2 Guidance for mediation of natural resource conflicts

This guide adopts a four-phased framework reflecting the UN's mediation practices and UNEP's approach to providing environmental diplomacy support (see annex 2).[21] This section provides a description of those four phases of the mediation process and provides guidance for each. The four phases are: assessment, pre-negotiation preparedness, negotiation, and implementation. It provides a framework for mediation professionals and their supporting institutions facing a resource conflict, irrespective of the natural resource sector involved. It will also be relevant to stakeholders that are considering a mediated solution to a natural resource dispute, who are seeking a basic understanding on the four main steps and requirements.

2.1 Assessment phase

The first phase of the mediation process is an assessment of all aspects of the conflict dynamic in order to determine whether a mediated approach is appropriate and likely to result in an agreement. Depending on the context, it may be conducted by a mediation support institution rather than by a mediator *per se*. Various conflict assessment tools have been developed to help mediators assess the context.[22] At a minimum, this step involves an understanding of: what the conflict is about; who the actors are; what the larger context is; and where the sources of power and leverage lie. The assessment should first establish whether suitable conditions exist for mediation. During the assessment, the mediation support institution also begins thinking about how the mediation process needs to be designed to maximize the chances of success, as well as the individual profile of a potential mediator.

The types of general issues considered in an assessment include:

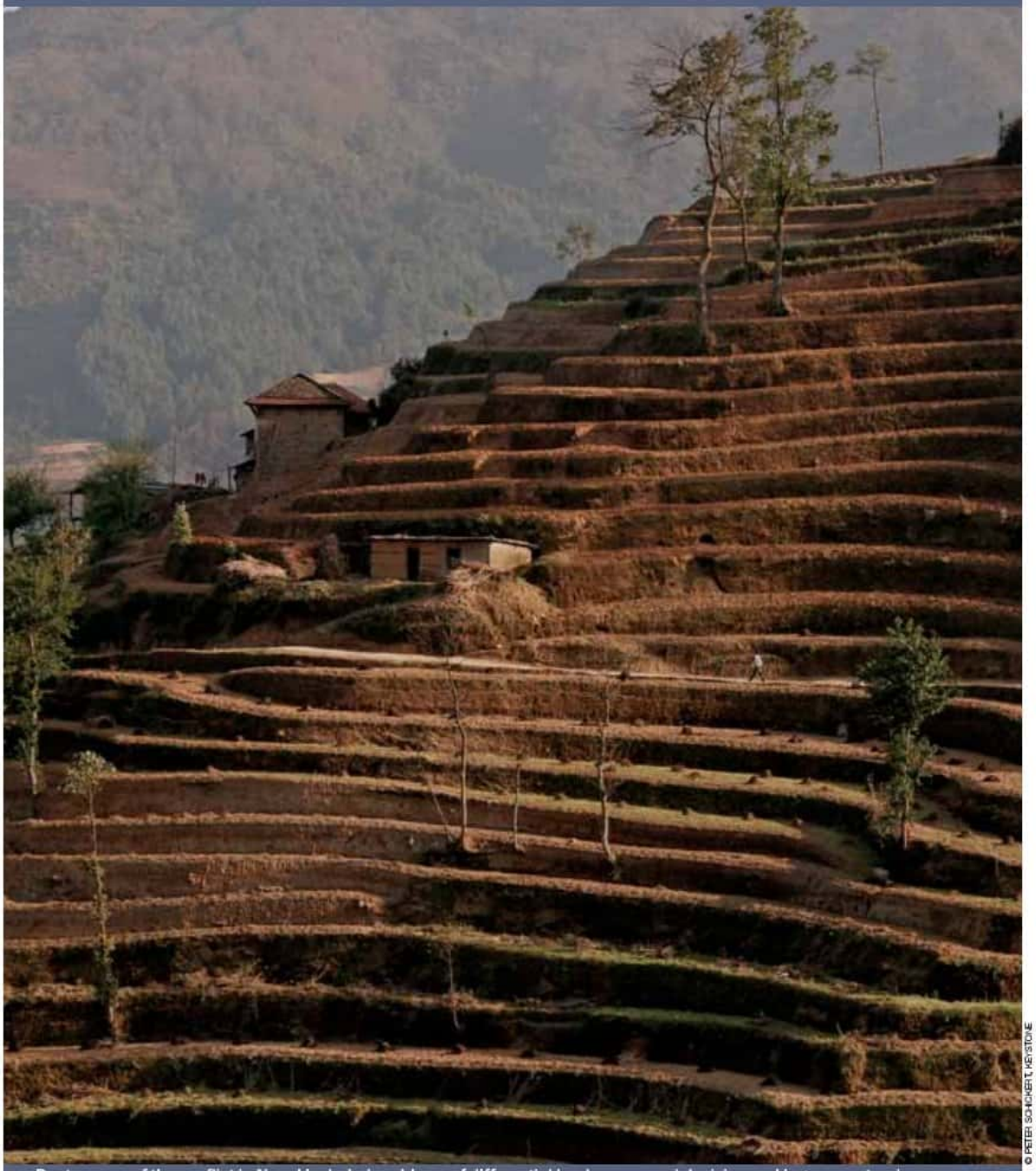
- The issues in contention;
- The parties, their interests, their interconnections, and their capacity to engage;
- The status and condition of the relevant governance frameworks, including those for dispute resolution;
- The political, socioeconomic, and environmental context;
- Potential entry-points to start the mediation process;
- Possible elements of process design from each party's perspective.

An assessment typically involves a mix of desk research and fieldwork, often grounded in direct engagement with stakeholders. Direct engagement with a range of stakeholders is essential to ensure a clear and accurate understanding of the conflict, as well as to garner sufficient ownership and buy-in for the mediation process that is expected to follow. Those undertaking the assessment must engage with a range of actors, including top officials, government administrators, civil society and community representatives, private sector actors, individuals knowledgeable about the conflict, relevant technical experts, and those whose voices are usually not heard (e.g. marginalized populations, youth, armed groups, etc.). The methodologies for data collection and analysis will vary based on context and whether the mediation support institution has been formally asked to engage in the process, or is simply assessing the feasibly of the context prior to offering its mediation support. The key steps and good practices that should be undertaken during the assessment phase to address these issues are suggested below.

Assess natural resources, governance, political economy, and conflict dynamics: The assessment should gather information about the type, quantity, quality, and location of the natural resources that are involved in the dispute. The assessment should map these resources, and try to understand the benefits that arise from them, the livelihoods that depend upon them, the negative impacts from their exploitation, and the political economy they support. It is also important to assess if the conflict is (partly) driven by confused, conflicting, or inconsistent information held by the different parties, or perceived unmet expectations and broken promises. It may also be useful to understand the supply-and-demand trends for those resources, as well as any related shocks and stresses from climate change, natural hazards, or natural variability.

The assessment should also gauge how effectively natural resources are governed and whether the governance structure is a source of conflict among stakeholders. There are several dimensions to consider: the legal and policy dimensions of current natural resource management; statutory and customary mechanisms for managing resources and resolving disputes; specific statutory provisions regarding benefit-sharing, transparency, and accountability safeguards; public

In practice: Assessing natural resources and conflict dynamics for the Comprehensive Peace Accord in Nepal



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Root causes of the conflict in Nepal included problems of differential land access and decision making over natural resources

The Comprehensive Peace Accord, signed in November 2006, put an end to the ten years of violence in Nepal between the government and the Maoist insurgency (the Unified Communist Party of Nepal). During the assessment phase leading up to the formal peace mediation process, international facilitators conducted an informal participatory analysis with key stakeholders to map the root causes of the conflict, which included inequitable land access and discriminatory decision making over natural resources. This analysis was undertaken as an initial step in the process, and the findings informed many aspects of the mediation process thereafter, particularly the manner in which land and natural resource issues were addressed.

Source: Expert meeting on mediating natural resource conflicts.

participation in decision making; and, environmental protection and compensation provisions. Participatory approaches in the assessment phase can set the stage for a more inclusive and nuanced understanding of the drivers and causes of conflict, which can then inform the mediation approach.

Analyze the natural resource stakeholders, including their capacities, positions, interests, and relationships: The assessment should include a stakeholder analysis that involves a clear and nuanced mapping of actors, their positions, and their interests with respect to natural resources. The analysis must capture the range of actors and institutions at all relevant strata, recognizing the multileveled nature of many resource disputes, and the fact that such disputes – and therefore stakeholder positions – evolve over time. Participatory stakeholder mapping using focus groups can be a helpful tool.

Stakeholder capacity to engage in a mediation process should be evaluated in order to identify areas where capacity-building could prove instrumental later in the process. In particular, proactive consultations should be conducted with women and women's organizations to ensure their input and concerns are specifically documented, given that their voices are often marginalized. When indigenous and traditional societies are involved, their particular history and dynamic with regard to the resource and territory involved should be noted. Inter- and intragroup dynamics within traditional societies that may be pertinent to the conflict should be noted.

Identify mediation entry-points: Opportunities and entry-points for initiating a mediation process should be identified and prioritized based on the dimensions of the conflict and the likelihood that the parties will be able to negotiate the issues through a mediated process. Consideration must be given to the kind of mediator role, style, and profile that would be most effective for possible entry-points. It is equally important to identify if there are any particular individuals, groups, or institutions that carry strong legitimacy in the eyes of key actors, and whether they can be used as an initial entry-point to kick-start the mediation process. It is also important to understand the history of any previous attempts to address the dispute and see if these offer lessons on what should be followed or avoided. Clarity is also needed on how different government agencies could provide entry-points and support, or potentially hinder, the process.

Consider options for design of the mediation process: It is essential to determine the pre-conditions that must be met to ensure the mediation process is locally owned and deemed to be legitimate in the eyes of key stakeholders. It is crucial to identify which actors must be engaged in the mediation, and to assess the political impact of including some and excluding others. Given the nature of resource disputes, it is important to consider whether a multi-level or multi-track process is needed, including the establishment of broader consultation and dialogue processes. At the same time, any other significant ongoing or planned processes that could influence the interests of the parties should be identified. These would include local or regional dialogues, legal reforms, judicial outcomes, award of concession contracts, and national planning or zoning processes. The mediation process design may need to establish formal or informal links to these initiatives, or build on their outcomes.

Decide on the feasibility of a mediation process and determine conditions for formal engagement: In addition to understanding the technical dimensions of the resource dispute and the interests of stakeholders, the key outcome of the assessment phase is to identify the minimum required conditions to advance to the next phase of the mediation process. This involves understanding the level of support and perceptions of legitimacy the parties express towards a mediation process. It also combines an internal analysis of the political risks, costs and benefits of engagement and the potential outcomes by the different parties together with ways to navigate existing power imbalances. These range from capacity-building on mediation skills and the use of technical information, to other creative approaches that can diminish power asymmetries. For example, a group that may be weak might enhance its power and influence by either joining a larger coalition of actors, interconnecting their interests with those of other stakeholders, or reframing their interests. These dynamics will inform any decision to proceed with the mediation, re-design it or make it conditional upon an agreed set of ground rules. The main outcome of this phase is that the identified parties give a formal mandate to the mediator or mediation support institution to proceed to the next phase.

2.2 Pre-negotiation preparedness phase

The pre-negotiation preparedness phase lays the foundation for negotiations and is focused on establishing the best possible conditions for a successful mediation. The issues addressed in this phase usually relate to procedural matters about who should be involved, the timing and location of negotiations, the structure of negotiations, and the items on the agenda. Clear agreement on the design of the process usually translates into greater commitment by all parties to the mediation itself. Common issues to address in this phase include:

- Goals and objectives of the negotiation;
- Scope of the negotiation and key principles;
- Parties in the negotiation and issues around their representation;
- Mediator(s) and other technical support that will be required;
- Process methods and modalities to be used;
- Work plan, sequencing, logistics, and location;
- Capacity-building;
- Mediation process design.

Some of the key steps and good practices that should be undertaken by a mediator or mediation support institution during the pre-negotiation preparedness phase are described below.

Define the goals and objectives of the negotiation: To prepare for and design a negotiation, the various short-term objectives or long-term goals must be clear. While these may evolve over time, the parties should at least start with a clear view on what the process intends to achieve. Objectives may include creating a safe space or building a relationship among the stakeholders, or proposing solutions to a problem. The longer-term goal may be to achieve a legally binding final decision on an issue. Objectives may require linking the negotiation to other conflict prevention tools such as broader processes of dialogue to ensure an adequate flow of information or buy-in within a broader spectrum of society beyond the negotiation table. In any event, it is essential to know how the mediation process will lead to a decision and appropriate follow-up action.

Establish the scope of the negotiation and key principles: The pre-negotiation phase determines the breadth of issues that will be addressed in the mediation and any principles the parties may agree on in order to guide the process forward (see annex 1, a synopsis of the UN Guidance for Effective Mediation). Common issues to address include management authority; public participation in decision making; free, prior, and informed consent; equitable benefits-sharing; land ownership and tenure; resource access and rights; population resettlement or displacement; access to justice and dispute resolution; illegal and illicit resource exploitation; and compensation for environmental damage or lost livelihoods.

Determine parties and their representation in the negotiation: Based on the stakeholder analysis in assessment phase, a key issue is to determine the parties to the negotiation, how they should be represented, and what other actors should be informed or engaged. This requires identifying who should be in the negotiation and who should be excluded.

There are many categories of people to consider for either direct engagement or consultation: resource users (communities, companies, etc.); resource regulators (governments, whether local or national, or others who set the rules); beneficiaries of the resource (those who get or buy the resource once exploited, whether legally or illegally); and other stakeholders who face the negative impact of the resource's exploitation. It is important to think through who is truly essential for the negotiation, factoring in considerations about potential spoilers and how they can be handled. Casting the net too wide can result in an unwieldy process that becomes difficult or impossible to conclude, but excluding key groups may result in a process being seen as illegitimate, or being derailed by groups who feel they deserve a seat at the table.

Another fundamental issue to address is whether mechanisms are in place to ensure that representatives can take decisions on behalf of the parties they represent. Furthermore, the mediator should consider if consultation and validation procedures will be used between representatives and their constituencies. Particular care is needed in regards to indigenous and traditional communities, where issues of representation can be challenging. Special procedures may be useful to ensure that representatives communicate regularly with civil society organizations and local communities. In establishing the mediation process design, it is imperative to consider how gender roles, socio-economic status, and ethnicity may influence men and women's relationship with natural resources and whether these concerns are being adequately reflected.[23]

Assess options for the mediator and other support: Determination of the mediator(s) and other support required for a mediation process is tied directly to the possible entry-points as well as the complexity and objectives of the mediation. The mediator, whether an individual or a team, must have the requisite skills and legitimacy to manage the many dimensions of mediation. A team can sometimes be useful in balancing different mediator roles, bringing a range of technical skills to the table, or bolstering perceptions of legitimacy. A balance of insider and independent mediators may be needed. Moreover, a mediation team may be needed when a dispute is expressed at multiple levels and multi-track processes are required.

The combination of mediator and support expertise must also anticipate linking mediation to other peacebuilding tools (see section 1.4.2 on dialogue). Technical and legal experts on natural resources can have an important role in supporting a mediation team, depending on the nature of the resource disputes. At this point it is also useful to identify any potential supporting actors to the mediation process, including mentors, conveners, and sponsors.

In practice: Process design and key principles in the Indus Waters Treaty

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Pakistan's Indus water commission official, Shiraj Mamon (center left in red jacket) walks with Indian officials on the banks of the river Tawi in Jammu, India. The Indus Waters Treaty of 1960 created the permanent Indus Commission, promoting cooperation on transboundary water issues in the basin

In the Indus Waters Treaty, an agreement on process design and key negotiation principles was an important precondition in preparing the ground for the negotiations over the allocation of the Indus River and its tributaries between India and Pakistan. The World Bank helped the parties to design the process and agree on initial key principles on the nature of the solution that the parties would aim for, as well as the type of representation needed to increase the likelihood of reaching a final agreement. In particular, the parties agreed to negotiate on a functional rather than political basis, resulting in the appointment of engineers from both countries to engage in the negotiations, supported by an engineer from the World Bank. This technical approach allowed both parties to overcome various barriers and helped contribute to the adoption of the Indus Waters Treaty.

Source: Expert meeting on mediating natural resource conflicts. See also case study 6 in Part B of this report.

Prepare mediation methods and modalities: Preparation requires thinking through the range of methodologies and modalities that will be needed to achieve successful meetings and all of the other activities that form part of the negotiation process. Tools such as stakeholder consultation meetings, joint fact-finding, brainstorming sessions, the use of outside experts, confidential caucuses, thematic subgroups, field trips, and community information sessions can be utilized throughout the process. By varying the interactions between the parties, interest in the process can be sustained and relationships can be built in different ways.

Establish a work plan, sequencing, logistics, and location: An essential aspect of negotiation preparation is determining when the mediation process should begin, how it should be sequenced, and where meetings should take place. For example, are quick early wins needed to develop momentum and build initial mutual trust, or are easy wins best used later in the process? It is important to think through how long individual meetings will last and to include contingencies for process delays. Setting milestones and targets for the overall mediation process can be extremely helpful, yet forced deadlines can sometimes backfire. If training will be part of the process, when should it be sequenced in? With regards to location, some processes or meetings are best held discreetly in private while others may be more appropriately done in public. Furthermore, a mediator must ensure all proposed locations are comfortable to all parties, represent a safe, 'neutral' space, conducive to building and maintaining trust. It is essential to estimate the costs involved and ensure financing is available to support the process through to its conclusion. Typically, a sponsor will play the financing role.

Offer training on negotiation skills or technical topics: If the assessment phase identified major asymmetries in the negotiation or technical skills of the parties, training may be needed to equalize the negotiating capacities and technical capabilities. Negotiation training should focus on interest-based negotiation techniques, with an emphasis on effective process design as well key principles of collaborative negotiation and consensus building. This can increase the negotiation skills of weaker parties, such as traditionally marginalized communities or social groups like women and youth, and thereby increase the likelihood of negotiation success. Technical training can introduce basic technical information on specific natural resource topics and provide participants with case studies on how similar resource disputes were resolved in other situations.

A training environment provides an initial opportunity for the parties to explore the issues in a neutral and 'safe space'. The views and positions expressed during training are without prejudice to future negotiations and can therefore help the parties to speak more freely. In some cases, joint training can begin building dialogue and confidence between the parties, albeit at an informal or indirect level. The training can also give the mediator deeper insights into the substantive, procedural, and psychological interests at play that can further inform the mediation process design.

