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Role-playing simulation as a communication tool in community dialogue: Karkonosze Mountains case study

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This article describes a process of role-playing simulation (RPS) as it was used during an educational exercise in community dialogue in the Karkonosze Mountains region of southwest Poland. Over the past decade Karkonosze National Park, a regional tourist magnet, has provided an excellent example of environmental conflict emerging from the tensions between nature protection and economic development. The project we describe herein, a course called “Dynamics of Sustainable Development,” was designed to give students the direct experience of challenges in solving difficult social-ecological problems with many linked conflicts and tensions. We focused on RPS to emphasize factors crucial to compromise. Because teaching students about conflict solving was our main objective, the second indirect but expected experience was to stimulate discussions among real stakeholders. Although RPS itself was not performed in the presence of the real stakeholders, their participation was ensured by inviting them for a final public debate where they got a chance to express their opinions about what they heard from the students. RPS offered the course participants not only a closer look at the conflict in the Karkonosze related to sustainable development, but also an insight into the general psychological background and evolution of conflicts.

KEYWORDS: community dialogue; compromise; conflict resolution; discussion; environmental conflict; the Karkonosze Mountains; role-playing simulation; stakeholders; sustainable development
This article describes a process of role-playing simulation (RPS) as it was used during an educational exercise in community dialogue in the Karkonosze Mountains region of southwest Poland. Over the past decade, Karkonosze National Park—a regional tourist magnet—has provided an excellent example of environmental conflict emerging from the tensions between nature protection and economic development. Environmentalists see the Park as one of the last bastions of remarkable biodiversity in a sea of globalizing economic change. However, many businesses see the Park as an aesthetic but bureaucratic anachronism in a sea of unemployment and wasted development potential. The conflict pivots around where and how to introduce new ski infrastructure; pitting a local company trying to place a ski lift within the Park against the Park authorities, who suggest that the development should take place outside the Park in the lower parts of the mountains. The former group is supported by the majority of the region’s inhabitants as well as by the media, local government, and business community. The latter benefit from the support of the national government (Ministry of Environment), environmental nongovernmental organizations (NGOs), and a wide array of intellectuals, both from the region and elsewhere in Poland. In spite of several attempts to reconcile the conflicting interests related to the development of skiing infrastructure, the conflict has been in place since the early 1990s. The conflict was further amplified by the prerogative issued by the Polish Ministry of Environment that favored creating skiing infrastructure where investment costs are lower, at present because of the lack of environmental tax, within the borders of the national park. The tactical advantage of making an alternative plan attractive through lower costs was neutralized by the fact that the proposed site’s higher ecological value rallied environmentalists against this option.

The project we describe herein, a course called “Dynamics of Sustainable Development,” was designed to give students the direct experience of challenges in solving difficult social-ecological problems with many linked conflicts and tensions. We focused on role-playing as a simulation to emphasize factors crucial to compromise that stakeholders had an immediate and intimate understanding of—such as personal relations and interactions. This approach offered opportunities to understand different, contradictory viewpoints and to become aware of the challenges of untangling and solving complex social, economic, and ecological problems. But although education was the primary goal of the course, a second hidden one existed. We wanted to check whether it is possible to use such experiments to contribute to a public dialogue in conflicts surrounding common pool resources in the future. In fact we hoped, but left it unspoken, that this experimental simulation of a community dialogue might restart a real community dialogue about how to address current problems.

In this article we first set the general background for the project, outlining the situation in the Karkonosze Mountains and the conflict, and then move to the description of our project. We subsequently discuss the results from the point of view of methodological issues and lastly we focus on lessons learned and questions to pursue in the future.
The context of environmental conflict

Karkonosze Mountains region

The Karkonosze Mountains, as the highest and most attractive range of the Sudetes, is the most popular tourist place in Lower Silesia, along the southwestern border of Poland. The broad plateau with its massive main ridge offers a diversity of wildlife habitats in the various forms of alpine tundra and mires, elevated rocky peaks, and long slopes deeply cut by glacier cirques and fast-flowing mountain streams. Over the millennia since the Neolithic era, human activity, such as agriculture, small-scale mining, or forestry, has greatly changed the environment. Recent pulses of acid rain in the last decades of the 20th century heavily impacted mountain forests. However, though some areas are still regenerating slowly, these damaged patches sit within a diverse landscape mosaic of high ecological and cultural value that continues to draw tourists from all over Poland. Starting from the early decades of 20th century, a tourist infrastructure has burgeoned around this rising demand for nature. Long slopes and relatively good snow conditions have led to the development of a ski industry. Surging tourism on a year-round basis has qualitatively shifted its ecological impact from occasional light use to permanent and high-intensity pressure. Whether the mountain landscape will be resilient in the face of such high usage rates remains in question.

