hungary. TEK is being documented by people who are not isolated individuals whole teams of academics and graduate students, as well

as local organizations and local people themselves. I was very impressed with some of the rangers working at national parks who are quite knowledgeable, and who also take part in documenting TEK. In the case of herding that knowledge is very strong, but there are other interesting and promising areas. Today we looked at the eco-tourism operation here in Hortobágy, which I thought was very remarkable because the people who ride their horses or drive their wagons are actually herders themselves. So what is offered here for eco-tourism is living knowledge, and the income is going to diversifying the livelihoods of people who are knowledge holders themselves. I was also very impressed in Hortobágy also with the old style buildings using reeds. The craftsmanship seemed very good, indicating that the skills involved in some traditional crafts like thatching are being transmitted successfully.

We have been talking about herding as a declining profession in this area. I am not so sure about that. I think the numbers of herders and herds might go up and down depending on various kinds of incentives. However, if herding is the only major possible use of the land in Hortobágy, then it is going to continue. Herding represents a very specific adaptation to this area which (apparently) cannot be replaced by agriculture but can be supplemented by other activities and land uses such as eco-tourism. Is eco-tourism always good? No. You are commercializing something, and that is always controversial, in our experience in Canada or elsewhere. But eco-tourism supplementing herding livelihoods is a good way to support herding.

Kovács: How could TEK research in Hungary and Eastern Europe enrich the global scientific discourse?

FB: In this summer school we learnt a lot about and from Hungary, and we had rich material also about Romania, the Carpathian Mountains and Transylvania, where obviously there is a very strong and continuing tradition of herders' TEK. We did not really learn much about Ukraine. Neither did we get a lot about Poland. We had no representation from other Eastern European countries. I am curious about Russia, which is always a bit of a 'black box', promising but mysterious and complex. IPBES does have representation for Eastern Europe, but I think that it is more a representation of Hungary than Eastern Europe as a whole. There are so many areas of TEK and so many distinct cultures in the region that no one person could authoritatively represent Eastern European TEK at the IPBES. But then, this is probably true for other world regions as well.

In Eastern Europe, one of the major application area of TEK is nature conservation. In most national parks in most countries of the

world, traditional uses are not accommodated. But in Hungary in some of the protected areas we visited, they are, especially with regard to herding. In Canada in many national parks, indigenous people are not excluded, but that is only because of the pressure of the courts. In the US they are absolutely excluded. So this is an area where Hungary has something to teach to the rest of the world. You got potential for putting forth some examples of good practices on how conservation planning and herding can be done together. Other applications include organic agriculture and meadow management. In some cases it may require amending existing laws, for instance to allow grazing under the trees.

Agro-forestry or sylvo-pastoral systems, where you can have trees, other crops growing underneath the canopy, and animals grazing the stubble, are alive and well in parts of Asia, South America and Africa. But sylvo-pastoral systems seem to have disappeared from Europe and North America. It seems that in Europe and North America we have somehow lost the ability to combine forestry and grazing, and forestry and agriculture. There is no need to ban sylvo-pastoral systems. I think that the ban reflects the false belief that the various functions of nature have to be separated somehow. Maybe we need some good ecological economists to point out that you can have forests and grazing at the same time, and that there is no reason to separate them in space and time. Maybe organic agriculturalists will come up with something. They have been looking at permaculture systems where you never completely clear the land but you have one crop after another coming up in a system where the ground is never bare and subject to erosion.

Going back to the general question, TEK research in Hungary and Eastern Europe can contribute to the revitalization of traditional knowledge and management systems. In many areas of the world we are finding a revitalization boom, like the restoration of sheep herding in Spain and the use of TEK for ecological restoration in some of the tribal areas of the United States. Some of these initiatives have resulted in ecological and cultural revitalization together, as TEK often has both an ecological and a cultural component. These revitalization initiatives also help underscore the point that TEK can be reinvented and can be used to address contemporary problems. Revitalization movements in places like Hawaii show that the issue is not just about knowledge of the environment but also about culture. And cultural revitalization is a very powerful tool to strengthen TEK, because it also involves political empowerment.

Kovács: As a closing question I would like to ask you what your message is to Hungarian researchers who are dealing with these issues.

FB: Embrace TEK as a legitimate kind of knowledge, embrace it also because it is part of your heritage as Hungarians, with links to people who are supremely knowledgeable pastoralists and herders. For young scholars there are good opportunities to do research and become international scholars in these areas. At the same time TEK research provides a good chance of contributing to society and to the solution of societal problems. Continuity and evolution of TEK is part of the maintenance of a diverse and vibrant society. Do not just give up to homogenizing globalization. Instead, look at what is happening in your own environment and the relationship of people to this environment, and build bridges for the diversification of local and traditional knowledge at the global level.

*Interview by Eszter Kelemen and Zsolt Molnár (May, 2015)
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