Adopt mediation process design: All aspects of the process design, as outlined above, should be agreed upon by the parties to the mediation and adapted where necessary. The agreement process itself represents an important opportunity to build confidence, find early consensus, and establish clear ground rules for the substantive mediation to which the parties can then be held accountable. Clear agreement on the process design usually translates into greater commitment to the mediation itself.

In practice: Pre-negotiation preparedness in Bougainville, Papua New Guinea

The initial discussions between the rival factions in the Bougainville crisis were mediated by New Zealand from 1997 to 2001. During the pre-negotiation phase, the parties agreed to hold the talks in a military camp in a secure, foreign, and neutral territory. This decision helped the parties feel safe in speaking freely about their grievances and helped increase the perception of negotiating on an equal footing. Throughout the process the mediators facilitated the talks but did not run them. Instead, they wanted to ensure that the negotiating parties themselves mainly managed the talks and thereby owned the outcomes.

Source: Expert meeting on mediating natural resource conflicts.
See also case study 2 in Part B of this report.

In practice: Training for negotiation

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Training can be an important aspect of the pre-negotiation phase, enabling stakeholders and increasing the chance of success

In the case of the Nile Basin, several week-long training courses in Cairo, Bujumbura, and Nairobi helped set the stage for the negotiation of the Nile Basin Interim Procedures for Data and Information Sharing and Exchange, which were agreed upon in 2009. Training activities were also instrumental for issues related to consultation and consent in the negotiation of the Mekong River Basin Agreement, signed in 1995. Leading up to the 2010 Boreal Forest Agreement in Canada, negotiation training was employed in the pre-negotiation phase to help increase the confidence and capacities of some of the stakeholders.

Source: Expert meeting on mediating natural resource conflicts.

2.3 Negotiation phase

The negotiation phase is where the substance and terms of the agreement are addressed. During the negotiation, the mediator helps the parties come to a mutually acceptable agreement. Under the right conditions, mediation can also help conflicting parties strengthen their relationship and move toward cooperation. Within this phase, it is generally necessary to:

- Clarify the issues;
- Develop a common information base;
- Investigate alternative approaches or models for resolving issues;
- Identify potential elements of an agreement that all parties are likely to support;
- Develop conditional elements of an agreement that integrate the interests of some or all parties to the negotiation;
- Prepare proposals by the parties;
- Consider trade-offs that may be required to overcome outstanding issues;
- Present proposals from the mediator to overcome impasses;
- Consider implementation requirements, including provisions for addressing unforeseen barriers to implementation and any ongoing governance requirements;
- Achieve an agreement on a final package, including testing that outcome with relevant constituents, and ratification.

The good practices outlined below can help mediators during the negotiation phase of a resource conflict. First, a framework is described that helps identify possible intervention entry-points based on different problem dimensions of a conflict. Following this, additional strategies useful for resource-specific disputes are described.

The identification of entry-points is facilitated by the framework below, which organizes the dispute into five possible dimensions:[24, 25] data/information problems; structural/systematic problems; relationship problems; conflict of values/beliefs; and conflicts of interests. Possible intervention activities associated with each of the five conflict dimensions are outlined below.

- **Data/information problems:** Possible mediator interventions can include coming to an agreement about the relevance of the data/information or the approach that will be used to compile it; establishing shared criteria to collect and evaluate the data/information; or using outside expertise to provide advice or resolve differences of opinion about data/information.

- **Structural/systematic problems:** Possible mediator interventions can include setting up a fair decision making process that is accepted by all parties; reframing the dynamics to bargaining based on interests rather than positions; redistributing ownership, control, access, or management of disputed resources; adjusting the ways in which the parties exert their leverage by moving to greater persuasion and less coercion; adjusting the timelines involved to permit greater or less time; and adjusting factors that bring outside pressures to bear on the parties.

- **Relationship problems:** Mediator interventions may include promoting constructive joint problem solving; establishing rules and procedures to manage the emotional aspects of communication; establishing supportive processes to encourage emotional expression and legitimize feelings where appropriate; unpacking perceptions and articulating them clearly; strengthening overall communications; and limiting repeated patterns of negative behavior through procedural adjustments;

- **Conflict of values and beliefs:** Intervention strategies can include reframing matters to avoid a narrative around conflicting values or beliefs; promoting agreement with parallel understandings to 'agree to disagree' on other matters; promoting constellations of issues characterized by common values where possible; identifying overarching objectives that are held by all parties; and accepting that fundamental conflicts over values and beliefs may not be resolved through a mediation process.

- **Conflicts of interest:** Intervention strategies can include prioritizing interest-based approaches that avoid zero-sum positioning; creating win-win solutions; seeking means to increase mutual benefit; employing criteria that are objectively grounded; and seeking resolutions that are integrated and complementary regarding the interests of the different parties.

In addition, a few ideas for interventions particularly relevant to mediating natural resource disputes are highlighted below:

Conduct joint information gathering: Natural resource conflicts are often driven by confused, conflicting, or inconsistent information held by the parties, which can fuel mutual distrust. In such cases, joint procedures to gather, validate, and analyze the information can be very useful for establishing a common understanding and for building trust between the parties. This approach can be used to address a wide range of information issues, such as the extent or amount of the resource; the rate of exploitation involved; the distribution of costs and benefits; or the influence of other factors such as climate change. However, joint approaches have to be designed carefully, especially when there are asymmetries in technical capabilities to collect and analyze information. The design of joint procedures needs to be based on a solid understanding of what each party considers relevant information, different "ways of knowing", and what role technical information plays in their understanding of the problems and solutions.

In practice: Joint information gathering for the Columbia River Treaty

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Bonneville Dam on the Columbia River near Cascade Locks, Ore

The International Columbia River Engineering Board was established by the United States and Canada in 1944 to study the river basin's hydrology, population, economics, and existing dams. It is an example of joint information gathering that helped to overcome years of unproductive dialogue and to unblock negotiations, resulting in the Columbia River Treaty, signed by the two countries in 1961 and ratified in 1964.

Source: Expert meeting on mediating natural resource conflicts.

A related approach involves establishing joint information platforms that both parties can contribute to on a regular basis. Such platforms can improve transparency and confidence in the mediation process and equalize the information held by the parties. Building such platforms may require agreement on a range of issues, such as the type of mechanism or scientific protocol needed to generate or collect information; the terms of reference for the process itself; the selection of relevant experts; and, the design of processes to analyze and validate the information. In some instances, ground rules may be required to ensure parties cannot misuse the need for better information as an excuse to avoid negotiating difficult issues.

Seek impartial technical expertise and lessons learned from other cases: Natural resource negotiations can be influenced by the manner in which the parties interpret the available data or by significant gaps in factual information. Impasses are more likely to occur when the parties base their positions on conflicting data or diverging interpretations of the same data, or when they believe the other party is withholding or misrepresenting essential data. Impartial technical experts can ensure that reliable, scientifically valid data and analysis is provided to all parties on an equal basis. Impartial third parties may also have access to state-of-the-art technologies (field sampling and laboratory analysis, remote sensing and geographical information systems, drone photography, etc.) that can expand the existing sources of information and analysis or help visualize the issues in a useful way. They can also help identify relevant case studies from other jurisdictions and countries where similar resource conflicts were successfully resolved or prevented (see annex 2).

Shift discussions from political and ideological dimensions to the technical aspects of the dispute: A common mediation tactic is to direct discussion towards the technical aspects of natural resource disputes and away from sensitive political, cultural, or ideological dimensions. This is commonly known as "technicizing the debate" and can be particularly useful for natural resource disputes because many dimensions can be objectively measured and quantified. These include resource quantity, quality, spatial distribution, seasonal variation, vulnerability to shocks and stresses, consumption and demand trends, historical environmental changes, recovery potential, and carrying capacity. Although this strategy can overcome key blocks, one of the important challenges it must address is that many resources are influenced by a range of factors leading to a high level of complexity and uncertainty in their availability, quality, and value. In some cases, a final agreement will need to include contingencies recognizing this uncertainty. Furthermore, this approach presumes a symmetry of technical capabilities between the parties which may need to be built in advance of its application.

In practice: Technical information and expertise on natural resources in Western Sahara

In the informal talks that took place in July 2011 over Western Sahara, the parties (the Frente Polisario and the Moroccan government) agreed to hold expert-level discussions on the status of the environment and natural resources. These technical discussions, supported by UNEP, took place in November 2011 in Geneva, where the parties confirmed their intention to develop a common database of existing natural resources as well as their existing levels of exploitation. This would serve as a foundation for further talks on issues associated with fisheries, water, phosphates, and other natural resources.

Source: UN Secretary General. 2012. S/2012/197: *Report of the Secretary-General: The Situation Concerning Western Sahara*, paras. 19-20 and 23. United Nations: New York.

Maximize benefits for all stakeholders: When a negotiation focuses on how a limited supply of natural resources should be allocated among different stakeholders, there is a risk of falling into a win-lose dynamic. Accordingly, a common strategy of resource mediators is to try to identify a broader range of benefits that are available from the resource, thereby expanding the pie that can be shared or used jointly. For example, resource benefits can include employment, revenues, services, access, and infrastructure. The more one can maximize the number and range of mutual benefits available for the different stakeholders, the more solutions are potentially available that allow for win-win outcomes.[26]

Delink resource ownership from resource use and management: The ownership of natural resources may be linked to complex and sensitive issues of identity, history, and culture that can be difficult to negotiate. Accordingly, there may be situations where it is possible to strategically separate issues of resource ownership from issues of management or revenue distribution by explicitly taking the question of ownership off the table.[27] Where this occurs, the parties typically agree that they disagree over ownership but are willing to negotiate on resource use and management for mutual benefit, provided this does not compromise their ownership claims in the future.

Employ scenario techniques, modeling, case studies and other tools to help parties visualize future resource use, management and benefits: There are a number of techniques that can be used to help the parties discuss potential solutions to resource conflicts without jeopardizing their current interests or requiring a political decision or mandate. Scenario-building can help develop plausible alternative versions of the future, which the parties can explore and compare different options and outcomes. Case studies can illustrate how similar conflicts were resolved in other situations and highlight the benefits derived by each of the parties. Modeling can provide more technical predictions and projections to the parties covering a range of variables such as resource availability, consumption trends, climate change, population growth, migration, etc. This can inform how each of the parties may conduct their internal evaluation of a potential solution to the conflict and generate momentum for compromise or an expanded political mandate to negotiate and conclude. These tools can help the parties generate new ideas and provide constructive solutions in a non-committal environment that can indirectly inform their negotiation strategies as well the feasibility of proposals from the mediator.

Use objective criteria and normative frameworks on natural resources: The use of objective criteria to establish standards, benchmarks, or targets deemed fair by all parties is a common mediation technique in resource disputes. This helps focus discussions in ways that are technical, while also moving away from perceptions that the information is biased towards a particular side. In resource disputes, normative frameworks based on the standard policy of established professional practice can be a source of such criteria. Normative frameworks may also be derived from domestic or international law and policy. In the case of international disputes, alignment to international norms can be used to shift the focus away from competing national interests. Conforming to established international standards can provide legitimacy to a process and also help marshal support to implement agreements. Normative frameworks on natural resources include multilateral environmental agreements or examples of best practices, such as the Natural Resource Charter and the Extractive Industries Transparency Initiative (EITI).

Change the negotiation dynamic: Natural resource mediation processes may encounter periods of stalemate when different positions become entrenched and the parties cannot make progress. When this occurs, mediators

In practice: Considering other national policies and international practices to reduce gas flaring in Alberta, Canada

The consideration of different national standards (e.g., from the United States and Norway) and international good practice was instrumental in helping stakeholders objectively assess options for reducing solution gas flaring in Alberta, Canada. The resulting directive mandated firm, short-term targets for reducing solution gas flaring, and defined maximum limits on the total volume of solution gas that could be flared at individual sites if voluntary targets were not met.

Source: Expert meeting on mediating natural resource conflicts. See also case study 3 in Part B of this report.

may need to change the dynamic of the negotiation. This can be done in many ways depending on the needs and context. A mediator may consider the use of informal talks, evening dinners, field trips, study tours, or on-site observation visits. Another option is to help the parties visualize the problem in a different way using maps or digital animations, or getting new information from a fresh perspective. The parties could also jointly visit disputed locations or places where similar disputes were resolved; alternatively, outside experts or parties to similar disputes may be brought in to share their experiences and findings. Using a combination of creative approaches can provide a change of dynamic that may prove to be constructive.

Increase the capacity of weaker parties when facing power imbalances: When significant power imbalances exist between the parties, the quality of a negotiation and the sustainability of an agreement can be improved significant-ly by building the capacity of the weaker party. Sustainable agreements require all parties to understand how to negotiate on the basis of their interests. One of the essential points of interest-based negotiation is the recognition that a mutually beneficial solution is often more sustainable than a win-lose outcome. When a weaker party lacks these skills, negotiations can stumble or stall easily – and for long periods of time – and may even result in a signed agreement that is questioned or rejected at a later date by the weaker party. Explaining the logic behind interest-based negotiation to both the weaker and the stronger parties may be needed to help all sides see why it is in their mutual interest to have capable parties at the negotiation table.

Offer proposals to the parties: Resource disputes can sometimes benefit from proposals offered by the mediator. This approach is a matter of timing and judgment, and is only feasible if deemed acceptable by all parties. The mediator in question also needs sufficient influence and credibility in the eyes of the stakeholders to the process. Given sensitivities around this, most mediators would be reluctant to present their own proposals without a formal request from the parties. Of course, proposals from the mediator may sometimes complicate matters as much as they may assist.

Consider joint procedures or institutions to deal with complex technical issues: Given that resource disputes often involve complex technical issues that require detailed information and long-term attention, the negotiators may decide to establish joint procedures or institutions that can deal with these issues at some point after the negotiation. Accordingly, the negotiation and agreement could address how new mechanisms should be established or operate without trying to resolve the issues themselves during the negotiations. In such cases, the parties should seek to agree on at least some of the following items: mandate, terms of reference, issues of representation or staffing, benchmarks and milestones, location of offices, source of funding, and dispute resolution process.

Draft flexible and adaptive agreements that can deal with uncertainty and change: While many aspects of natural resources and the environment can be quantified, there is still a great deal of uncertainty in how complex ecosystems interact, evolve, and respond to different pressures, shocks, and stresses. Mediated agreements can navigate this uncertainty by adopting flexible and adaptive management arrangements or contingency plans based on different possible outcomes. For example, the parties could agree on certain targets that would be met through specific strategies or technologies to resolve their dispute. The effectiveness of these would be monitored and evaluated on a regular basis during the implementation of the agreement. If agreed targets were not met, the parties could make adjustments using the adaptive management provisions of the agreement.

Determine the best option for documenting, ratifying, and communicating the agreement: In natural resource mediation, the range of different instruments for documentation and ratification is broad, and they can take many forms. The overall key here is to ensure that it is designed in a way that minimizes the scope for future perceptions of unmet expectations and broken promises. The options can range from presidential decrees and joint declarations, to memoranda of understanding, formal treaties, and legal agreements, and even to customary ceremonies and practices. Consideration must also be given to the process that will be needed to ratify the agreement by the constituency of each party in a manner consistent with domestic law. A communication strategy may also be needed to inform stakeholders and the broader public of the outcomes or to garner their support.

In practice: Technical proposals by mediators

In the negotiations between India and Pakistan over the Indus River in the 1950s and early 1960s, both countries presented their own water development plans, based on common information about the available supply, but proposing very different allocations. The World Bank, a sponsor of the talks, presented an alternative proposal that allocated the majority of the water supply from the river's eastern tributaries to India, and the majority from its western tributaries to Pakistan. The parties could not immediately agree on the proposal. The World Bank then suggested that India build more storage facilities, which was rejected by India. The negotiations then focused on how much India should contribute to the constructions of additional storage. The World Bank conducted separate negotiations with Pakistan, India, and international donors to come to an agreement, which was ratified in 1961. Likewise, in the border dispute between Ecuador and Peru, proposals by the four guarantors of the mediation process helped Ecuador and Peru reach the Brasilia Agreement, which was signed in 1998. Among the key outcomes of the peace agreement was the establishment of Adjacent Zones of Ecological Protection in the Cordillera del Cóndor mountain range along the disputed border, which eventually culminated in the establishment of the Condor-Kutuku Conservation Corridor in 2004.

Source: Expert meeting on mediating natural resource conflicts.
See also case studies 5 and 6 in Part B of this report.

2.4 Implementation phase

Mediation does not necessarily end when an agreement is reached. During the implementation of an agreement a range of challenges, stresses, and disputes can emerge that may seriously affect the agreement's sustainability. The durability of an agreement hinges on whether such problems were anticipated and how they are formally addressed throughout the implementation process. Parties may feel frustrated, disgruntled, or tricked if problems during implementation are not anticipated and addressed adequately. An agreement may even collapse if serious implementation problems are not addressed. In many cases, ongoing mediation is needed during the implementation phase of a negotiated agreement to address issues such as the establishment of the governance mechanism specified in an agreement; monitoring and reporting to inform parties about progress in implementation; grievance mechanisms and/or dispute resolution processes; and, the adjustment of the terms of an agreement in response to unforeseen implementation occurrences. The most important considerations for the implementation of resource agreements are outlined below.

Establish clear guidance for implementation: An agreement must anticipate and address key concerns that will arise during the course of implementation; this should include clearly defined roles and obligations of the different parties and stakeholders; a timetable for implementation, including clear benchmarks; a monitoring and reporting regime; an amendment mechanism; and, a dispute resolution clause. If appropriate, external mediation support can be useful to resolve certain implementation disputes. However, overdependence on mediation support from third parties during implementation may undermine the sense of local ownership.[28]

Ensure that agreements provide for adaptability and feedback loops during implementation: The agreement should promote an implementation management regime that is adaptive in nature, and able to adjust to events and issues that arise during implementation, whether anticipated, unforeseen, or the result of natural changes. Monitoring and reporting mechanisms that provide feedback about implementation to the parties and stakeholders are critical to maintain confidence in the process. They typically involve joint design, participation, or oversight by the parties and should incorporate technical information as well as local knowledge and perception. Adjustments to the agreement may also be required for a range of possible issues; for example, environmental or market conditions that do not evolve as anticipated or governance arrangements and dispute resolution processes that do not work as planned.

Mitigate power imbalances during implementation: When significant power imbalances exist between the parties, enforcement mechanisms and continuous consensus-building processes can be used throughout implementation to promote and maintain a collective approach to resource management. Other mechanisms that could be incorporated into an agreement to address asymmetries of power may include: future dispute resolution and arbitration processes; implementation alternatives for different field contingencies; the use of external observers to monitor compliance and promote greater transparency; and, joint site management, monitoring, and reporting. Building an adaptive approach into an agreement is also very pertinent when power imbalances are significant, because adjustments can be made in response to political, social, or ecological changes that may play out over time.