Conflict between National Park Board and local community

Karkonosze National Park was established to protect the rare landscape against the rising impacts of growing numbers of visitors. Its restrictive role reduces pressure on nature and blocks further development of the regional ski system. Development pressure has mounted as unemployment surged with the collapse of local industry following the fall of the socialist regime in 1989. The tension between stalled development and anticipation of more jobs and income drives frustration ever higher in local communities. To sustain its regional and national appeal, the ski industry feels compelled to modernize and construct new infrastructure, such as lifts. Urged on by the apparent success of ski industries in the Alps and, especially, of their Czech neighbors immediately across the border, new development within the Park seems the only option to local government. These tensions have placed local government and industry in increasingly bitter opposition to the National Park authorities. Local authorities and media have amplified these tensions by claiming that all regional problems, such as high unemployment, have arisen because a blind and backward national park protection system is obstructing modern progress.

In the early 1990s, intensive lobbying by local authorities and the ski industry led to an agreement with the Ministry of Environment enabling ski-industry development within the National Park. This agreement granted a special privilege for ski-area developers; by repealing the environmental tax that is normally levied on forest
conversion to ski areas. Permitting ski-infrastructure development within the most valuable natural areas of Karkonosze made the agreement even more controversial. Fortunately for the integrity of the natural habitat, further development was stalled by deficient planning and design. During the past decade the few elements that were actually built did little to meet the needs of rising demand, and even their full realization would not have significantly improved the ski area’s functionality. Ski development could not adapt by modifying an agreement already considered close to breaking the law, and no one in the Ministry of Environment wanted to reconsider such politically explosive issues again. The ski industry stagnated for years as no solution, formal or otherwise, was apparent to anyone or agreeable to any significant fraction of society. Alternative areas were suitable for the ski industry located outside the protection zone, but investment there was not as profitable as in the National Park because the environmental tax could not be avoided or even reduced in the areas outside the Park that belong to the State Forests Agency.

To break this deadlock, a group of scientists sent an open letter to the Ministry of Environment, proposing improvement of the ski-system development plans. The improvement was based on a new spatial design, making the ski system more environmentally friendly and better suited to the skiers’ needs. In response, all interested parties began to work together to prepare a final version that satisfied both the ski industry and environmentalists. Despite several months of intensive revision, the proposition was not accepted by ski-area developers. Officially, technical aspects were blamed, but this impasse really resulted from a second critical reason that was never publicly discussed: the environmental tax.

The walls separating the main parties continued to grow in the years of simmering conflict following these collapsed negotiations. As frustration fuelled spiteful personal attacks, the accumulated negative mood stifled any creativity or innovation that might have generated novelty or even experimentation. Accusations, counteraccusations, and self-righteous justification flooded all communication channels. In such an atmosphere our experiment in RPS was organized.

**Application: Education, gaming exercises, public dialogue**

**The approach**

RPS is a tool that provides support for education, management, and negotiation processes. RPS is also seen as an important method of teaching interpersonal skills (Holsbrink-Engels, 1997), problem structuring (Joldersma & Roelofs, 2004), and forecasting decisions in conflicts (Green, 2002). Role-playing, role-play, or merely playing roles, can be a simple and easily organized technique. It is highly flexible and leaves room for the demonstration of individual initiative and imagination (Ladousse, 1987). The use of role-playing as an educational or training technique is considered to be part of a wider set of techniques that have collectively become known as simulation. These tools are often used to enhance learning about sophisticated situations.
Alkin and Christie (2002) found role-playing to be a tool for creating experiential learning environments designed to increase student engagement in the learning process and academic achievement. Role-playing is most commonly used in situations dealing with attitudes and feelings, for example, to replicate the feelings of someone in a particular social situation. It is also used to develop skills such as listening and conflict resolution. Interactive role-playing techniques have been shown in practice to be extremely effective for teaching conflict-management skills (Chircop, 2000), as it is possible to simulate many scenarios, either hypothetically or with a high degree of real-life experience. The RPS recreates in the classroom a complete social interaction in a given issue area. Regarding the use of RPS in management, Shubik (1975, p. 9) stated that “experience gained in playing roles foreign to one’s own interests may provide insights hard to obtain in any other manner.” For example, RPS can be used to minimize subjective portrayal of information in interviews if it is suspected that the knowledge elicited is being distorted by the interviewee’s attempts to appear in a favorable light. Calculated attempts to distort information may be more difficult to achieve when one is pressed to integrate many ideas into a believable portrayal of a role in the novel atmosphere provided by an RPS exercise. In brief, the discipline of dynamically portraying a complex role, especially in response to others in a public space, may override any cunning attempts to apply a specific spin or color to information. In conclusion, RPS is often used in management and education, and it has proved to be particularly useful in the case of aiding conflict resolution. It was with reference to all three of these areas that we used RPS during the “Dynamics of Sustainable Development” course.

Although teaching students about conflict solving was our main objective, the second indirect but expected one was to stimulate discussions among real stakeholders. In this case there was a need to consider different options. We had to decide if we wanted students to play in front of stakeholders to possibly provoke reactions and discussions among them. Another way to enhance community dialogue and shared understanding would have been simply to put real stakeholders, not students, in the RPS situation. We decided ultimately to make students play the roles of stakeholders in the simulation of conflict-resolution negotiations in the absence of the real stakeholders, and then later let the students present to the real stakeholders what they had learnt about the situation in Karkonosze from playing the RPS and what conflict resolutions they had achieved. Our choice was conditioned by different factors. Although we expect that RPS with real stakeholders as participants could be a good method, bringing their real viewpoints and feelings to light, the problem is that it would be extremely difficult to convince stakeholders to participate in such an exercise, especially in a tense situation of strong conflict like the one in Karkonosze. It is hence easier to engage students in the process of role-playing itself and to convince stakeholders to act only as experts who stand above the fray, judging it without being judged or caught up in the fight. This approach seems to be more realistic in application and obviously more accurate according to our educational goals. To stimulate discussions among real stakeholders, we could have invited them to be the audience of the actual RPS. This would have probably been the best way to use the mirror function of RPS (Fonseca, 2004; Forte,
2002). On one hand, we expected that watching RPS exercises could bring many events and emotions freshly to light for the real stakeholders, as well as act as an emotional impulse and provoke different reactions. But on the other hand, this advantage of RPS could also have been a problem if reactions were too aggressive and prevented us from finishing our exercise. In this situation, to avoid potentially unpleasant and uncontrolled situations, we decided that stakeholders would make up the audience during the public debate on the outcomes of the game session, when the students report their achievements. The role of stakeholders was also to judge the accuracy of the students’ representation of their own standpoints.

**The method**

The process consisted of five stages (presented in Figure 1) that are described below in detail. The resultant process protocol is provided in the appendix. The course was carried out over two weekends. The meetings were held in the conflict area—Karkonosze Mountains—and, as well as the exercises described below, included a field trip.

The project began with seminars to introduce the complexity of the situation in the Karkonosze Mountains from the multiple perspectives of different disciplines (ecology, social science, systems thinking). Students also received brief instruction and preparation as to how to conduct interviews.

To make sure that participants developed a comprehensive picture of the problem and hence minimize bias, the organizers provided them with opportunities to meet representatives of all sides of the conflict. Students were divided into five teams, each of which was supposed to represent a specified stakeholder group and to play its role in both mock negotiations and public debate. These stakeholder groups included:

- Karkonosze National Park’s authorities,
- local government of the town of Szklarska Poreba,
- local and regional environmental NGOs (including two authors of the previously mentioned open letter to the Ministry of Environment),
- local business representatives,
- inhabitants of Szklarska Poreba.
Students had an opportunity to personally meet and interview representatives of their assigned stakeholder group to learn about their needs, interests, values, and viewpoints.