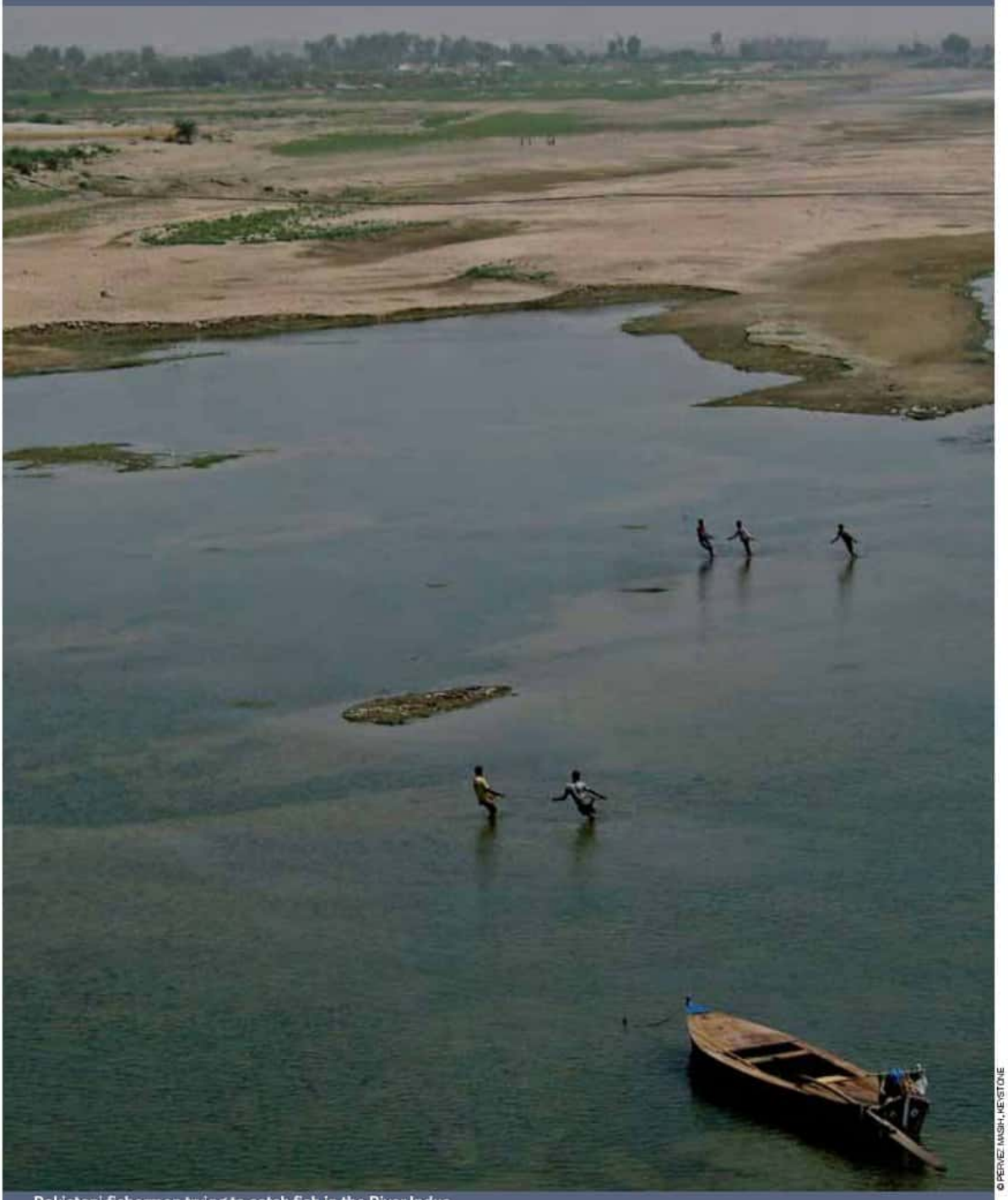
Use dispute resolution processes and/or grievance mechanisms during implementation: Dispute resolution processes and grievance mechanisms should always be incorporated into an agreement because difficulties and differences are a natural part of implementation. These mechanisms should be clear and transparent, yet designed with sufficient flexibility to respond to whatever difficulties arise. Mechanisms should be capable of resolving disputes and grievances at different levels, whether local, national, or international.[29]

In Practice: Implementation of a gas flaring framework in Alberta, Canada

A clear regulatory plan for the implementation of the gas flaring framework in Alberta, Canada, proposed by a multi-stakeholder process was important for the resulting reductions in flaring. In 1999 the regulator published Directive 60, which implemented a solution gas-flaring management framework based on the results of the negotiation. It included a decision tree and specific management recommendations. The directive mandated firm, short-term solutions for gas flaring reduction targets and defined maximum limits on the total volume of solution gas that could be flared at individual sites if voluntary targets were not met.

Source: Expert meeting on mediating natural resource conflicts. See also case study 3 in Part B of this report.

In practice: Disputes during implementation of the Indus Waters Treaty



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Pakistani fisherman trying to catch fish in the River Indus

Agreements or treaties often face challenges in the implementation phase. This highlights the need for the inclusion of governance and dispute resolution mechanisms. An example in this regard is the Indus Waters Treaty process. A series of dispute resolution mechanisms included within the treaty have been employed by the parties to resolve key issues, including referral to the Permanent Indus Commission, the use of an independent expert, and the use of the Permanent Court of Arbitration.

Source: Expert meeting on mediating natural resource conflicts. See also case study 6 in Part B of this report.

3 Guidance for mediation in specific natural resource sectors

This section focuses on mediating conflicts in three natural resource sectors: extractive resources, land, and water. It builds on the four mediation phases, described in the previous section, that apply to any natural resource dispute. Following a brief introduction to each type of resource, each discussion then highlights key conflict factors in the sector and presents a series of effective mediation strategies and agreement models. A list of questions that may be useful during the assessment phase of a mediation process is also included.

3.1 Extractive resources

The term *'extractive resources'* covers non-renewable resources such as oil, gas, and minerals, as well as renewable resources such as commercial timber. As mentioned in the introduction, these resources are grouped together because they are often managed or governed in a similar manner, and are typically extracted by companies with the award of a concession contract or license. They also share similar challenges, such as the potential to cause severe social and environmental impacts, and the capacity to spark conflicts over benefit-sharing with local communities.

Extractive industries are developed through a series of stages typically known as an 'extractive industry value chain' (EIVC).[30] These steps can include: deciding to develop an extractives sector with appropriate intuitions, laws and inclusive decision-making processes; awarding contracts and licenses; monitoring operations; enforcing environmental protection and social mitigation requirements; collecting taxes; distributing revenue in a sound manner; and, implementing sustainable development policies and projects. Although the stages may have a chronological character, they are generally considered at the time when the concession or license is granted. It is equally important to understand that most extractives are embedded in global supply chains that introduce a high level of economic uncertainty and price volatility which local stakeholders in a resource dispute cannot often control.

Extractive resources typically hold the promise of jobs, government revenues, and economic growth. Under the right conditions, the extractive sector can be an important contributor to a nation's economy. On the other hand, extractives are often associated with conflict, either in the form of stand-alone disputes or as an element of a broader political struggle. In circumstances where governing institutions are weak or underdeveloped, countries with abundant extractive resources may suffer magnified effects of the so-called "resource curse".[31]

3.1.1 Conflict factors

Extractive resources can be linked to conflict in many ways, and there is a potential for conflict at each stage in the extractive industry value chain.[32] This potential is dramatically increased in situations where the state lacks the institutional capacity to manage the resource in an effective, transparent and accountable manner. At a macro-economic level, an overdependence on a narrow range of resource commodities has historically led to a series of problems related to poor planning, currency appreciation, and economic instability. In weak and failing states, poor control over the extraction of high-value resources is frequently associated with the capture of valuable resources by armed groups and criminal organizations. Finally, large-scale extractive activities such as mining or forestry can have social and environmental impacts that may trigger or fuel disputes and violent conflict. Against this background, key drivers of conflict in this sector are outlined below.

Inadequate institutional, legal, and policy frameworks: This is a fundamental aspect of conflict regarding the extractive sector in resource-rich states. The institutional, legal, and policy frameworks may be weak, inadequate, contradictory, or even nonexistent, undermining effective resource development and management. These problems may be causal or exacerbating factors.

Disputes over borders and boundaries: Oil, gas, and minerals often straddle national boundaries as well as areas of overlapping territorial claims of states or different ethnic groups. Boundary delimitation processes that influence control over natural resources have always generated tensions and controversy due to the critically important economic and political implications. In particular, the delimitation of Exclusive Economic Zones (EEZs) and maritime boundaries has increasingly important implications for the ownership of offshore oil and gas reservoirs. The desire of ethnic groups to retain exclusive rights of exploitation over specific territories within a state also constitutes one of the most potent and divisive drivers of conflict at a national level. Conflict in the extractive industries can also be caused when the boundary of a license or concession overlaps with another approved land use, a designated area such as a park, or communal lands.

Rush to develop extractive resources without sufficient safeguards: Once extractive resources are discovered, decision-makers, whether private or public, often assume the resource should be developed quickly in order to begin generating an income stream. This is often done without having first established an adequate regulatory framework with appropriate environmental and social safeguards. In other words, there is often a push to develop the resource before adequate capacities are in place, requisite legal and policy frameworks have been developed, or appropriate public consultations are undertaken. Moving forward before addressing these issues could trigger strong opposition to extractive projects. It is imperative to have a strong regulatory framework in place before revenues start accruing, given that vested financial interests and budgetary dependence might limit opportunities for future reforms.

Poor engagement of communities and stakeholders: Much conflict around extractive projects is caused or exacerbated by weak and inadequate community and stakeholder engagement. Many engagement strategies are not conflict-sensitive and do not address key characteristics typical of many resource disputes. For example, an engagement approach might not fully address the wide range of key actors and stakeholders, the different levels at which the conflict operates, the power imbalances between parties, or local community needs, goals and cultural practices. Many processes also fail to respect the principle of free, prior, and informed consent (FPIC), which often leads to immediate grievances within affected communities. When key stakeholders are poorly engaged, marginalized, or excluded from decision making or related engagement processes, opposition is more likely and tensions can escalate rapidly. In some cases, marginalized stakeholders may develop strategies of political confrontation or violence to make their voices heard.

In practice: Free, prior, and informed consent

The International Labour Organization (ILO) Convention 169 recognizes the right of indigenous populations to be consulted on procedures and investments that affect them directly. Free, prior, and informed consent (FPIC) can be understood as a continuous process of engagement and approval, involving ongoing participation of indigenous peoples at the various stages of the extractive industry value chain. While the UN-REDD[33] guidelines recognize explicitly the possibility of a veto, according to the ILO and the UN Special Rapporteur on the rights of indigenous peoples, a veto right could polarize parties into entrenched positions whereas the objective should be to seek consensus.

Decision making that is aligned with FPIC involves, among other things, participatory mapping (identifying indigenous peoples affected) and incorporating traditional knowledge along with modern data collection and analysis methods.

Source: International Labour Organization Convention 169 on Indigenous and Tribal Peoples, 1989.

Unmet expectations and broken promises: Unmet expectations of benefits from the exploitation of natural resources, such as jobs, an increase in local business, improved security, health services, education and infrastructure, can lead to community grievances and ultimately to conflict. This includes situations where expectations have been based on misunderstood or unrealistic projections of what external investors and authorities are able to and willing to provide, as well as cases where false expectations have been created in the process of establishing the project. Conflict can also arise when realistic expectations are not met. When clear terms in the concession, agreements with local authorities or stakeholders, or oral promises are not honored, or are disputed or protracted, this can lead to disappointment and material disadvantage. It can also lead to disempowerment and costly processes for the beneficiaries, and in some instances disagreement among stakeholders.

Inadequate benefit-sharing: Many conflicts in the extractive sector are also caused, or exacerbated, by inadequate sharing of benefits, ranging from revenues to jobs as well as access to infrastructure and public services. Violent conflict is more likely in a country when such benefits are not equitably distributed among groups or regions. An individual project is more likely to face opposition when the benefits are distributed in a manner that seems unfair, particularly to groups who feel disenfranchised or who bear the brunt of negative impacts, such as environmental pollution or displacement. A few issues worth highlighting are:

- **Local and regional distribution of revenues:** The concentration of high-value extractive resources in one region can lead to tensions if revenues are inequitably allocated across the country, as well as within and between the adjacent communities.
- **Access to infrastructure and public services:** The location and use of major infrastructure and services associated with extractive resources can be a key point of tension. When public access to roads, railways, ports, electric grids, and water services that support the extraction of natural resources is restricted, tensions can mount. This can be amplified when an extractive operation employs an "enclave approach" that does not extend infrastructure and services to neighboring communities.
- **Employment and business opportunities:** Tensions and conflict can arise when a local population does not receive significant employment, decent salaries, and business opportunities related to servicing an extractive resource project. This is exacerbated when people and businesses from outside the community or country are favored or given more opportunities than locals.

Negative economic, social, and environmental impacts: While extractive industries can bring benefits to communities, there are also a number of negative consequences that can drive local conflict. In situations of weak governance, the negative economic consequences of the so-called resource curse may be magnified,

including currency appreciation, local inflation, land speculation, and reduced export competitiveness. Furthermore, extractive developments can have numerous negative social impacts, including corruption, displacement, human rights violations, significant inflows of migrant workers, disruptions to traditional livelihoods, and increased social problems and crime. These can be further compounded by environmental impacts, ranging from lost access to livelihood resources, to resource damage and degradation, to contamination of land, air, and water. Even where the extractive sector has well-developed social and environmental assessment and management procedures, they are frequently not applied or are poorly enforced.

Concessions and licenses overlapping with existing statutory or customary land and resource rights: Major tensions can be sparked when a concession contract or license is issued in a manner that fails to recognize, or overlaps with, existing land and resource rights. In some cases, statutory land rights do not cover sub-surface resources or are revoked through an act of expropriation under a justification of eminent domain. On the other hand, customary land rights can pose specific challenges as they are seldom formally documented or legally recognized. (For more information on this issue, refer to section 3.2, which deals specifically with land-related conflicts.)

Lack of legitimate dispute resolution processes or grievance mechanisms: When stakeholders lack access to legitimate and effective mechanisms to address their disputes and grievances, there is a greater likelihood that frustrations will escalate and be expressed through violent means.

Mismanagement of resource revenues: Corruption, diversion, and mismanagement of revenues from extractive industries at the expense of national and community interests can easily contribute to public outcry and conflict. Such misappropriation often occurs in order to maintain political power through systems of patronage. Revenues from extractive resources can also be diverted away from the public interest to finance armies and armed groups.

Illegal extraction and criminality: Illegal exploitation and trade of extractive resources combined with organized criminality is frequently a factor driving conflict in resource-rich areas that have weak governance, instability, or armed conflict. The individuals, groups, and companies working outside the law are typically interested in perpetuating the conditions under which they profit, and may try to undermine initiatives aimed at changing the status quo.

Lootable natural resources: How an extractive resource may contribute to conflict is heavily influenced by its nature, location, and method of extraction as well as by the actors involved in its extraction and trade. From a conflict perspective, a key distinction is whether a resource is lootable or not. A *lootable resource* has a high value and is associated with low economic barriers to enter into the sector. In essence, this means a valuable resource that can be exploited by artisanal means (e.g., alluvial diamonds or timber). Lootable resources can fuel conflict when used to fund armed groups; they are called *conflict resources* when they help finance war crimes and human rights abuses. *Non-lootable resources* require significant infrastructure investment and technical expertise to extract or transport (e.g., oil, natural gas, and deep-shaft minerals such as kimberlite diamonds). Non-lootable resources can also fuel conflict when they are stolen or informally taxed along the value chain, and provide a revenue source for armed groups.

Human rights violations: Human rights violations may be a significant driver of conflict, or can serve as a trigger for protests or violence. Extractive companies may be directly or indirectly involved in human rights abuses, either related to negative economic, social and environmental impacts on communities mentioned above, or with regards to their own staff and security providers. The United Nations Special Representative on human rights and transnational corporations and other business enterprises, John Ruggie,[34] has outlined the ways in which businesses can abuse human rights. For example, this can be done through child labor, forced labor, discrimination, restrictions on unions, forced displacement, and as a result of the actions of both public and private security forces. Due to the large-scale and high-investment nature of operations involving extractive resources and the complexity of security arrangements between the state and extractive companies (especially in the context of Joint Ventures), it is vital to find a conflict-sensitive solution to the security requirements of companies, and to protect human rights.

3.1.2 Strategies and agreement models

Several approaches and agreement models can be useful in mediating conflicts over extractive resources.

Invite impartial technical assessments by third parties: In many disputes over extractive resources, the parties have a different technical understanding or interpretation of the available data. When the basic technical facts are disputed, it can be helpful for the parties (or mediator) to invite impartial technical experts to conduct a scientific assessment aimed at introducing objective data into the mediation process. The assessment can be done on a completely independent basis, or jointly with the parties. In the latter case, it is important that the methodology is agreed upon by all parties and that the data is independently verified. It is important to note that the process of jointly narrowing uncertainty and disagreement may be far more useful to conflict resolution than arriving at a shared understanding of reality. This technique is especially helpful when disputes in the extractive sector are due to perceptions of environmental damage, health risks, and lost livelihoods. A third party assessment that maps and catalogues differences in expectations, and reviews compliance with promises and obligations, can help to clear up misunderstandings, uncover shortcomings and increase the realism of expectations. This can be a good starting point for dialogue about key matters that need to be resolved.

Build negotiation capacity for communities and stakeholders: Local communities and social groups often lack the knowledge and skills to negotiate effectively with companies and the government on issues related to extractive resource management and benefit-sharing. Accordingly, training in interest-based negotiation and related technical skills can be an effective way to balance negotiation capacities. This can be particularly important with groups that tend to be socially marginalized, such as indigenous people, women, or youth.

Support or enhance state engagement and law enforcement: Many conflicts in the extractives sector involve corporate-versus-community disputes in the context of weak or asymmetric state engagement. In such cases, one strategy is to build the capacity of state or local authorities to engage in the dispute, and/or to enforce existing laws, regulations and dispute resolution procedures in a fair and consistent manner.

Employ benefit-sharing agreements and community-development agreements: These can be a very effective tool to help communities and extractive companies find grounds of mutual agreement. Benefit-sharing agreements help clarify the distribution of benefits, costs, and responsibilities from an extractive development. They can address a range of issues: tenure or concession ownership; equity positions within the development; revenue-sharing and royalties; community development and infrastructure investment (including housing and community facilities); training and employment opportunities; social, economic, and environmental impact mitigation; and independent monitoring. Companies can also partner with communities and local NGOs to support community development in their areas of operation. These partnerships can focus on infrastructure, capacity-building, or basic services.

Use grievance mechanisms: Developers of extractive industries face disputes and grievances resulting from unforeseen impacts or specific incidents. This is true even when an impact-benefit agreement or community development agreement is in place. Accordingly, effective grievance mechanisms are needed to ensure that frustrations do not accumulate. Effective grievance mechanisms are one of the principles of "access to remedy" proposed by the Ruggie Guiding Principles on Business and Human Rights (discussed above).

Develop spatial plans and employ demarcation: When an extractive resource is located within or near environmentally sensitive areas, or areas particularly important for local livelihoods (water source, forests, arable lands, grasslands), contention often arises over the potential environmental impacts related to its extraction, as well as impacts upon the rights of local people. Spatial plans and clear demarcation of sensitive zones, migratory routes, or extraction sites can be useful in mitigating impacts and preventing conflicts.

In practice: Impartial technical assessment in the Niger Delta

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Visible oil pollution on surface water in Ogoniland

In 2006 the government of Nigeria requested that UNEP undertake a comprehensive environmental assessment of the oil contamination of Ogoniland, a region with a long history of resource-based conflict. At the time, the government was trying to mediate between the community and the oil producer. While it was widely known that environmental degradation and contamination from the oil industry was a central underlying cause for the ongoing social unrest, there had never been a comprehensive or independent field assessment of the degree of contamination. UNEP provided the first independent baseline assessment of the contamination using a scientific methodology to measure the environmental impacts and corresponding risks. To ensure objectivity, this effort was led by international experts; but to ensure transparency and buy-in, local institutions also participated.

In practice: Impartial technical assessment in the Niger Delta (continued)

A community meeting in Ogoniland, 2006. UNEP representatives consulted the various communities impacted by oil contamination prior to commencing the environmental assessment

The results of the analyses were presented to the government of Nigeria in 2011. The report recommended emergency actions to minimize ongoing public health damage, which directly addressed community concerns. At the same time, the recommendations in the report prompted the oil company to initiate an asset integrity survey to prevent further pollution. This helped the company to gain access to key oil infrastructure to undertake preventive maintenance. The assessment ultimately provided a common information base to the parties and a solid technical basis on which they could negotiate a clean-up program. Other communities in Nigeria are currently taking the UNEP report on Ogoniland as a model for dealing with oil contamination and the community conflict associated with it.

Source: UNEP. 2011. *Environmental Assessment of Ogoniland*. United Nations Environment Programme: Geneva.

Adopt environmental standards agreements: In some cases, community fears over the potential environmental impacts from extractive operations cannot be addressed by reference to existing legislation and performance standards. One solution is for companies to adopt environmental standards and operating procedures that go beyond existing legal frameworks; for example, higher standards that ensure water and air quality, operational practices that protect biodiversity and promote conservation, or technologies used to manage hazardous wastes.

Consider unitization agreements for shared borders: A cooperative framework is needed between countries when oil or gas deposits straddle national boundaries. In the absence of such a framework, the lack of coordination can be wasteful, inefficient, damaging to the environment, and harmful to state relations. A unitization agreement consolidates competing claims to an oil or gas field into a single production plan that takes into account the field's natural geology, and establishes the best conditions for extraction regardless of national boundaries. Countries can use the agreement to co-develop oil and gas fields so that exploration, drilling, and production can proceed efficiently and revenues can be shared accordingly.[35]

Consider joint development zones for contested borders: Where an oil field straddles a contested maritime boundary between two states, a mediator might encourage the creation of a joint development zone through a joint development agreement. This is a tool that allows states to cooperate over the exploration and exploitation of the resources, while temporarily shelving their disagreement over the border without jeopardizing their respective claims.

Integrate the Voluntary Principles and other human rights frameworks into the process: The Voluntary Principles on Security and Human Rights (VPs) are a set of non-binding principles created to assist extractive companies to balance security concerns with human rights.[36] The VPs can prove especially useful for relationship-building in the context of mediation and/or dialogue processes when multi-stakeholder forums are created to help implement and monitor the implementation of such agreements. For other human rights violations, 'internal' and 'external' grievance mechanisms are needed. Internally, extractive companies must have mechanisms to ensure workers have an effective recourse for complaints and injustices. Externally, grievance mechanisms are needed to provide recourse for communities and other affected stakeholders. Grievance mechanisms should be tailored to the context and needs of those they are intended to serve.

In practice: Unitization agreements

Unitization is "the joint, coordinated operation of an oil or gas reservoir by all the owners of rights in the separate tracts overlying the reservoir or reservoirs."[37] Cross-border unitization takes place for an oil or gas reservoir underlying two or more countries that have a common border between them. Examples of unitization agreements include the Sunrise International Unitization Agreement between Australia and the Democratic Republic of Timor-Leste (2003); the Ekanga/Zafiro field between Nigeria and Equatorial Guinea (2003); the Statfjord Agreement between the United Kingdom and Norway (1979); and the Frigg Agreement between the United Kingdom and Norway (1976).

- A number of good practices in the substance of unitization agreements have been identified that can help minimize disputes during their implementation. These include clear provisions on:
- Unit area, including areal extent, depth, and how to address new discoveries;
- Unitized substances covered by the agreement—oil or gas, or both;
- Access to other substances that may be required for enhanced recovery, such as water;
- Allocation of production and costs between countries, as well as royalty and bonus payment obligations, production sharing and cost recovery, and taxes for license holders;
- Major differences in pre-unitization development costs or additional costs incurred in transitioning from existing operating agreements to the unitized agreement;
- Determination of "tract interests," including both the relative quantities of oil or gas in place under each tract of the unitization agreement as well as the relative quantities of recoverable reserves attributable to each tract;
- Determination of "unit interests" based on the addition of tract interests and the amount of each tract held by different parties;
- Procedures for decision making by the parties that control the unit interests;
- Interaction of unitized operating tracks with preexisting nonunitized tracks.

Source: Okoye A., T. Walde, S. Mahmud, and E. Bastida. 2007. Cross-Border Unitization and Joint Development Agreements: An International Law Perspective. *Houston Journal of International Law* 29: (2): 355-425.

In practice: Joint development agreements

In cases where countries have overlapping sovereignty claims, the underlying natural resources can still be developed through a joint development agreement (JDA) without resolving the sovereignty dispute. This approach is used especially in maritime areas. Articles 74(3) and 83(3) of the UN Convention on the Law of Seas explicitly mentions the possibility for states to enter into "provisional arrangements of a practical nature" when they cannot agree on the maritime boundaries of their respective Exclusive Economic Zones. This enables joint development of the natural resources for a "transitional period" while a final agreement is reached. It is important to note that a JDA is made without prejudice to the respective claims of the parties and to the final delimitation.

When Nigeria and São Tomé and Principe could not agree on the boundary of their respective EEZs, they established a JDA in 2001. Both countries now have joint control of the exploration and exploitation of resources in the agreed joint development zone, sharing benefits and obligations arising from development activities on a 60/40 percent basis respectively. At the same time, the JDA clearly states that it does not renounce any right or claim relating to the whole or any part of the zone by either state party.

Sources: Okoye A., T. Walde, S. Mahmud, and E. Bastida. 2007. Cross-Border Unitization and Joint Development Agreements: An International Law Perspective. *Houston Journal of International Law* 29: (2): 355-425; Olufemi A. A., and O. George. 2010. *Current Challenges in Unitization—The Nigerian Experience*.

Extractive resources: Questions to ask

Several questions can be useful for a mediator or mediation support institution during the assessment phase of a mediation involving extractive resources.

- At what stage in the extractive industry value chain did conflict occur or escalate? Is this the first attempt at developing the resource? If not, were previous attempts poorly managed and did this lead to lingering resentment or unresolved grievances?
- Is the development in question compounding other preexisting risks and community concerns?
- How does the development of extractives relate to any broader political conflict? Are the profits from extractives fuelling any kind of rebellion?
- Is the resource in question a lootable or a non-lootable resource? What is the nature of its extraction process and who controls the allocation of benefits? Are the benefits shared in a transparent and equitable way between stakeholders?
- Are the relevant institutional and legal frameworks consistent with international standards regarding extractives and are they being applied fairly and consistently?
- Is there sufficient capacity to prevent illegal exploitation and trade of extractives through monitoring, enforcement, and compliance?
- How have communities and stakeholders been engaged in addressing and distributing the impacts and benefits of the development? Is there a grievance mechanism already in place? If so, how effective and trusted is that mechanism?
- How does the extractive industry supply chain influence conflict dynamics? How well are local businesses integrated into the supply chain? Do sufficient backward and forward economic linkages exist to avoid resource enclaves? How transparent are the relationships between local suppliers and the development company? How much local employment do contracts guarantee? How fair are the wages that are being paid?

3.2 Land

Land, in its broadest terms, includes "the surface of the earth, the materials beneath, the air above, and all things that are fixed to the soil."[38] This definition therefore includes houses, buildings and other improvements, as well as the natural resources located above or underneath the soil. Land is a key resource for livelihoods and is intimately connected to other natural resource sectors, especially water. In this regard, it is both a vital economic asset and closely tied to issues of community identity, history, culture and livelihoods.

Land tenure is a key concept regarding land issues. In broad terms, it refers to the set of relationships that exist between individuals and groups with respect to land and other resources. Land tenure systems determine who can use which resource of the land, for how long, and under what conditions. It is often categorized into four types: private, communal, open access, and state. Under any of the tenure systems, lack of secure access to land or unclear land rights often contribute to exclusion and poverty. Understanding the land tenure system that underlies a natural resource dispute can provide critical insights into the drivers of land conflicts and possible ways to address them.[39]

3.2.1 Conflict factors

Land is closely tied to conflict in many ways, both directly and indirectly.[40] Such conflicts are fairly common given land's centrality in many aspects of human existence, particularly in agricultural and traditional societies. When a conflict is directly about land (i.e., a land conflict per se), tension generally revolves around ownership, tenure, or access. Because land can be so economically and symbolically valuable, land disputes can involve particularly intense emotions and politicization. When social discrimination, political exclusion, and/or economic marginalization are central to the dynamic, land conflicts have a greater chance of leading to violence. Land is also indirectly part of many disputes that arise from the development of extractive industries or that are linked to water access and allocation. Given the importance of land, addressing land grievances and associated conflict is considered a fundamental prerequisite for sustainable peace.[41] Key causes of conflict over land issues are outlined below.[42]

Denial of access, use, or control of land: The denial of access may involve a physical barrier or restrictions on land use, such as new infrastructure, or may be linked to discriminatory policies, or caused by the use of force, either threatened or actual. Denial of access may also be linked to recent policy or management decisions such as granting agricultural, forestry, or mining concessions. In many cases, some groups are excluded from land use and related decision making due to historical events and relationships between the parties, possibly stemming from colonization, discriminatory land allocation, or civil wars.

Threats to land tenure security: Land grievances are often triggered by new laws, policies, programs or large-scale investments that directly impact land tenure security. Such triggers can include agrarian reform, land privatization, land titling, or land concessions to resource companies. These are frequently associated with changes in the status quo that are perceived to affect the supply and demand for land, established land use patterns, or competition between different types of land use.

Conflict between customary and statutory land tenure systems: An unclear relationship between different tenure types and institutions can be a source of tension, especially between farming and pastoral communities. This tension can exist between statutory, customary, informal, or religious forms of land tenure. The tension can be particularly challenging when the state seeks to bring land within a statutory legal framework when it is also claimed under a customary system by tribal, ethnic, or religious communities who view the territory in question as part of their homeland or self-identity. Furthermore, customary land tenure systems, which embed or nest land rights within a complex set of relationships and layers, can present a particular challenge (e.g. individual rights within households, households within kinship networks, kinship networks within wider 'communities').

Land scarcity, land use changes and migration: A variety of natural and human-induced pressures can contribute to land degradation causing significant shifts in livelihoods, land use and migration patterns. These can range from desertification processes, changed weather patterns and climatic conditions, to the impacts of maladaptive livelihoods and unsustainable resource management. These can contribute to increasing scarcity of fertile land, and increased competition over access between livelihood groups. Understanding these critical processes of change is important both to mitigating the drivers of the conflict and to inform the viability of proposed conflict resolution solutions.

Competing land claims, land grabs, and secondary occupation: In broad terms, conflict situations involve shifting balances of power and the settling of old scores that frequently have land dimensions. In many situations, opportunistic land grabbing occurs when new groups come to power. As a result, it is common for different groups to have competing land claims based on the circumstances when they were more closely affiliated with power and influence. This kind of problem can emerge when a displaced population returns to its land following a civil war to find it occupied by other individuals or groups. Known as 'secondary occupation', this problem is common in resettlement initiatives targeting internally displaced people, refugees, or demobilized former combatants. Furthermore, when the land of a returning displaced population is already occupied, they often temporarily resettle in alternative areas, triggering a domino effect of further conflicts with another set of actors who claim that land and who may also be displaced. To complicate matters further, the destruction of land titles and cadasters is fairly common during armed conflict, thereby exacerbating the complexity of the challenge. Conflicts triggered by these issues are typical in countries that have been affected by violent conflict.

Ineffective dispute resolution systems: Land disputes often exist in such large numbers that they overwhelm the capacity of existing dispute resolutions systems, whether court-based or customary. In turn, this means that resolutions may take a very long time or be seen as impossible to finalize. This can drive frustration that may be expressed through violence. Furthermore, dispute resolution systems may be difficult to access or use for reasons of distance, prohibitive fees, documentation requirements, procedural knowledge, or illiteracy. Some dispute resolution procedures may be especially challenging to access by women or marginalized ethnic groups.

Transitioning between land tenure systems: Transitions from one type of land tenure system to another may cause conflict when an effective process is not in place to reconcile the transition and resolve the many land disputes that will arise. Tension is very likely, for example, when moving from a customary to a statutory tenure regime, or from communal to private tenure. There may be a legacy of historical grievances dating back to periods when colonial lands were transferred to the state at the time of a nation's independence, with little regard for customary owners.

Reclaiming "unused" community lands: National or local authorities may attempt to reclaim community land that is not visibly cultivated or settled in order to make it more productive. Attempts to reclaim land under these circumstances can trigger conflict between authorities and affected communities, particularly in situations where the community's traditional practices require the land to be kept fallow for periods of years, or where the land is protected for religious reasons.

3.2.2 Strategies and agreement models

Some strategies and agreement models that have proven useful in mediating land conflicts are detailed below.

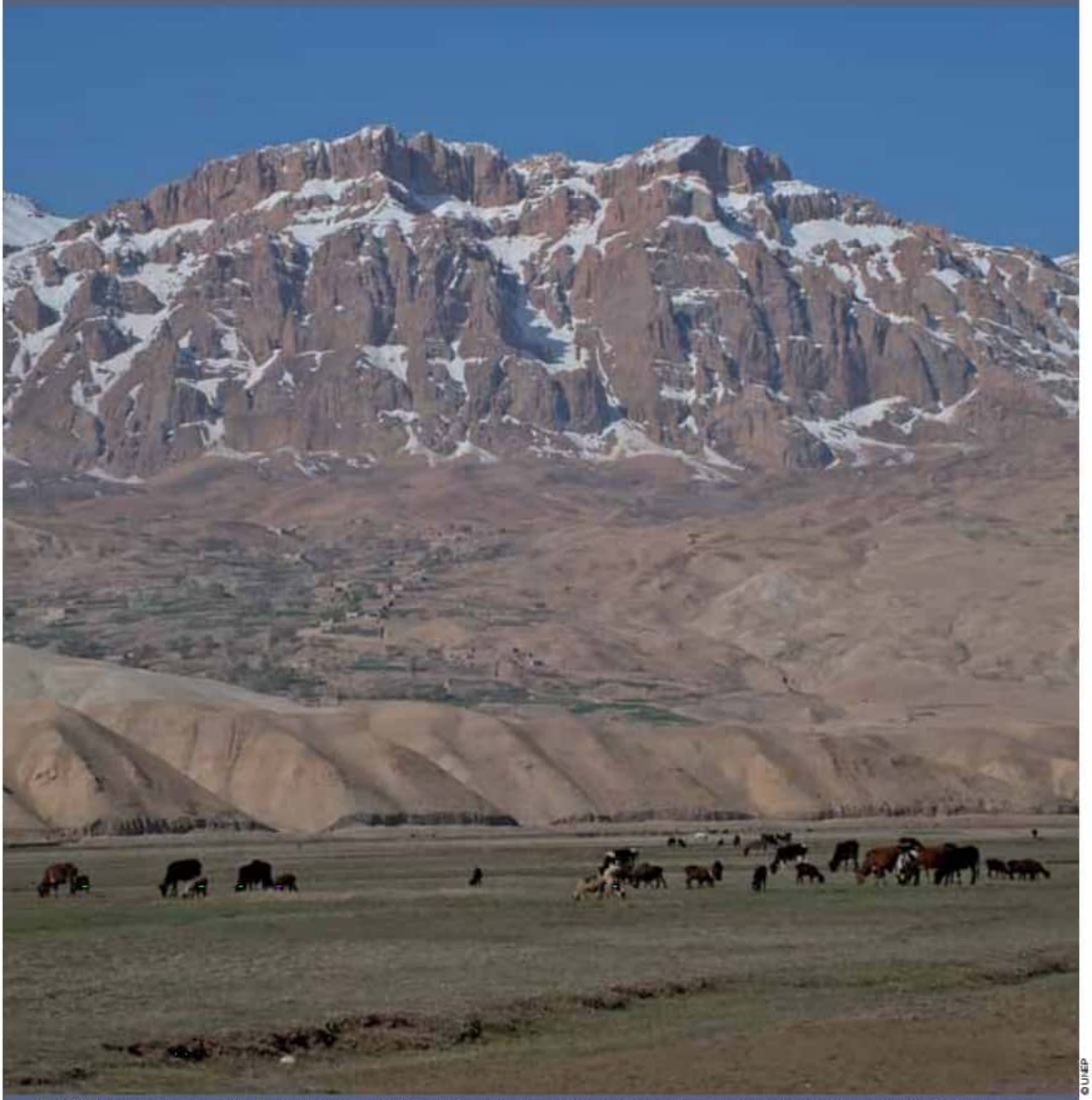
Establish an integrated land dispute resolution system with mediation as a central element: One of the most important means of managing large numbers of land disputes is to establish an integrated land dispute resolution system that uses mediation as a central feature. A typology of land disputes will be needed to ensure that disputes are directed to appropriate conflict resolution procedures, and that only appropriate disputes are actually directed to mediation. The mediation system should be able to operate at different inter-linked levels. For example, the system should link customary and statutory mechanisms while also connecting local to national procedures. The mediation system must be carefully integrated to avoid conflicting judgments, "forum shopping", and fragmentation of claims. Strategic design can ensure that different levels of the system work in a complementary manner, and that appeal procedures are available for appropriate cases. Capacity-building will be required for many people working in the system. Coordination between different government agencies will be very important, as well as coordination between different levels of government.