To prepare the students to participate in a RPS of negotiations, participants within each group had to discuss and establish a standpoint of the interest group that they represented.

The understanding that students developed from discussing what they learned in the interviews helped them to take part in a “mock debate”; this was a simulation of how negotiations might occur in the community (Figure 2). Because of time constraints, only one game session was planned with each group of students. During the debate, each team played the role of the stakeholder group they had interviewed. As with the interviews, the students were supposed to put aside their own points of view and personal knowledge to express as closely as possible the stakeholders’ viewpoints and interests.

The negotiations’ simulation prepared the student teams for a public debate in front of real stakeholders the following day. Every team was given the task to present to the guests how they understood their interests and viewpoints, and how they negotiated and made agreements while taking those interests into account. This process was supposed to open fresh perspectives on the conflict by revealing to the real stakeholders their own behaviors within a context where all parties are present. A view composed from all parties can challenge a perspective based on confrontations between pairs of interest groups. So stakeholder groups that had historically been locked in one-on-one confrontations found themselves reexamining the problem from a richer vision constructed from all the perspectives in the community (Figure 3).
The role of the instructors

Instructors had significant tasks to fulfill. His or her individual role was to supervise how a small group of participants prepared to represent a group of stakeholders. Each of the instructors focused on selected issues according to his or her real-life field of specialization. A person with an economic and/or business background joined the group that visited business stakeholders; a person with a social science background led the group responsible for interviewing people in the street; a person active in an NGO led the group that talked to the local NGOs involved in the conflict.

Instructor support included not only attending and moderating the interviews but also supervising other activities taken up by the group’s members, such as preparing reports. This also included supervising group preparations between course meetings, such as facilitating distance learning of concepts (science of complex systems) and methods (adaptive management, interviewing techniques) over the Internet. There was also a need to coordinate many specific issues with other instructors; both organizational, such as the times of meetings and interviews; and technical, such as the depth of interviews and the potential focus on certain issues.
Results and discussion

We present below results from the perspective of two of the goals of the project: education and community dialogue.

The effect of the process on the students

As the name of the course was “Dynamics of Sustainable Development,” students who applied to participate were those greatly interested in sustainability and environmental-protection issues. Because of this, they had certain personal opinions about how this conflict should be resolved and who were right—environmental NGOs and National Park authorities—and who were not—the rest of stakeholders.

Although students received brief instruction and preparation as to how to conduct interviews, applying these techniques proved surprisingly difficult. The most important and frequent error was that they were unable to withhold their personal opinion and simply listen. They often got involved in discussions with their stakeholders, and they encountered difficulties when speaking to those who did not share their views. The biggest challenge for the students was to ask questions that neither revealed their point of view on the conflict nor suggested a particular answer to the interviewee. Practice on the street and in the homes of local residents illustrated the difficulty of generating questions that are “real” to stakeholders and that result from a genuine desire to get a better understanding of the matter rather than the urge to put their respondents to the test, to ridicule them, or to undermine their authority. The tendency of student teams to try to convince interviewees to consider an “ecological” view stood in stark contrast to the goals with which they had set out: to learn about the viewpoints and interests of local people. Through their own struggle, the students personally experienced one of the most difficult challenges in eliciting knowledge: to suspend one’s own perspectives and identify oneself with a point of view that we really do not support. It was then only a short step for students to see how inflexible (and perhaps subconscious) reliance on personal perspective and identity can influence communication between groups. They realized that these experiences reveal some of the reasons why social conflicts are so complex and remain locked in an impasse for long periods, as is the case in the Karkonosze region.

Similar problems occurred during the discussions that the students performed to prepare themselves for the RPS of negotiations. The participants often tended to shift their mode of thinking from the one they were supposed to represent to that of their own. As a result, they then perceived the problems differently and, most often, thought of them as easier to solve. When they were brought back to their “original” mode of thinking (that of the stakeholders they represented), the problems again appeared insurmountable. During these personal transitions the students realized that, to a large extent, the conflict was actually rooted in personal interactions and not in an insolvable problem. It became clear for students that 10 years of conflict had hardened the stakeholders’ fanatical grip on their positions, to the point that they were not able to adopt any other perspective.
The main point of the process was the RPS of negotiations. For most of the students it was the first time that they ever had a chance to take part in an RPS of public, round-table negotiations. However, the combination of the novelty of their direct experience of the process and their newly gained understanding of a real (non-textbook) situation generated an enthusiastic stream of fresh ideas about how to approach the situation. The whole group became so engaged in the negotiation that they forgot about dinner, arguing on into the evening.