Resolve similar land dispute cases in high volumes: Large numbers of cases that share common features may be suited to a similar dispute resolution approach. One option is to consider whether a new piece of legislation or policy could provide a clear and effective solution to large numbers of disputes that are similar in nature. Some disputes may be resolved through clarification or strengthening of the law, while others may require nothing more than policy clarification on how the existing law should be implemented. Another approach could be to establish a land commission or some kind of specialized and temporary institution. A land commission would typically involve a multi-channel, transparent system for claims intake and registration, an eligibility assessment process, an investigation process, third-party dispute resolution services, dispute tracking and monitoring, and/or a compliance and enforcement mechanism. If large numbers of returning internally displaced people or refugees who have lost access to their lands are part of the problem, a compensation mechanism could be put in place that provides alternative plots or financial compensation.

Build on local and customary mediation mechanisms: Many land disputes involve local actors and require local knowledge to resolve. In numerous instances, customary mechanisms already exist that handle land disputes or have the capacity to do so. Such mechanisms are often seen as legitimate by local actors. Local and customary mechanisms can be linked to the relevant statutory procedures to create a hybrid system. This should be done in a manner that does not undermine local structures and processes, but ensures coherence with the national system. Some checks and balances may be required regarding local mechanisms to ensure a degree of due process or to protect against certain types of discrimination. In turn, mechanisms may be needed to ensure locally achieved resolutions are then protected within the broader national system. In any event, local and customary mechanisms should be strongly considered as potentially very effective and a legitimate means of managing large numbers of local land disputes.

Build on existing dispute resolution mechanisms: As a general principle, it is useful to build on existing dispute resolution systems rather than create new mechanisms. This applies to statutory or customary systems that are effective and legitimate. For example, there may be some kind of customary community mediation system already in place, but it does not necessarily focus heavily on land disputes. With adjustments, it may be made effective in dealing with land issues as well. Existing mechanisms will usually require targeted capacity-building and support in order to address a new docket of disputes. Of course, the idea of building on what already exists does not preclude the fact that new mechanisms are often very much in need, particularly when existing systems have been proven inadequate or lack legitimacy in the eyes of local actors.

In practice: Mediating land disputes in Afghanistan, pasture by pasture



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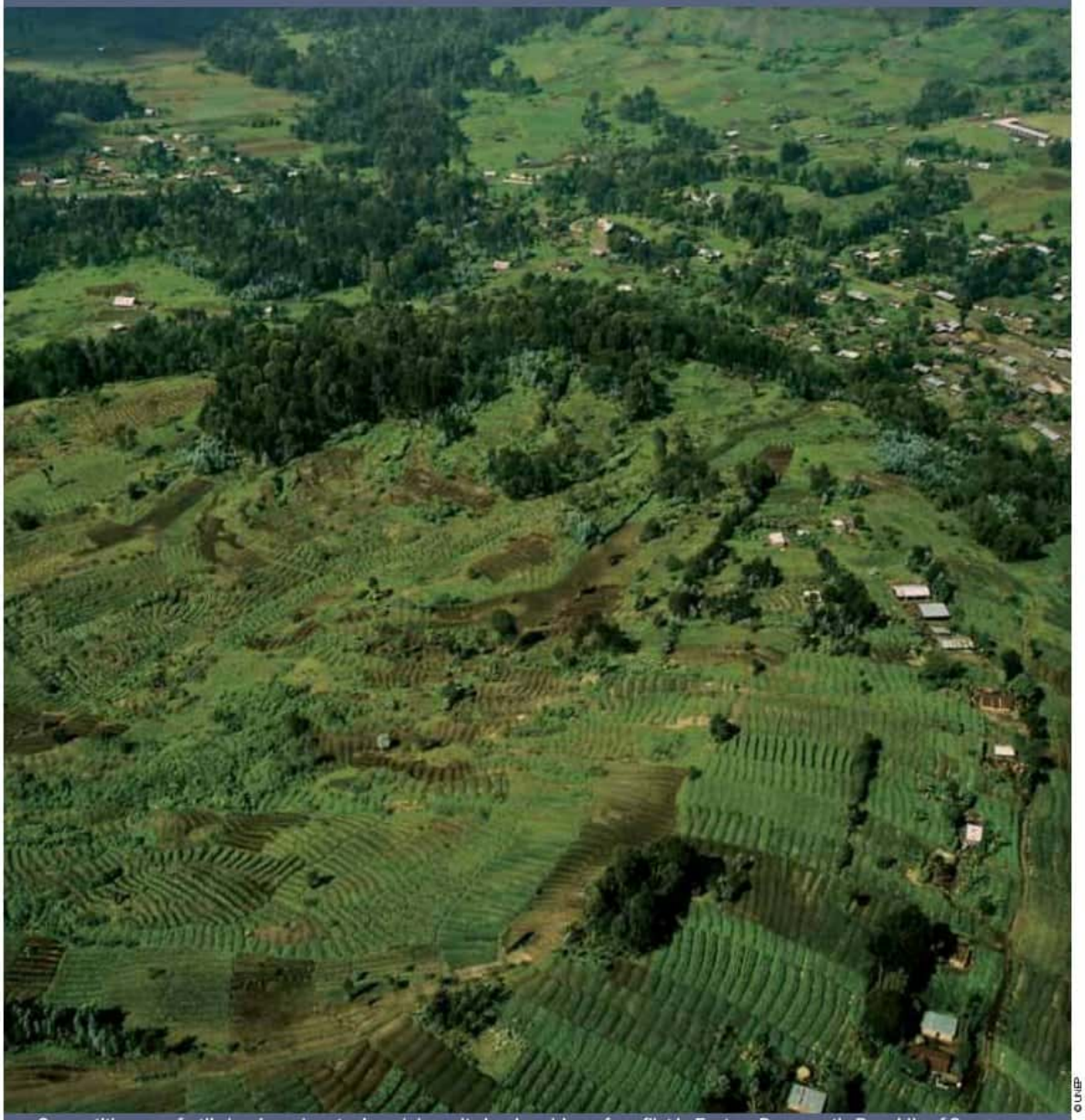
Conflict between nomadic Kuchi tribes and Hazara farmers over access to grazing pastures has been ongoing for decades

Access to the pasture lands of the central Afghanistan highlands has been a source of conflict between the nomadic Kuchi tribes and settled Hazara tribes for decades. While the Kuchi claim a legal right to access the summer grazing pastures, based on a system of permits dating back to the 1890s, the Hazara claim a collective customary right of access. Disputes have often turned violent and have become a source of instability. In 2009, UNEP was asked to propose a strategy for an integrated land dispute resolution system using both top-down and bottom-up processes to resolve the competing claims over the high pastures. The strategy was to be anchored in lessons learned from previous partial or failed attempts. At the core of the strategy was deploying local mediation teams supported by international experts to work on conflict resolution between the tribes on a pasture-by-pasture basis. This involved supporting joint assessments of the condition and scope of each pasture in dispute, specifying pasture-specific regulations and measures for rehabilitation, identifying alternatives, and providing suitable compensation where access was no longer feasible. The strategy also included broader top-down approaches, such as disarmament of relevant districts and harmonization of the dispute resolution strategy with overarching laws and policies such as the National Land Policy, National Rangeland Strategy, and Draft Rangeland Law.

Source: Wily, L. 2015 forthcoming. Resolving Natural Resource Conflicts to Help Prevent War: A Case From Afghanistan. In *Livelihoods, Natural Resources and Post-Conflict Peacebuilding*, ed. H. Young and L. Goldman. Earthscan: London.

In practice: Using mediation at the local level to resolve land disputes in the Democratic Republic of Congo



Competition over fertile lands and vast mineral deposits is a key driver of conflict in Eastern Democratic Republic of Congo

In eastern DR Congo, intense competition over fertile lands and vast mineral deposits remain some of the key drivers of conflict. Since 2009, UN-Habitat has been implementing a land dispute resolution program in North Kivu, South Kivu, and Ituri under the International Support Strategy for Security and Stability. The main goal of the program is to prevent and mitigate land disputes and conflicts in return areas using a team of local mediators combined with community land mediation centers in key conflict areas. The project enables affected community members to present their land claims, while receiving advice and information on land issues. The use of mobile mediation teams staffed with local mediators has proven to be an effective means for alternative dispute resolution, given the prevailing customary tenure regime and the absence of a land use plan and cadastral system. In addition, mediation activities have led to improved cooperation between government land agencies and traditional authorities in protecting community land use rights as well as developing a land policy for the country.

Source: Expert meeting on mediating natural resource conflicts. See also UN HABITAT. 2013. *Guide to Land Mediation Based on the Experience in the Eastern Democratic Republic of Congo*. United Nations Human Settlements Programme: Nairobi.

Explore novel forms of land tenure: Secure access to land is extremely important for livelihoods and development. However, private property is only one of various forms that can provide tenure security. A number of alternative approaches and agreement models can achieve the same goal, such as rent, leasehold, freehold, conditional freehold, or transient rights, including rights that vary according to seasons, for example. In disputes involving traditional or indigenous people who are organized along communal lines, the array of existing collective and communal tenure arrangements must be taken into account.[43]

Clarify the legal relationship between customary and statutory land tenure systems: In situations where overlapping customary and statutory systems are generating conflicts over land tenure, it is useful to legally clarify their relationship, the manner in which they are nested, and the formal status of customary rights. In many cases, a hybrid approach can be recognized whereby land disputes are first addressed through customary means, and – in the absence of a suitable resolution – they can then enter into the statutory process.

Conduct public consultations on land issues: Broad-based or issue-specific public consultations can be used to promote a sense of transparency and fairness around land issues when confusion or mistrust is pervasive. They may complement a specific land dispute mediation process or they may represent a more appropriate tool. Public consultations can be employed to provide inputs in the development of a new land policy, or used to initiate a review process of a particularly contentious policy issue. These can include procedures for granting a land concession, wealth-sharing provisions linked to concessions, or to the selling or inheritance of customary land. When used, consultative mechanisms need to be carefully designed to ensure they work with other mechanisms used in the dispute dynamic. Public consultation should ensure that all relevant voices are heard, and should be designed in a way that eliminates constraints on the participation of relevant groups.

In practice: Interaction between customary and statutory systems in Ethiopia and Mozambique

The 1995 Ethiopian constitution provides a formal example of the interaction of customary and statutory system. Articles 34 and 78 recognize customary and religious laws for the resolution of disputes if the contesting parties consent to jurisdiction of customary and religious courts.[44]

In Mozambique the 1992 peace accord and subsequent land legislation recognizes diverse approaches to land tenure. This was an important factor in addressing post-conflict land disputes. A single land tenure right called DUAT (Direito de Uso e Aproveitamento da Terra, or Land Use Rights) was established, which applies both to informally acquired rights (customary) and for those that conform to a formalized process of acquiring land use rights (statutory). The innovation is that a DUAT obtained through customary mechanisms does not have to be registered in order to be protected by law, representing a novel approach to the management of land rights, which usually require the formalization of customary rights into the statutory system.

Source: Expert meeting on mediating natural resource conflicts.

Land: Questions to ask

The following questions could be useful for a mediator or mediation support institution to ask during the assessment phase of a mediation involving land.

- What are the economic dynamics of land use? How are land-related livelihoods tied to local and regional markets?
- What is the status and history of the land tenure system in the area? How is land exchanged and valued?
- What are the causes of the land disputes? Are they temporary (returning refugees addressing secondary occupation of their lands) or long-standing (unresolved ownership, or tensions between customary practices and statutory laws)?
- Does a typology of different types of land disputes exist or could one be developed?
- Are certain social groups marginalized when it comes to access and usage rights? To what extent does the dispute increase this marginalization?
- What are the existing institutional mechanisms for dealing with land disputes? How well do these institutions function? Do stakeholders trust them?
- How effectively do customary and statutory dispute resolution mechanisms interact?
- Which authorities and stakeholders should be involved in the development and implementation of new institutional arrangements on land tenure?
- Which authorities and stakeholders should be involved in the development of solutions to process high volumes of similar land dispute cases?
- Are there culturally appropriate or symbolic rituals to make land dispute resolution agreements binding? Are there any rituals or practices that increase the chances of community members honoring agreements or commitments?
- How does the system in place affect each disputant's definition of an acceptable agreement? How much trust do the disputants place in the institutions established to resolve disputes?

3.3 Water

Water is distributed unevenly in time and space, creating challenges in management and allocation. Though water is a renewable resource, its natural availability in a particular locality and at a point in time cannot be accurately predicted in advance. Water is essential for a number of purposes ranging from economic (agriculture, industry, transport, energy), social (culture, household consumption, recreation), and environmental (all ecosystem services). Contemporary water resource management is a combined process of sharing water between these uses and constantly resolving conflicts among stakeholders. Shared water resources can motivate cooperative solutions to disputes, but can also delimit the range of acceptable alternatives quite sharply.

3.3.1 Conflict factors

As competition for water resources grows, tensions are inevitable. Disputes can occur between countries, livelihood groups, or economic sectors when unexpected changes take place in the availability or quality of the water supply. These changes may be caused by human activity (dams, irrigation, pollution, overuse), natural variation, extreme events (floods, droughts) or climate change. Disputes can therefore appear at local, regional, national, or transboundary levels. The risk of conflict escalation is higher in situations where two or more sets of actors with unequal power face increasing water scarcity without access to alternatives or coping mechanisms. At the same time, however, shared water resources can serve as a platform to build cooperation between parties in conflict. Whether water resources generate conflict or cooperation between competing users often depends on the governance systems in place. With this in mind, key drivers of water conflict are presented below.[45]

Mounting pressure on water supplies and climate change: Pressure on limited fresh water resources is mounting, driven by increasing population, economic growth, industrial pollution, and loss of forested watersheds. The predicted effects of climate change are likely to aggravate water scarcity even further in some regions by impacting both variability and geographic distribution. Growing demand and increased competition for the resource has pushed some countries to reach their water resource limits. Stresses are increasingly evident both between countries and within countries. Domestically, the lines of friction are frequently between urban and rural areas, across economic sectors, or between livelihoods groups. Under all of these pressures, water is an increasingly politicized resource. Understanding these critical processes of change is important both to mitigating the drivers of the conflict and to inform the viability of proposed conflict resolution solutions.

Major infrastructure development: Large infrastructure projects can cause conflict by reducing the supply of water or changing access to water bodies. Dams and irrigation systems may reduce the downstream water-supply, increase the risk of flooding, interrupt transportation, and affect fish stocks. Reduced water flows can also increase salinity and concentrations of pollutants downstream. Large dams enable upstream control over downstream water supply, establishing the potential for conflict.

Variations in water supply: The amount of water available to different stakeholders can be influenced by natural variations in rainfall or the occurrence of extreme events such as droughts or floods. When the water supply decreases for any of these reasons, competition will increase, as may the risk of conflict. The risk is highest when institutional mechanisms are not in place, especially at the transboundary level, to deal with such variations in supply and to help resolve related disputes.

Impact of pollution: Water quality can be degraded by a number of sources of pollution, including industrial, agricultural, or municipal waste. When this impacts local livelihoods (farming, fishing, hunting), tensions can erupt. Pollution can affect freshwater sources such as lakes, rivers, and groundwater aquifers, as well as marine resources, thereby having potential transboundary impacts.

Changes in international boundaries: The secession of regions or the breakup of countries can lead to changes in international boundaries dividing water basins that were previously managed as a whole. Examples include the Aral Sea basin after the breakup of the Soviet Union, the Indus River basin after the partition of India and Pakistan, and the Nile basin after establishment of the Republic of South Sudan.

Water pricing and privatization: Conflict can be triggered when countries or local authorities attempt to privatize water management and introduce fees for water use or sanitation services. In cases where water has been seen historically as a free common good, this can lead to tensions between affected communities, government, and the private sector.

Unclear water access and usage rights: Conflicts between water users can emerge when their use and access rights are not clearly defined by customary or statutory frameworks, or when the same water body is governed by different jurisdictions. Similarly, the water requirements needed to support large agricultural or mining concessions can be significant but are often left undocumented and can affect the usage rights of adjacent communities. Disputes are inevitable when the available water is insufficient to satisfy all existing legal rights, especially in situations of high natural variability.

Incompatible water management institutions and information: Conflicts may arise when different jurisdictions, especially at a transboundary level, manage a water body using approaches or institutions that are incompatible. For example, one jurisdiction may manage on the basis of integrated water resource management, whereas another jurisdiction may use a more narrow, sectoral approach that focuses on managing water flow and quality. These differences can

lead to incompatible systems for managing water across administrative borders, monitoring water quality and quantity, and sharing data.

Divergent interpretations of international legal obligations and agreements: Parties that have adopted multilateral or bilateral agreements on water may disagree on the interpretation of specific provisions or how to address changes in water flow. This issue arises typically between riparian countries that share a transboundary river, lake, or sea. This kind of situation is even more challenging when the dynamic is narrowly focused on allocating specific water quotas and absolute values, rather than a percentage of available flow.

Asymmetries of power: The conflict dynamic can be complicated when significant power imbalances exist between upstream and downstream countries or regions in a water dispute. In particular, upstream countries may lean toward unilateral solutions and show reluctance to engage in collaborative approaches to water management with their downstream neighbors, as the benefits of collaboration and cooperation for them may not be clearly defined.

3.3.2 Strategies and agreement models

The following strategies and agreement models have proven useful, either alone or in combination, when mediating water conflicts.[46]

Assess and maximize the benefits of water cooperation: Successful mediation strategies to address water allocation conflicts, especially at a transboundary level, should find ways for the parties to shift from a focus on sharing water *per se* to sharing the benefits of water. This can include managing water resources to achieve the maximum overall benefits and then allocating those in an equitable way. There are four categories of direct benefits: (1) economic production and asset protection (e.g., increased agricultural production, energy production, transport, minimized flood risks to urban infrastructure, reduced costs of water supply); (2) social benefits (e.g., lives saved from water-related disasters and water pollution, lives enhanced from increased access to electricity and water services); (3) environmental benefits (e.g., tourism, fisheries improvements, biodiversity protection); and, (4) geopolitical benefits (e.g., strengthened perception of government performance, improved cooperation and trust, reduced potential for armed conflict).[47]

Benefit assessments may include qualitative assessment, physical quantification, and monetary valuation (through market and non-market techniques). It is important to identify not just the benefits, but also the beneficiaries. Once the beneficiaries and shared benefits have been identified, the next step is to determine how these could be introduced into a policy process and transformed into actions in a sequenced manner.

Use the tools of integrated water resource management: Benefits assessments can be complimented by the tools and approaches of Integrated Water Resources Management (IWRM). IWRM promotes the coordinated development and management of water, land, and related resources in order to maximize economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems. It represents an alternative to a sector-by-sector, top-down management style. IWRM implementation requires looking at water basins as a management unit, assessing water demands and impacts across sectors, and encouraging the participation of all stakeholders. The tools and approaches of IWRM can be applied in the context of mediation in a four-step process: (1) evaluate the current situation through joint assessments and information sharing while conducting training workshops that also build trust; (2) remove jurisdictional borders from the map and ask the parties to maximize potential benefits through integrated planning and development; (3) ask the parties to propose potential dispute resolution solutions that involve mutual gains; and (4) reinstate the jurisdictional borders on the map and determine how the proposed solutions can be institutionalized.[48]

Adopt a common language and methodology to calculate direct and indirect water use: Tension can occur in a mediated process when stakeholders use different methods and terminology for calculating water use, with many failing to consider all of the direct and indirect source of consumption. It can be useful from the outset to adopt a common language and methodology based on a recognized international approach. Water footprint assessment is one methodology that can be used to provide comparative figures among stakeholders while also assessing sustainability of use.[49]

In practice: Sharing of the benefits of the Columbia River between Canada and the United States

The 1961 Columbia River Treaty between Canada and the United States is an example of a basin-wide approach for benefits assessment. The treaty acknowledged that the greatest benefit to each country, in both hydroelectric power generation and flood control, could only be secured through cooperation in the management of the water resources of the Columbia River basin. For this reason, the Columbia River Treaty utilizes an integrated approach of benefit-maximization at the basin level, rather than trying to maximize benefits independently for each country. In order to equally redistribute the flood control and power generation benefits, the treaty put in place a series of financial and operational arrangements. As compensation for the flood control services provided by Canada, the United States agreed to pay approximately US$65 million for the construction of water storage infrastructure in Canada. Recognizing the benefits of Canadian storage to power generation in the United States, the treaty also entitled Canada to half of the additional power generation in the United States.

Source: Expert meeting on mediating natural resource conflicts

Consider a combination of demand-side and supply-side solutions to address water scarcity: There are typically two potential responses to address water scarcity that generate competition between different user groups or economic sectors: supply side, which meets demand with new resources, or demand side, which manages consumption to postpone or avoid the need to access new resources. Many past approaches tended to favor supply-driven solutions that were oriented towards new water supply projects, usually through new capture and retention infrastructure. More recent supply-side efforts have begun to consider developing new water supplies through ecosystem rehabilitation or improved watershed management. However, there is also a marked shift towards demand-driven approaches that focus on water-use efficiency and conservation as well as water demand management. These have been recognized as essential for the sustainability of water resources and the environment, as well as economic efficiency and social development.

Design payments for ecosystem services to maintain land uses that favor water supply: Many water conflicts are provoked by changes in land use that impact key ecosystem services that are essential for the availability and quality of freshwater but that are not directly valued in economic terms. In particular, conflicts can emerge when communities in upstream locations want to change land use practices in a manner that affects water quality or quantity for downstream users (e.g., by converting forests into agricultural areas). One approach for resolving such conflicts is through the use of the Payments for Ecosystem Services (PES) model, where the user of an environmental service, such as water purification, pays the landowners who provide that service by maintaining the forest cover in the upper watershed. The basic logic is simple: those providing ecosystem services by foregoing alternative uses of the land should be compensated by the beneficiaries of the service. For PES to function, there must be a clearly defined user and supplier, as well as a number of other necessary conditions, such as land tenure security, systems for monitoring, enforcement and compliance, and an enabling legal framework.[50]

Use remote sensing to equalize access to information: Riparian neighbors or stakeholders using the same water source may be reluctant to share information and data for a number of reasons. Remote sensing tools offer an effective way to equalize access to a common information base without needing to rely on direct information-sharing between the parties. This can improve the quality of available information, establish objective baselines, and monitor trends at a national or transboundary level. Once remotely sensed data is collected and made available, it can also encourage the parties to share further information they hold, thereby demonstrating good will. This change of attitude may occur because strategic advantages to withhold information have been removed. Establishing a common information base from remote sensing techniques can help to depoliticize the dispute and address misunderstandings that stakeholders may have regarding the extent and use of available water.

Employ scenario-building techniques to help parties explore different options: Scenarios can be used in water negotiations to develop plausible alternative versions of the future, which can help parties explore and compare different options and outcomes. A range of variables can be used, such as resource availability, consumption trends, climate change, population growth, or policy frameworks. Scenarios can help parties to understand the competition between various sectors, including irrigation, drinking water supply, hydropower generation, flood control and other ecosystem services, as well as the evolution and implication of existing and potential conflicts. Closely related to scenario-building is a technique called "back-casting", which envisions a future desirable outcome, and then tracks backwards, allowing parties to identify the steps that would be needed to achieve it. Agreement on a desirable future can then translate into agreement on the steps needed to get there.

Use decision-support systems to address uncertainty and visualize options: Water resource management and conflict resolution are complex processes due to uncertainties associated with economic development, ecological processes, weather patterns and climate change, data availability, and overall level of stakeholder knowledge. Computer-based decision support systems and geographic information systems (GIS) can therefore be very helpful in understanding and analyzing the variables, technical feasibility, and economic viability of different management decisions in a more quantitative manner.[51] Such systems are usually based on a structured decision making approach in a computer environment that makes assumptions explicit and enables the exploration and visualization of alternative options, in ways somewhat similar to scenario-building. However, decision-support systems go one step further by systematically evaluating possible alternatives, including structural reforms, until an acceptable solution can be reached and supported by all stakeholders. The process is one of informed negotiation and compromise, but it has the potential to provide an outcome that has broad support and actually addresses the underlying structural causes of conflict.[52]

In practice: Technical approaches used by the Nile Basin Initiative

The Nile Basin Initiative (NBI) was established in 1999 to coordinate the management of the basin between the ten basin states. It has used a combination of approaches, including benefits assessments, IWRM, scenario-building, and decision-support systems to help the parties consider a number of factors and variables that could influence the future of the river. The NBI experience illustrates the importance of using both technical information and informal processes to build trust among states, and the value of involving a variety of stakeholders in the dialogue. While the efforts of more than ten years have been significant, the most challenging issues remain unaddressed, namely reaching a consensus between all ten countries on new levels of water allocation based on changing needs and demands.

Source: Expert meeting on mediating natural resource conflicts.

In practice: Use of remote sensing to document environmental change in the Sistan wetlands

Water scarcity in the Sistan basin wetlands has led to tensions between Iran and Afghanistan, with differing perceptions of the causes. UNEP has been providing environmental diplomacy support to both Iran and Afghanistan since 2002

In 2003, UNEP was asked to provide environmental diplomacy to Afghanistan and Iran to provide scientific and impartial data on the status and use of the transboundary waters of the Helmand River and the Sistan basin wetlands. The aim of the request was to help resolve tensions that were caused by uncertainty over the drivers of environmental change and implications for water availability.

UNEP documented ecological changes in the basin from 1976 to 2005 through the use of extensive satellite surveys combined with field sampling missions and community consultations in both countries. The study, released in 2005, helped identify the main phases of environmental change in the wetlands over the past 30 years together with the key drivers, both natural and human-induced. This information was used as an initial basis for technical meetings between the parties on cooperation opportunities and helped catalyze dialogue that continued for two years.

Source: Expert meeting on mediating natural resource conflicts. See also UNEP. 2006. *History of Environmental Change in the Sistan Basin. Based on Satellite Image Analysis: 1976–2005*. United Nations Environment Programme: Geneva.

In practice: Organization for the Development of the Senegal River

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The Senegal River is an important resource, used for activities ranging from fishing to recreation

In 1972, Mali, Mauritania, and Senegal created the Organization for the Development of the Senegal River (OMVS, Organisation pour la Mise en Valeur du fleuve Sénégal), which replaced previous defunct attempts at international cooperation over the economically and politically important Senegal River. This has led to many joint projects and agreements and shared physical and institutional infrastructure. A milestone was the Senegal River Charter, signed in 2002 by the three countries, which sets the principles and procedures for allocating water between sectors (agriculture, aquaculture, hydroelectric energy, etc.), defines procedures for the examination and acceptance of new water projects, and determines regulations for environmental preservation. Starting in 2003 the Global Environment Facility (GEF) funded a four-year water and environment management project to provide a framework for the sustainable development and transboundary water management of the river basin area.

Source: Expert meeting on mediating natural resource conflicts. See also Newton, J. 2007. *Case Study of Transboundary Dispute Resolution: Organization for the Development of the Senegal River (OMVS)*. Oregon State University.

Use framework agreements or joint projects to maintain momentum while continuing to work out technical details: Given the complexity of resolving water conflicts, it can be useful for parties to adopt a framework agreement or joint project early in the process that can help maintain momentum and signal good faith. Such agreements can commit the parties to a set of principles for cooperation within an ongoing dialogue, establish joint data-collection systems, or focus on the implementation of small joint projects. In doing so, such agreements foster mutual trust and show visible progress to their respective constituencies, while also allowing negotiations to proceed.

Establish transboundary institutions and related agreements: In the presence of transboundary water resources, riparian states have to determine the extent to which they want to co-manage them. The degree of cooperation and collaborative management varies along a continuum, with corresponding institutional arrangements for each. At one end of the spectrum, riparian states might opt only for basic cooperation, organizing joint activities with a limited scope and maintaining separate management, control, and enforcement structures. This can include regular communications, information-sharing, coordination between planning authorities, technical cooperation, navigation agreements, and procedures for prior notification and dispute resolution. An example of this level of cooperation is the Indus Waters Treaty and the related Permanent Indus Commission.

A more collaborative approach might include establishing structures and institutions for a more integrated management of shared water resources, covering joint decision making, monitoring, control, and enforcement mechanisms. These can include watershed management plans, basin-wide development strategies, integrated disaster risk-reduction programs, and joint policing and security arrangements. The IWRM-based Mekong Basin Development Strategy established by the Mekong River Commission is an example of this type of institutional arrangement.

At the farthest end of the spectrum, riparian states can choose to cede increasing levels of decision-making authority to regional bodies that they create. This option may become increasingly attractive in the future in cases where overuse and degradation are permanently threatening a transboundary river or lake.

Water: Questions to ask

The following questions could be useful for a mediator or mediation support institution to ask during the assessment phase of mediation over a water conflict.

- What are the differences and similarities in perspectives and water management approaches between disputing jurisdictions or different stakeholders?
- What sources of data and information do the parties rely on? To what extent are these compatible and scientifically sound?
- Are there any economic arrangements or benefits related to the basin's water but not immediately associated with the dispute?
- Are there important elements of cultural significance around water that either limit possibilities for negotiation or create incentives for problem solving?
- Are the parties aware of opportunities arising from basin-wide approaches to water management?
- What is the natural variation in water supply and the various water requirements by different sectors?
- Are current water use patterns and any plans for agreement realistic in light of both historical patterns of availability and uncertainty therein? Is the proposed agreement "climate smart" on water?
- What arrangements for transboundary water management exist between the parties?
- How aware and compliant are the parties regarding any customary, statutory, and international legal obligations?
- Is there a history of disputes between upstream and downstream users?
- Are watercourses— rivers, lakes, canals, or the sea— significant for transport or infrastructure?
- How much understanding exists about international financing arrangements for water infrastructure, which may include provisions regarding conflict resolution and compensation?
- What are the implications of climate change for water availability and variation? How will this potentially affect each of the parties in the dispute?

4 Guidance for mediating natural resource issues in a peace negotiation

Natural resources are increasingly included in peace negotiations and their resulting agreements. While roughly half of all peace agreements concluded between 1989 and 2004 (51 out of 94) contained direct provisions on natural resources, all major agreements from 2005 to 2014 contained such provisions (see Table 1). Clearly, there is an increased awareness of the need to address natural resource issues during peace negotiations, and the need for mediators to deal with these challenges more systematically.[53] Because conflicts associated with natural resources carry a greater risk of relapse over the first five years of the peace agreement, the importance of effective provisions on natural resources cannot be overstated.[54] This section provides guidance on addressing natural resource issues within the context of peace negotiations.

Table 1. Natural Resource Provisions* in Peace Agreements (2005 – 2014)

Peace Agreement	Year	Extractive Resources	Land	Water	General
Aceh Peace Agreement (Memorandum of Understanding)	2005	X	X		X
Sudan Comprehensive Peace Agreement	2005	X	X		X
Nepal Comprehensive Peace Agreement	2006		X		X
Eastern Sudan Peace Agreement	2006		X	X	X
Goma Peace Agreement	2009		X		X
Darfur Peace Agreement (or Doha Agreement)	2011	X	X	X	X
Kampala Dialogue	2013		X		X
Comprehensive Agreement on the Bangsamoro	2014	X			X

* Natural resource provisions in peace agreements vary greatly. While some agreements deal with land, water, or extractive resources explicitly, others refer to the equal sharing of benefits from natural resources, or refer to future mechanisms through which disputes related to natural resources, or their management, may be resolved. Any references to natural resources outside of the specific categories of extractive resources, land, and water (as described in chapter 3) have been included under the descriptor "general".

4.1 Considerations for including natural resources in a peace negotiation

Deciding whether natural resources should form part of a peace negotiation involves a range of considerations. This section highlights the situations when natural resources should be included in peace agreements and reviews the main reasons why natural resources are often addressed inadequately or left off the negotiation table.

4.1.1 Situations when natural resources should be included

Generally speaking, natural resources should be addressed in a peace process negotiation if any of three situations apply.

Natural resource ownership, access, or wealth-sharing is a contributing cause or trigger of conflict: Failure to address these issues constitutes ignoring a major driver of conflict and, therefore, may undermine the durability of an agreement. To recommend that these issues be addressed does not, however, mean they have to be a central issue at the negotiating table, nor does it prescribe the different direct and indirect techniques for addressing the issues.

Natural resource revenues are used to finance the conflict: When revenues derived from natural resources are an active source of financing for armed groups, mechanisms to halt such revenue streams should be considered at the negotiating table. If ignored, armed groups may continue to have access to conflict resources and little incentive to commit to the peace process.

Natural resources have been damaged, degraded, or destroyed during the conflict: These issues can range from immediate short-term concerns linked to health risks from environmental hotspots and contamination, to long-term concerns linked to livelihoods and economic recovery, to ecosystem rehabilitation. The extent and magnitude of resource damage or degradation will ultimately determine the importance of, and approach to, addressing the issues within the negotiations.

4.1.2 Why natural resources are excluded from peace negotiations

Although natural resources are receiving more attention in peace processes, certain factors can prevent them from receiving the attention that may be warranted. Some of the most common reasons why natural resources are not included or are inadequately addressed in peace negotiations are described below.

Competing priorities in the aftermath of crisis: Many urgent and pressing matters require attention during a peace negotiation. Agendas may have to prioritize cessation of hostilities, return of refugees and internally displaced people, power-sharing arrangements, or disarming rebel groups. This may mean that natural resource issues are left off the agenda as they may risk overloading it, thereby jeopardizing the entire process.

Vested interests: The stakes can be significant when natural resources carry a high monetary value or important symbolic value. Vested interests that profit significantly from the status quo may discourage negotiations around natural resources. Accordingly, while mediators may encourage the parties to address natural resources, they must be wary of pushing too hard given the risk of stalling the process.

Natural resources perceived as economic issues that lack urgency: Some mediators do not see natural resource issues as contributing to immediate peace and security; rather, they view them as longer-term economic issues that can be addressed outside of the peace agreement. This approach fails to recognize the importance that some natural resources can have in determining the political balance of power in the peace process. Excluding natural resources also misses a critical opportunity to anchor key reforms that may be needed to establish more equitable governance systems that could influence the existing political economy and reduce the risk of conflict relapse.

Concerns about a lack of technical expertise, time, and mandates: Concerns that the mediator lacks the expertise, sufficient information, time, or the mandate needed to address natural resource issues effectively during a peace negotiation may prevent from natural resources be addressed adequately. Constitutional, legal, or institutional arrangements to govern resources can be elaborate and complex, often requiring detailed information, broad stakeholder consultations, and public support. For these reasons, tackling difficult resource governance questions within a mediation process can be perceived as being premature or as taking place in the wrong forum.

4.2 Strategies for mediating natural resources in a peace negotiation

Despite the challenges listed in the previous section, mediators can use a number of strategies and tools to directly or indirectly address natural resource issues in the context of a peace process. The following strategies have proven useful.[55]

Address natural resource issues in a manner suited to their role in the conflict: If resources were central to the conflict, mediators should recommend provisions on resource ownership, access, and management in the peace agreement. If natural resources helped sustain the conflict and finance different armed groups, a peace agreement should limit access to related resource revenues or include transparency safeguards. When natural resources are damaged, degraded, or destroyed over the course of a conflict, the peace agreement should consider issues around environmental assessments, restoration, compensation, and alternative livelihoods.

Use potential benefits from natural resources as an incentive to keep parties at the negotiating table: It is common during the negotiation of peace agreements for discussions to be derailed by specific political or security issues, or simply from negotiation fatigue. In some cases, the economic prospects associated with natural resources have been used as an incentive to keep the talks going and to help maintain momentum. Mediators should help the parties see how natural resources are an essential element in any future economic vision, thereby recognizing the opportunity costs of a return to conflict.

Establish mechanisms or institutions to address resource issues in the future: Natural resource issues often require solutions that are too complicated or long-term to be comprehensively addressed in a peace negotiation. Accordingly, mediators may choose to use the peace agreement as a means to create an institutional framework that will, in turn, deal with resource issues in the future. In this regard, natural resources can be addressed through direct or indirect provisions in peace agreements, or through follow-up

In practice: Economic opportunity costs as an incentive for peace negotiations in Sudan

In the negotiations over Sudan's Comprehensive Peace Agreement, signed in 2005, oil resources helped to bring the two parties to the negotiating table to try to end 35 years of conflict. High levels of armed violence in oil-producing regions prevented the government from fully benefiting from the revenue of the oil wealth because it eroded foreign investment. To reap the fullest benefits, oil exploration required important investment as well as a certain level of collaboration between northern and southern Sudan. It therefore became an issue that affected both parties' economic interests. Through informal talks, the case was made that "oil represented an incentive for peace insofar as oil activities could not be pursued in a war context," and the belligerents were urged to "relocate the fighting from the battlefield to the negotiation table."[56]

Source: Expert meeting on mediating natural resource conflicts. See also Wennmann, A. 2012. Sharing Natural Resource Wealth During War-to-Peace Transitions. In *High-value Natural Resources and Post-conflict Peacebuilding*, ed. P. Lujala and S.A. Rustad. London: Earthscan.