To some extent, the simulation went beyond “control,” in that it followed such a spontaneous and lively development that almost no coordination was necessary. Discussion after the simulation showed that many students experienced a variety of emotions and feelings related to the dynamics of the process. During the simulation they went through multiple difficulties and impasses, but at the end the whole group developed a kind of a consensus, which they considered to be an important success. To get to this point they had had to learn how to manage the relations between different stakeholders, to gain trust, and to listen to what other groups had to say. The students later described that the views played out by roles in the simulation also seemed to be very common in social conflicts. During the entire RPS, some actors treated the attendance of some groups as marginal and passed over their interests and values. Some groups behaved as an elite that could work out solutions alone, omitting all or most of the others. For example, the team playing the National Park authorities tried to negotiate only with the ski-lift company, because that was where they perceived the problem. By consequence, other groups felt left out of the process. Although this happened in the simulation, the students realized that this is also the case in the real conflict and presents a significant obstacle to its resolution.

During the simulation it was clearly visible that the stakeholders encountered several problems that were very specific to the situation of a social dilemma. First, there was a critical lack of information exchange between the groups in the community, as well as an important lack of trust. As experienced by the students, more open communication and trust could not only facilitate the understanding of different interests and viewpoints but could also lead to a better understanding of both the negative and positive consequences of decisions on the social, economic, and natural environment.

The effect of the process on the real stakeholders

Although RPS itself was not performed in the presence of the real stakeholders, their participation in the study was ensured by inviting them for a public debate, where they got the chance to express their opinions about what they heard from the students. Unfortunately the real stakeholders used this chance to speak to sink back into the personal conflicts and ideological propaganda that had for years blocked any exploration of the basic issues or assumptions. The trap of trying to rectify their opponents’ past mistakes hijacked consideration of the future of the region, especially that in relation to alternative visions of development. Perhaps it is perfectly natural that stakeholders responded to the results of RPS by immediately jumping back into the fiery personal animosities in which they had been locked. These immediate reactions
clearly illustrated the “hot buttons” that block thoughtful and deeper analysis and, ultimately, compromise. They created the perfect opportunity for students to experience why these kinds of local conflicts are so hard to manage and resolve.

Even though the stakeholders were exposed to several interesting ideas and could watch “from outside” their own behavior in the situation, this process did not seem to influence their views. It became clear that the goals of several stakeholders were redefined as the regional conflict escalated and hardened in the heat of confrontation. Instead of focusing on the realization of their needs, their main goal became to attack personally other groups and to defend strongly their personal viewpoints—a trap typical of relation conflicts. In the public debate, the discussion quickly skipped the real issues and went on to become a personal “fight” between several individuals. Stakeholders concentrated mainly on the past events and opponents’ mistakes, and the future of the region and the vision of its development were lost from sight. The fresh approach presented by the students seemed to be rejected without further analysis, and the students had the impression that any compromise they achieved was not really of interest to their guests. For the people of the Karkonosze region, the strength of their engagement in stressful confrontation for a long period of time seemed to lock them into their own ways of perceiving the situation and processing that information. As often happens in social dilemmas, it was difficult for them to notice different solutions, even when they were presented by students whose youth and extraregional origins gave them an air of “innocence.” The attitudes, values, and emotions of residents who work, as opposed to recreate, near protected areas are very often biased against nature conservation. In the face of opposition they seek information that reinforces this bias, while challenging the credibility of any information that contradicts their attitudes (Stoll-Kleemann, 2001). That is why it may be hard for a local community in Karkonosze to accept solutions of conflict different from the conventional ones they normally read about in newspapers.