In practice: Laying the foundation to address natural resources within the Liberian Comprehensive Peace Agreement

Although timber and diamonds were exploited to finance the Liberian conflict, the comprehensive peace agreement (CPA) did not directly address the management of natural resources. Most provisions dealt with political arrangements, particularly the organization of the transitional government. Neither the parties to the CPA nor the mediator thought that the peace talks were the appropriate process for addressing the governance of natural resources or the collection of revenue from them. The parties had little time to develop an agreement on these contested issues, which were seen as requiring major reform based on a wider national consensus.

Within the Liberian CPA, however, the parties did lay the foundation to address resource management by placing this issue on the agenda of two independent follow-up commissions. First, the Governance Reform Commission (GRC) was established to promote the principles of good governance in Liberia through the development of public sector management reforms, the assurance of transparency and accountability in all government institutions and activities, and the guarantee of an economic environment that will attract private investment. Second, the Contract and Monopolies Commission (CMC) was created to oversee contracts undertaken by the National Transitional Government of Liberia. The CMC sought to ensure that all public financial and budgetary commitments were transparent, nonmonopolistic, and in accordance with Liberian law and international standards. Natural resource management was a key subject on the agendas of both committees, particularly with respect to concessions, contracts, revenue management, and land tenure.

Sources: Suhrke, A., T. Wimpelmann, and M. Dawes. 2007. *Peace Processes and Statebuilding: Economic and Institutional Provisions of Peace Agreements*. Bergen: Chr. Michelsen Institute.

In practice: Delaying the resolution of resource ownership in the Sudan Comprehensive Peace Agreement

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Sudan Oil for Peace. New oil platforms are constructed, near Kotch in southern Sudan. Sharing of oil revenues was an important part of the peace mediation between North and South Sudan, forming part of the 2005 Comprehensive Peace Agreement

The ownership of land and natural resources was at the heart of the dispute over the self-determination of southern Sudan and threatened to derail the negotiations over Sudan's Comprehensive Peace Agreement, which was eventually signed in 2005. The Sudan People's Liberation Movement/Army (SPLM/A), the political movement in southern Sudan, claimed that land in southern Sudan (both the surface and the natural resources lying underneath) was owned by the communities living on it. On the other hand, the government of Sudan argued that the national ownership of surface and subsurface land was the prerequisite for an equitable and legitimate redistribution of natural resources. Fearing that the two positions were irreconcilable, the mediators of the talks proposed that the ownership of subterranean natural resources remain unresolved in the final peace agreement and that the two parties agree to a process to resolve the issue later. This solution allowed the parties to continue negotiations on revenue sharing and management of the oil sector, without needing to agree on ownership. In this way, a fundamental disagreement did not prevent progress on wealth sharing, which was central to both parties' economic interests. Ultimately, the 2004 Agreement of Wealth Sharing (AWS) became an important step toward the Comprehensive Peace Agreement that was signed one year later.

Source: Wennmann, A. 2011. Breaking the Conflict Trap? Addressing the Resource Curse in Peace Processes. *Global Governance* 17:265-280. See also case study 8 in Part B of this report.

mechanisms such as needs assessments, peacebuilding plans, commissions, land trusts, or sovereign wealth funds. New constitutional, legal, institutional, or economic frameworks may be needed to manage and resolve natural resource issues constructively in the months or years to come and to ensure that related revenues support stabilization and peacebuilding. A peace process thus provides an opportunity to anchor sustainable natural resource management within the fabric of future legal and governance systems.

Consider different options to address ownership claims: Dealing with the contested ownership claims for natural resources can be daunting for a mediator. Previous peace agreements have addressed conflicting interests over resource ownership in four ways: (1) establishing autonomous regions that own or control the natural resources in question; (2) recognizing specific resource rights or secure access arrangements; (3) establishing a future political process tasked with reforming the ownership of, and access to, the natural resources; and, (4) deferring the issue of ownership to a future political or judicial process while agreeing on issues of access, resource management, exploitation, and revenue sharing.

Address natural resource governance: When natural resources form part of a conflict dynamic, it is extremely common that resource governance issues are part of the problem. Accordingly, mediators will often need to include matters regarding legislative and regulatory authority over natural resources in peace talks, or to embed these questions in follow-up processes. Mediators will have to think about the institutions that will be responsible for resource management both on an interim basis in the post-agreement period and for the longer-term. They should also consider issues around safeguards to ensure revenue transparency, accountability, benefits-sharing, and public participation in decision making.

Design appropriate wealth-sharing provisions: Important tools for a mediator are provisions designed to share natural resource revenues. The wealth may need to be shared at different levels, and the provisions should address this accordingly. For example, clarity may be needed on revenue-sharing between countries, as well as between the central government, the resource-producing region, and local communities. Wealth-sharing provisions can perform three main functions in a peace process:[57] (1) provide economic benefits that can be transformed into visible peace dividends while helping shape a new economic vision for the future; (2) provide financial incentives that increase the opportunity costs of renewed conflict while transcending tribal, religious, ideological, and political divisions; and, (3) control access to finances that could otherwise be used to fuel another round of conflict. Fundamental questions must be asked when designing a wealth-sharing regime: Who will issue resource contracts and collect resource revenues? Who should receive the revenues as they are distributed, and in what proportion? How will monitoring be conducted and transparency ensured? The importance of well-crafted provisions on wealth-sharing cannot be underestimated, as they can have a critically importance influence on post-agreement political dynamics, peacebuilding, and statebuilding.

Establish a technical track on natural resources within the broader political negotiation: In many cases, a mediation process that includes a natural resource dimension will be more successful when parties move away from political or ideological positions, and focus on technical aspects of resource management. One way to achieve this is to form parallel tracks with technical experts that deal with natural resource issues alongside, yet separately, from the main political negotiation. Mediators should not assume that an agreement achieved by teams of technical experts fielded by the parties in a sidetrack will necessarily be seen as politically binding by the parties. For this reason, the mediator must link parallel technical negotiations on resources to the main political negotiation. In certain cases, it may be best to do this after the technical negotiations have been successful.

Consider optimal timing of natural resource negotiations within a broader peace negotiation: On the one hand, addressing natural resources and related wealth-sharing provisions at the outset can provide an early win for the parties because it can speak to their immediate economic interests and help build confidence to move onto more difficult issues. This is true even when the parties hold divergent views on security and other issues. On the other hand, when natural resources are highly contentious, they bring the risk of unraveling progress on other issues. In such cases, natural resource issues may be scheduled toward the end of a negotiation process in the hope that earlier agreement on other matters will create a positive environment for finding an agreement on natural resource provisions.

Include an appropriate level of detail regarding natural resource provisions: Mediators should carefully consider their advice to parties on how much detail to include when crafting natural resource provisions within a peace agreement. One consideration is the expected relationship and level of trust that will prevail between the parties during the implementation phase. When levels of trust and confidence are expected to be low, it can be important to include more detailed provisions in peace agreements to provide sufficient assurances and not leave issues open to interpretation. If trust is high, broad provisions may be more appropriate, with much of the detail to be clarified later. Similarly, when capacity to implement natural resource provisions is weak, detailed clauses may be needed, combined with mechanisms to ensure sufficient capacities are built. If natural resources have been a driver of conflict, greater detail may be required to outline required safeguards that could help prevent a return to conflict. Regardless, the weaker or more vulnerable party will typically argue for greater detail.

In practice: Timing natural resource negotiations – the Aceh, Sudan, and Guatemala peace negotiations

Indonesian soldiers patrolling at Exxon Mobil Oil Indonesia in Lhokseumawe, Indonesia, May 18, 2003, while the government and rebels held last-minute talks to save the faltering truce in Aceh

In Aceh, resentment over perceived imbalances in the distribution of oil and natural gas revenues was one of the driving forces of conflict. Accordingly, sharing of oil and natural gas wealth was one of the first items discussed in the peace negotiations between the Islamist Free Aceh Movement and the Indonesian government. Building on an agreement that had been reached in 2001, these discussions focused on how the autonomy provisions and wealth sharing formula could be reflected in the peace agreement that was eventually signed in August 2005.

Sharing of oil revenue was a similarly important issue in Sudan. By contrast, it was addressed towards the end of the process out of fear that it would derail the talks due to irreconcilable views on resource ownership. In this case, the approach was to obtain agreements between the parties on other issues, such as governance, to establish the momentum and confidence needed to tackle controversial resource topics. The 2004 Agreement on Wealth-Sharing that was eventually agreed to was an important step towards the 2005 Comprehensive Peace Agreement.

Similarly, in the peace negotiations leading up to the 1996 peace accords that put an end to the Guatemalan civil war, land was one of the last issues resolved because the parties failed to reach an earlier agreement on the issue. These varying experiences demonstrate that timing and sequencing of natural resource negotiations in relation to other issues is an important consideration in peace talks.

Source: Expert meeting on mediating natural resource conflicts.

It is important, however, for mediators to be aware that greater precision on natural resource institutions or reforms does not necessarily translate into better implementation. Other factors such as changes in key actors and political conditions may negatively affect implementation and undermine the political commitment that was made. One critical lesson learned is that ambiguous provisions on resource ownership, management, exploitation, and wealth-sharing should be generally avoided because they can delay implementation and lead to renewed tensions between the parties.[58]

Use natural resources and the environment as confidence-building measures in the implementation of a peace agreement: Under certain conditions, shared natural resources (water, land, extractives) or common environmental threats (pollution hotspots, climate change, natural hazards) can be used during the implementation of a peace agreement as an early confidence-building measure. To use resources in this way, the mediator must find an issue that is narrow, unthreatening, and sufficiently important to engage the parties, but that can also serve as a stepping-stone for building trust. Over time, if cooperation and confidence can be built around a natural resource of common interest, the parties may acquire sufficient confidence to move onto more sensitive implementation issues. When parties are at an impasse on other issues in the implementation of a peace agreement, cooperation around natural resources and environmental issues may serve as "fall-back" topics to keep channels of communication open.

Consider complementary dialogue or consultation processes: Some aspects of natural resource issues within a peace process may be suited to broader dialogue or consultation processes that complement confidential negotiations (see section 1.4.2, on mediation alongside other peacebuilding tools). Broader engagement processes may be used to inform a wider set of actors concerning progress in the negotiations, as well as to receive input on certain matters or to obtain validation of draft agreements. If a broader engagement process is not included to elicit views from stakeholders and members of the public on certain resource issues, the overall negotiation may lack legitimacy and face unnecessary opposition.

Use indirect provisions on natural resources when direct provisions are not possible: If parties cannot agree to include direct natural resource provisions in the peace agreement, it may be possible to address these issues in more indirect ways. For example, other topics that have important resource implications include power-sharing, confidence-building, reintegration of ex-combatants in a resource-dependent economy, access to land for displaced people, and compensation provisions. If agreement cannot be reached on direct or indirect natural resource provisions, they can also be embedded within follow-up tracks that are anticipated in the agreement, such as post-conflict needs assessments, governance commissions, and stakeholder dialogues.

In practice: Using shared natural resources to build confidence and cooperation between Israel and Jordan

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Water flows through a section of the Jordan River, near Alumot Dan, northern Israel, near the border with Jordan

Parties to a peace agreement commonly use confidence-building measures (CBMs) to test the political will and commitment of each side to peace. CBMs often start with less controversial topics such as information sharing, verification of troop numbers, or economic cooperation projects before moving to more difficult issues such as security sector reform and power sharing. While confidence-building measures often focus on military and political issues, the peace agreement between Israel and Jordan in 1994 used natural resources as a means to cooperate and effectively build confidence between the parties during implementation.

The peace agreement included two annexes focused on water management and environmental cooperation. Annex II called for the establishment of a joint water committee, as well as for cooperation to prevent pollution and to protect marine resources, including coastal reefs. While the initial accord did not explicitly outline the terms for such cooperation, it did present a timeline for negotiations relating to pollution issues in the Aqaba region. Annex IV outlined other areas for environmental cooperation, including environmental impact assessment, environmental legislation and standards, and emergency response. It articulated that cooperative efforts could be carried out on protection of nature, air quality, waste management, pollution control, pest control, and desertification.

Because virtually all parties attempting to reach a peace accord share some resources of value, a number of scholars and organizations have argued for using shared natural resources or common environmental threats more systematically as a platform for post-conflict cooperation and confidence building. If both sides can equally benefit from resource exploitation, clean up, or disaster risk reduction, such cooperation around natural resources can help build early trust and confidence before moving on to more difficult measures.

Sources: Expert meeting on mediating natural resource conflicts. See also Government of the State of Israel and the Government of the Hashemite Kingdom of Jordan. (1994). Treaty of peace between the State of Israel and the Hashemite Kingdom of Jordan; Conca, K., and G. Dabelko, G. 2002. *Environmental Peacemaking*. Woodrow Wilson Center Press and Johns Hopkins University Press: Washington, D.C.

5 Conclusion

The exploitation of high-value natural resources—oil, gas, minerals, and timber—has often been a key factor in triggering, escalating, or sustaining violent conflicts around the globe. Competition over renewable resources such as land and water is on the rise, and environmental degradation, population growth, and climate change are compounding the challenges. Governments are therefore under increasing pressure to sustainably manage natural resources and resolve conflicts around their ownership, management, allocation, and control.

Mediation can play a critical role in resolving conflicts over natural resources, preventing the outbreak of violence, and enhancing collaboration between adversaries. This guide offers concrete strategies for effective use of mediation to achieve these goals.

Seven overarching messages capture many of the lessons learned in this field.

1. **Context is extremely important.** Each natural resource sector addressed in this guide—extractives, land, and water—generates multiple forms of conflict, which require different approaches to mediation. The design of a mediation process should take into account the characteristics and functionality of the resource in question, together with mechanisms for dealing with uncertainty. In all cases, it is essential to understand the root cause of the conflict, the interaction of natural resources with other conflict drivers, the broader political economy, and the entry-points for a mediated solution.

2. **Effective mediation requires a clear but nuanced mapping of actors and interests.** Mediators should only enter into the interactive phases of the mediation process once they have become well informed about the complex network of relationships among natural resource actors and their interests. The analysis should consider direct and indirect actors at the different levels of the conflict dynamic, and should capture the range of their multifaceted interests.

3. **Equal access to impartial scientific and technical information about the resource in dispute is key.** One of the prerequisites to effective mediation processes over natural resources is for all parties to have equal access to impartial scientific and technical information about the resource in dispute. This can be jointly generated by the parties themselves or by an independent third party. The very process of generating common information can also have confidence building benefits.

4. **Careful attention is needed to identify the stakeholders that should be engaged in the mediation process.** Designers of mediation processes should think carefully about which stakeholders to involve. Inviting the participation of all stakeholders may, for example, prove too unwieldy or fragmented to produce consensus. Understanding which actors to include in mediation, and the potential political impacts of including some and excluding others, is essential. In turn, ensuring consultation with a sufficiently wide set of stakeholders is crucial to establish and maintain the legitimacy of the process. This can be particularly important with groups that tend to be marginalized, such as indigenous people, women, or youth.

5. **Mediation should aim for collaboration over shared benefits, which can generate the trust needed to tackle other issues.** Mediators approaching a conflict over natural resources should try to help parties to move past zero-sum, win-lose positions. Mediators should try to identify ways that stakeholders can maximize shared benefits and address common problems and challenges together. When possible, natural resources should be treated as a platform for cooperation that transcends religious, ideological, political, or tribal differences, as initial cooperation over natural resources can sometimes be leveraged to tackle more challenging problems down the line.

6. **Mediation techniques are available to overcome critical impasses and entrenched positions.** Once involved in negotiations, mediators can break down impasses using a number of techniques: focusing the talks on technical issues; conducting joint information-gathering; identifying and sharing multiple benefits; and/or using scenario-building approaches. Altering fixed or inflexible default positions can sometimes be achieved by moving parties away from questions of natural resource ownership and toward broader issues of benefit-sharing, predictable access, and management—

areas where opportunities for mutual benefit can be found.

7. **Natural resource issues in peace negotiations are frequently addressed to lay the foundation for future reforms, and not necessarily to resolve problems immediately.** Mediators addressing natural resource conflicts in a peace process should keep mind that their objective is not necessarily to resolve the issue during the negotiation, but often to create an institutional framework and momentum that can deal with natural resource issues at a later time. This can often be achieved by including direct or indirect provisions on natural resources in the peace agreement. Alternatively, issues of natural resource governance can be embedded in a follow-up track to that peace agreement—for example, through a commission, a needs assessment, or a peacebuilding plan.

Further information and support

Lessons and best practices regarding the mediation of natural resource conflicts are available to mediators through DPA. Mediators and stakeholders can also seek impartial scientific and technical expertise on natural resources combined with environmental diplomacy support through UNEP. For more information, see annex 2.

Part B

Case studies

1 Aceh, Indonesia: Oil and natural gas[59]

Key mediation themes and strategies:

- Wealth sharing provisions were used as an economic incentive to keep negotiations going.
- The mediation team used independent experts.
- The final peace agreement included direct provisions for autonomy over natural resources.

Exploration of oil and natural gas reserves in the region of Aceh, Indonesia, began in the 1960s. In 1971, Mobil Oil Indonesia discovered oil and natural gas deposits in Lhok Seumawe, North Aceh. This discovery inspired the development of the Lhokseumawe Industrial Zone, an enclave devoted to oil and liquefied natural gas extraction for foreign export. The oil and gas resources of Aceh were developed and exploited, providing significant revenues for the government of Indonesia.

Map 1: Aceh, Indonesia[60]

The Arun natural gas fields in the Indonesian province of Aceh

In 2000, Aceh operations produced nearly 40 percent of Indonesian natural gas output. However, not sharing in the benefits from these resources was also a large source of grievance for the local Aceh population, and became a motivating factor in the civil war, which lasted from 1976 until 2005. Oil and gas issues were important topics within the peace process and the final peace agreement gives Aceh greater control over their management as well as a greater share of wealth from their exploitation.