One other important fact was that not all stakeholders appeared at the meeting; especially notable was the near-total absence of local people (e.g., residents who did not represent a special group but who are concerned about the region’s future). It is commonly believed that residents of the west of Poland, who were forcibly moved there after World War II, are indifferent to the region’s problems because they do not identify with the place, and feel no attachment to it (Krolikowska, 2004). On the other hand, in line with what the students felt during the simulation, local citizens were usually omitted from the discussion process. The only person from the community who was present seemed to be the informal local leader; many of the local residents mentioned him during the interviews as the person who represented well their way of thinking. This person was very active during the debate, but in a very aggressive way that came as a shock for some of the students.

In reality, many stakeholders were either not interested or ready for any kind of community dialogue. Prolonged conflict and years of angry disagreement squelched any good will for discussion. However, “for the sake of the students,” many stakeholders did agree to participate and let the students listen to their concerns, problems, interests,
and even learn about what they thought of the future of the conflict. As a result of interviews and role-playing activities, students—under supervision of researchers and teachers—brought to the real stakeholders two kinds of information: perception of the stakeholders’ own actions and information about their adversaries (Figure 4). From this point of view this process might be regarded as a first step to real social dialogue in the future.

Lessons learned and questions to pursue in the future

RPS offered the course participants not only a closer look at the conflict in the Karkonosze in relation to sustainable development, but also an insight into the general psychological background and evolution of conflicts. Instructors were surprised to see students associate so much with the roles they played. Apart from its other advantages, RPS turned out to be an excellent tool to activate students.

Regarding public debate, unfortunately we must admit that it did not work according to our assumptions. Probably one short course with a primarily educational aim is not enough to change the attitudes of interest groups that have been engaged in conflict over common pool resources for years. Rather, it should be considered as only a part of a more broadly designed project that includes social consultancy, and professional mediation and negotiation processes, wherein a bottom–up, participatory approach is applied.
Having a local NGO as an organizational partner proved to be an important advantage; the most important assets that the partner NGO brought into this undertaking included contacts and excellent recognition of the situation. However, cooperation was not always easy because, for example, the NGO representatives had less determination to arrange some meetings that were difficult to organize, and they generally were less interested in sticking to the original plan of activities that they probably perceived as excessively rigid and academic.

Probably it would be very interesting to perform the game itself in front of real stakeholders. With less-intensive conflicts it might not be so risky and could provide students with valuable comments from stakeholders regarding process of conflict and its dynamics, and above all give insights on the behavior of the interest groups during confrontation.

However, the dangerous potential for confrontation raises ethical issues about such experiments. Students obviously were not meant to be actors in the conflict. But although students were instructed that they should forget about their own standpoints for the time of the course, this proved extremely difficult for them. These difficulties make us conclude that future experiments should invest far more time in training for listening and interviewing techniques.

The second ethical issue relates to the general discussion in the social sciences as to whether researchers may in any way interfere in social problems and bring their own values into research process. In the case of combining research, and also education, with intervention, the following question arises: What kind of legitimation do we have to intervene? However, a paradigm of participatory action research also exists that includes the assumption that the aim of a researcher is to serve the very people who are surveyed so as to solve their problems (Babbie, 2001).

Conclusions

With a very modest budget, RPS succeeded in helping participants learn about the complexity of issues and ideas involved in social-ecological interactions and sustainable development. The desire to learn was stimulated when, through active participation, students experienced skills or theories useful in conflict resolution or negotiations, as well as where they were lacking. On one hand, by listening to stakeholders and watching other role-playing participants, students learnt from seeing a conflict that they would not normally have been able to observe. And, by having to act out roles that express very different assumptions and worldviews, they became more sensitive to other perspectives. On the other hand, stakeholders making up the audience to the public debate were given a chance to see how they are perceived by others and, sometimes, what mistakes they make.

Although the course’s impact on the real situation in the Karkonosze is debatable, the rare feat of bringing “combatant” stakeholders together in a public debate and achieving any discussion at all can be regarded as some kind of a success.
## Appendix
### Process Protocol

<table>
<thead>
<tr>
<th>Category</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting up of the whole</td>
<td>Design an initial, simple, and adaptable plan for stakeholder involvement.</td>
<td>Select most important stakeholders. Define the forms of stakeholder involvement—interviews, supervision, consultation, observation, participation in the debate.</td>
</tr>
<tr>
<td>process and the interaction</td>
<td>Provide participants with information.</td>
<td>Divide participants into groups, preferably considering their background knowledge. Arrange for interviews with stakeholders.</td>
</tr>
<tr>
<td>with stakeholders.</td>
<td>Interviews with stakeholders.</td>
<td>Match groups of participants with appropriate stakeholders according to their specialization. Preferably add one instructor to each group interviewing stakeholders. Instructors should control the emotions of participants during the interviews and intervene when the discussion gets away from the subject of interest. Perform interviews.</td>
</tr>
<tr>
<td>Executing the project.</td>
<td>Prepare participants for a role-playing simulation of negotiations.</td>
<td>Let participants discuss the interviews within each group. When necessary, clarify the positions with real stakeholders.</td>
</tr>
<tr>
<td></td>
<td>Perform a role-playing simulation of negotiations.</td>
<td>Arrange for a meeting of all groups. Confront the positions of different groups representing various stakeholders. Channel discussions so that they do not become too abstract. Ask participants to try their best to reach a consensus, forgetting about the side issues that make the same task difficult for real stakeholders. Make sure that students understand their roles.</td>
</tr>
<tr>
<td></td>
<td>Prepare a public debate.</td>
<td>Invite stakeholders. Confirm that stakeholders will be represented. Prepare a room big enough to accommodate participants and stakeholders as the audience.</td>
</tr>
<tr>
<td></td>
<td>Execute a public debate.</td>
<td>Allow for final consultations with real stakeholders.</td>
</tr>
</tbody>
</table>
Make participants seated in a way that they are able to see each other and so that they have enough space for all necessary documents.

Initiate and moderate a debate.

Finalize a debate.

Make sure that the positions of stakeholders were represented appropriately.

Ask stakeholders for comments.

Close the debate.

References


Karolina Krolikowska works as a research assistant in the CAVES Project under EU 6th Framework Programme at the University of Wroclaw, Poland. She has completed her master’s degree in environmental science and PhD in geography. Her research interests focus on social aspects of nature conservation, protected areas management, and environmental decision making. Her work involves both qualitative and quantitative social research methods. She has also participated in a number of courses and workshops devoted to conceptual and computer modeling of social-ecological systems.

Jakub Kronenberg, PhD, is a lecturer in the Department of International Economics at the University of Lodz, Poland. His research interests focus on economy–environment interactions, in particular from the perspective of ecological economics and environmental and resource economics. He gained international research experience while working in France, Switzerland, and the United Kingdom. In 2001-2003, he served as environmental management consultant to the UNDP Umbrella Project. When not working, he may be bird-watching or traveling.
Karolina Maliszewska is an expert at the Office of the Committee for European Integration in Poland. She has a master’s degree in environmental science and environmental psychology. Her research and educational projects concentrate on the edge of social and environmental issues, and she is especially interested in the alternative methods of socioecological conflicts resolution and public participation in environmental decision making. She also works as a governmental expert in the field of EU environmental policy.

Jan Sendzimir is a systems ecologist working in wetlands at landscape scales and larger. He uses conceptual and formal modeling in conjunction with field research within an Adaptive Management process to guide scientific research and policy development related to the sustainable development of communities and ecosystems in five river systems: the Narew, the Odra, and the Barycz rivers (Poland), the Tisza river (Ukraine, Romania, and Hungary), and the Amudarya river (Uzbekistan). He currently directs work packages in two EU 6th framework projects, NeWater and CAVES, on research applied to problems with complex combinations of ecological, economic, and sociopolitical factors that occur over relatively large areas such as river basins, major watersheds, and mountain chains.

Piotr Magnuszewski is currently working at the Wroclaw University of Technology, Poland and also the International Institute for Applied Systems Analysis, Austria. His research concentrates on using simulation modeling to facilitate participatory management of social-ecological systems. Some of these models are also used as games, management flight simulators, or microworlds. He also explores how model development can enrich theoretical issues such as resilience, social networks, and collective action.

Andrzej Dunajski works as a research fellow in the Institute of Plant Biology at the University of Wroclaw. He has completed his PhD in plant ecology, but his scientific work also includes landscape ecology and conservation. He directs case study research in the CAVES Project under the EU 6th Framework Programme, which is focused on agent-based modeling of land-use change and evolution of social networks.

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