Conflict

The province of Aceh has a long tradition of resisting the Indonesian central government. This resistance began as a religious movement, but acquired a different tone once oil and natural gas deposits were discovered in 1971. Violent conflict erupted in Aceh in 1976, led by the Free Aceh Movement (Gerakan Aceh Merdeka, or GAM). This conflict is often explained as a classic resource conflict, where exploitation of natural resources that did not benefit local society added to preexisting tensions and desires for self-determination and autonomy.[61] In particular, there were serious grievances in Aceh linked to oil and gas production over wealth sharing, environmental degradation, dislocation of indigenous families, significant inflows of migrant workers, and disruptions in their traditional livelihoods. This combination sparked widespread conflict and calls for independence, lasting almost 30 years. An attempt from 2000 to 2003 to end the conflict, known as the Geneva Peace Process, failed, with renewed violence in 2003. A second attempt, known as the Helsinki Peace Process, ran from 2004 to 2005. The conflict ended in 2005 with the signing of a Memorandum of Understanding between the government of Indonesia and the Free Aceh Movement (GAM).[62]

Mediation process highlights

In the Geneva Peace Process (2000–2003), the mediator was the Centre for Humanitarian Dialogue (HD Centre), an international humanitarian organization. Before official negotiations began, the HD Centre engaged in a form of shuttle diplomacy, speaking to the central government of Indonesia, representatives of GAM outside of Indonesia, and stakeholders within Aceh, in order to establish a relationship that would enable face-to-face negotiations.[63] Furthermore, in 2000 the HD Centre hosted a meeting at its headquarters in Geneva between the national government and GAM to negotiate a "humanitarian pause,"[64] which established relative peace before political negotiations began. Once the talks started, the HD Centre brought in experts to facilitate the process, give advice, and exert influence when necessary, which was seen as crucial to the progress made.[65] In 2002 the Cessation of Hostilities Agreement was reached between the parties. However, in 2003 it was violated, and the HD Centre withdrew from the mediation process.[66]

The fact that the HD Centre was a low-profile, nongovernmental, and nonpolitical organization made its involvement acceptable to the national government, which encouraged the HD Centre to take the role of lead mediator.[67] Its status as an international humanitarian organization also gave it a degree of legitimacy in the eyes of GAM and was a way for the national government to improve its international image.[68] However, the HD Centre lacked political leverage and connections to the United Nations and the Security Council, hindering its ability to use a "carrots and sticks" approach to assist the negotiations.[69]

The second mediation process, known as the Helsinki Peace Process (2004–2005), was coordinated by the Finnish Crisis Management Initiative (CMI). Former Finnish President Martti Ahtisaari acted as the senior mediator. This process began just one month after the 2004 tsunami, which, in the view of many, was critical in motivating the parties to achieve peace.[70]

All five of the negotiating rounds took place in Helsinki. In Ahtisaari's words, a key starting point for the talks, and a reason for their success, was his principle that "nothing is agreed before everything is agreed."[71] This prevented the parties from publicizing the results of the ongoing peace process, allowing them to compromise on a variety of issues without losing face publicly.[72] Additionally, thanks to his preeminence as an international peacemaker and mediator, Ahtisaari held substantial political leverage, which was important in his ability to convince GAM to move away from its calls for independence and instead accept autonomy as a starting point for the talks.[73] The negotiations proved successful, and the two parties signed a Memorandum of Understanding in 2005.

Mediation in both the Geneva Peace Process and the Helsinki Peace Process were influenced by several historical factors and preexisting agreements that provided important context:

- In 2001 the Indonesian parliament enacted the Special Autonomy Law, which stated that Aceh would have a high level of autonomy within Indonesia and would receive 70 percent of the revenues from its natural resources. This law formed part of the government's strategy at the time to reduce secessionist threats in the provinces of Aceh and Papua. Since it had, in the view of parliament, passed a law giving generous concessions to Aceh, the government was unwilling to compromise further or negotiate on autonomy and wealth sharing.[74]
- The Geneva Peace Process ran in parallel to the government's broader reforms and conflict-management strategy of decentralization and special autonomy arrangements for Aceh and Papua, which had begun in the late 1990s.[75] However, the two processes were not integrated to any significant extent.[76]
- At the outset of the Helsinki Peace Process, the national government made clear that it was unwilling to go beyond the offer of special autonomy and

revenue sharing that it had outlined in the 2001 Special Autonomy Law. Ahtisaari embraced this position as a framework for the talks, and convinced GAM to accept this framework. As a result, wealth-sharing was more of a side issue in the peace negotiations as the framework had already been established.[77]

- Oil and gas production had peaked in the 1990s, and its declining importance meant that revenue-sharing issues did not hold the same weight as they would have had a decade or two earlier.
- GAM had significant concerns with the 2001 Special Autonomy Law, which was negotiated by local elites without input from the local population or GAM members. Furthermore, the Special Autonomy Law lacked provisions on human rights and did not address popular calls for independence. It also effectively barred GAM members from being involved in politics; candidates could not be involved in criminal acts, or have ever been citizens of a foreign country, ruling out much of the group.[78] At the same time, the wealth-sharing aspect of the law was favorable to Aceh, and a great improvement from the past.
- The wealth-sharing provisions of the Special Autonomy Law were used as an economic incentive to keep negotiations going after a deadlock on the issue of international monitoring.[79]

Agreements

Key provisions of the Special Autonomy Law (Number 18/2001):[80]

- Transfers unprecedented amount of power from the central government to the province of Aceh;
- Gives Aceh greater share of revenue from its natural resources (oil and gas fields: 70 percent for eight years; after that, 50 percent).

Key provisions of the Memorandum of Understanding between the Government of the Republic of Indonesia and the Free Aceh Movement, August 15, 2005:[81]

- Granted Aceh the right to retain 70 percent of its oil and gas revenues;
- Greater transparency over collection and distribution of these resources;
- Joint control over these resources; stated that the new Law on the Governing of Aceh would be created and become law no later than 31 March 2006. This law was passed on 11 July 2006; it restated that Aceh would receive 70 percent of profits from oil and gas for the next eight years, and that resources would be managed jointly.

Implementation challenges

Although the 2005 Memorandum of Understanding specifies that Aceh is entitled to retain 70 percent of the revenues from all current and future hydrocarbon deposits, it includes an ambiguous provision stipulating that the Indonesian and Acehnese governments will manage the resources jointly. It fails to specify which government will regulate hydrocarbon revenue sources and have the authority to grant licenses for new exploration. This ambiguity has complicated the implementation of this provision.

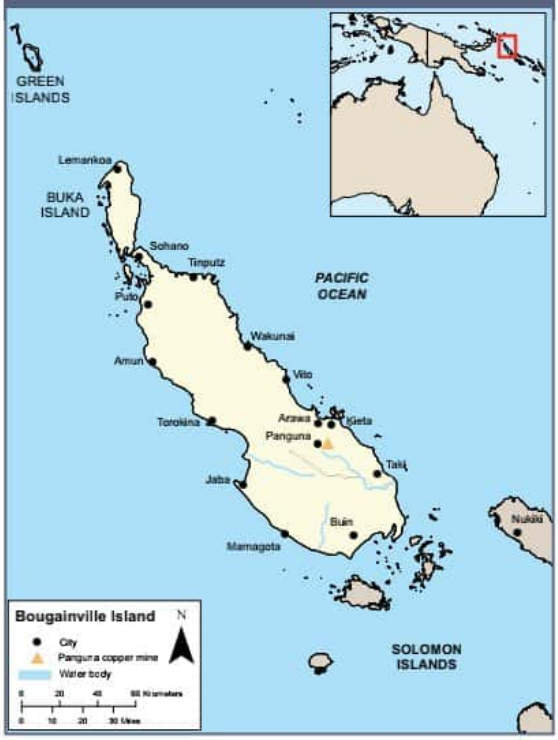
2 Bougainville, Papua New Guinea: The Panguna copper mine[82]

Key mediation themes and strategies:

- The conflict was sparked by a combination of negative environmental and health impacts of mining and insufficient benefits sharing.
- The mediation style was nondirective and facilitative.
- The peace agreement has curbed widespread violence but does not mention the Panguna mine directly.

The Panguna copper mine, located in Bougainville, Papua New Guinea (PNG), was once the largest open pit mine in the world. Current estimates put the mine's copper reserves at 5.3 million tons, and gold reserves of 19.3 million troy ounces. The mine was developed by Bougainville Copper Limited in the 1960s and 1970s

Map 2: Bougainville, Papua New Guinea[83]



Panguna mine's copper and gold await political settlement before extraction can resume

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after the signature of the Bougainville Copper Agreement authorized its exploitation. It was the largest source of revenue, besides foreign aid, for PNG from 1975 until closure.[84] Amid violent conflict, it closed in 1989 and has remained closed ever since. Reopening the mine is now under discussion, as it would be a major source of revenue for the Autonomous Region of Bougainville. However, there is resistance to this idea from a variety of groups, in particular the Me'ekamui, a political movement claiming to be the legitimate representatives of landowners around the Panguna mine. In light of the conflict that mining caused in the past, the government is treading carefully and emphasizing the role that local landowners will play in any negotiations.[85]

Conflict

The Panguna mine remained at the center of the violent conflict in Bougainville, even after it closed, until 1997.[86] During these years, local communities accused the mine of causing a variety of environmental and health problems. The mine was also a source of severe socioeconomic tensions; BCL was charged with practicing "economic apartheid" because foreign workers had better facilities, higher wages, and more opportunities for advancement than local workers.[87] Lastly, Bougainville received only a small share of the revenues gained by the PNG government from the mine.[88] Consequently, most Bougainvilleans perceived the Panguna mine as an exploitation of their resources by foreign forces.[89] They felt they bore the brunt of the costs associated with the exploitation of the mine without seeing its benefits.

In 1988 the mine was sabotaged by the Bougainville Revolutionary Army through a series of arson attacks. Violence escalated when the PNG Defence Force was sent to quell the rebellion. The Panguna mine was not the sole cause of the conflict: divisions along ethnic and geographical lines were already felt and were exacerbated by the dynamics around the mine.[90] Rather, the grievances surrounding the mine provided the catalyst for the outbreak of the conflict, which only ended in 1997 with the signing of the Burnham Truce, followed by the 1998 Lincoln Agreement. These agreements initiated the withdrawal of PNG soldiers from the island and the deployment of a multinational Peace Monitoring Group. Peace talks between the government of Papua New Guinea and Bougainville leaders continued until the signing of the comprehensive Bougainville Peace Agreement on August 30, 2001.

Mediation process highlights

The peace process (1997–2001) was mediated by New Zealand, with Australia playing an important supporting role through facilitation. New Zealand representatives John Hayes (high commissioner to PNG) and Don McKinnon (minister of foreign affairs and trade) were instrumental in getting the rival factions in Bougainville to reach a new level of unity, enabling them to negotiate with the PNG government. The fact that the early round Burnham I and II talks were held in the secure atmosphere of a military camp in foreign neutral territory was important in making the parties feel safe to speak freely about their grievances.[91] Throughout the process, the mediators facilitated the talks but did not run them, instead preferring that the negotiating parties manage the talks themselves. This was done to ensure the parties felt ownership over the outcomes, and to create a tailored solution that would be more likely to succeed.[92] Also important in allowing the peace process to move forward from a truce in 1997 to the comprehensive peace agreement in 2001 were the Truce Monitoring Group and the Peace Monitoring Group, an unarmed, neutral monitoring groups that kept Bougainville generally peaceful while the parties negotiated.[93]

Agreement

During the peace process, the prevailing assumption among the leadership of PNG and the Bougainville delegations was that it was unlikely that the Panguna mine would reopen in the near future.[94] Mining was an extremely sensitive issue for Bougainvilleans, and an open discussion surrounding copper mining would have been difficult to sustain at the time. Gaining control over their natural resources was a priority for the Bougainville leadership, and it formed an important part of the autonomy agreement reached with the national government.[95] Still, the mine was not mentioned in the Bougainville Peace Agreement as such, nor were mining issues clearly addressed in the resulting constitutional documents. The result is that mining issues remain ambiguous and inconclusive in key respects.

It is possible to say, however, that ownership of natural resources was indirectly addressed in the 2001 Bougainville Peace Agreement, given that broad governing authority was to be transferred from the national government to the Autonomous Bougainville Government (ABG) in several ways.[96]

- The powers of the PNG government were clearly listed. These did not include control of mining or natural resources.
- The powers and functions of the ABG were to be written in its constitution, and could include everything not on the national government list. This included authority over its natural resources, the right to collect revenues, and decision making power on foreign investments.[97]
- The PNG government passed amendments to its constitution detailing the new powers and functions of the ABG, in 2002.
- The agreement stated that the powers and functions would be transferred to the ABG when it notified the PNG government of what it would like to have transfer-red. This process began when ABG drafted its constitution in 2004 and elected its first president in 2005.

On the other hand, the crucial question of mining revenues, which had been a cause of major problems in Bougainville in the 1970s and 1980s, was left ambiguous in the 2001 peace agreement.

- The agreement stated that once Bougainville reached fiscal self-reliance, its revenues would be shared between the ABG and PNG. However, there was no formula given for how revenues would be shared.[98]
- It is perhaps the case that specific details pertaining to the Panguna mine and revenue sharing were constructive ambiguities that were deliberately left unclear in order to reach an agreement.[99]

Implementation challenges

The settlement is widely considered one of the more successful peace processes, mainly because, to date, no further episodes of widespread violence have occurred. But, in fact, all the mining issues were kept out of the main mediation. The negotiations left three critical issues unresolved:

First, the unfinished business of Panguna. Negotiations are still ongoing on whether the mine should be reopened and under what terms. To support a transparent and inclusive decision making process on the reopening of the mine, the Joint Panguna Negotiation Coordination Committee (JPNCC) was established in 2012. The JPNCC consists of representatives from ABG, the government of PNG, the United Panguna Mine Affected Landowners Association, and Bougainville Cooper Limited.

Second, the drawdown of powers. The lack of capacity of the ABG (without any local mining revenue, and dependent on the PNG government for grants) means that it is very difficult for the ABG to draw down powers from the PNG government, including those relating to mining. This "catch-22" is likely to be a flashpoint in the autonomy process in the immediate future. A complete moratorium on all mining exploration in Bougainville was instituted by the PNG government in 1971. Lifting that moratorium requires clarifying the relative legal powers of the PNG government and the ABG, building sufficient capacity within the ABG to administer mining, and addressing the unfinished business of the Panaguna mine.

Finally, the issue of customary landowners. Following the Bougainville Peace Agreement, the Bougainville constitution now recognizes that ownership of all natural resources in Bougainville lies with landowners, even if the ABG has the role of governing and regulating them once the powers are drawn down from the PNG government. In relation to the Panguna mine (and the rest of Bougainville's resources), writing customary ownership into the constitution puts the landowners in a dominant position. This is likely to be a source of significant problems, even conflict, in the years ahead, as the ABG has no systems or institutions to:

- Assess competing claims between those who assert customary ownership;
- Enable customary claimants to make binding decisions that will endure across generations, including for the lifetime of major mining investments;
- Allocate legal rights that override custom and give sufficient confidence to investors and financiers in the durability of investment law; or
- Convince all parties, including dissenters, that violence has been put aside in favor of legal methods of dispute resolution. The Bougainville constitution obligates the ABG to clarify land issues, but this has not yet been done. Creating durable legal and administrative systems is a significant challenge ahead.

Despite this, reopening Panguna is a priority for the current ABG government, which emphasizes that it would be a major source of revenue for Bougainville and would deliver benefits to its population.[100] There is also talk of developing other smaller mining projects. The ABG has said it would include local landowners in the process and that mine-lease landowners would be party to the review of the original Bougainville Copper Agreement.[101] As noted, however, there continues to be resistance to the idea of resuming mining operations from groups like the Me'ekamui.[102]

In summary, the Panguna mine issue (and indeed all other mining) was deferred in the peace process in favor of establishing peace over most of the territory under an elected autonomous government. This strategy has clearly been successful so far, but the issue of reopening the Panguna mine has once again taken center stage. If a peaceful reopening of the mine is going to take place, the concerns of all stakeholders have to be addressed. The political and security issues are compounded by the absence of sufficient resources and capacity for the ABG to take over powers from the PNG government.

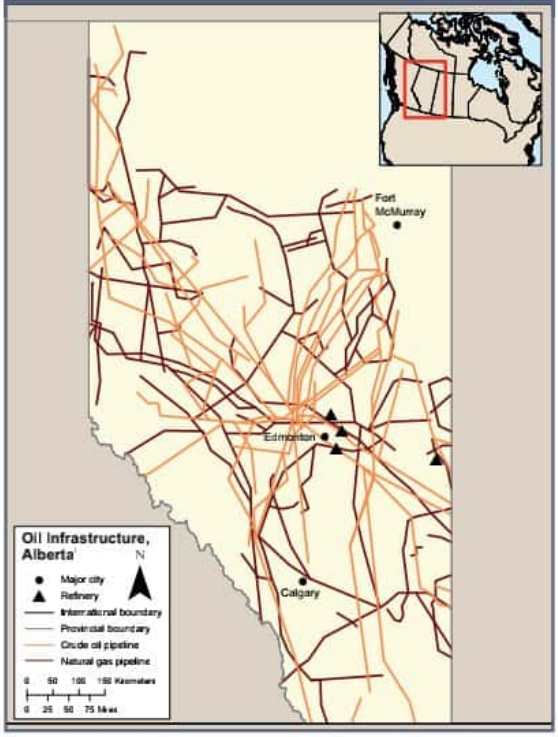
3 Alberta, Canada: Gas flaring framework[103]

Key mediation themes and strategies:

- The process was broad and included multiple stakeholders.
- Knowledge creation was employed as a shared activity to build confidence.
- Increasing exposure to interest-based negotiation helped to address a very complex issue and change seemingly intractable positions.
- Agreement implementation was more successful than expected; an official directive was established based on the results.

The oil and gas industry in the province of Alberta, Canada, draws on the world's third-largest oil reserves. In 2013 it employed 121,500 people, and oil sands-related investment is expected to generate $79.4

Map 3: Alberta, Canada[104]



Gas flaring in Alberta, Canada, was reduced by 60% between 1996 and 2012

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billion in federal and provincial government revenues between 2012 and 2035.[105] However, these operations also have important environmental consequences. One such consequence stems from gas flaring—the burning of natural gas contained in crude oil that cannot be efficiently processed or sold (also known as solution gas). Gas flaring not only contributes to CO^2 emissions but can also emit compounds such as methane and sulfur dioxide, which are associated with respiratory problems. Between 1996 and 2012 solution gas flaring was reduced by 59.1 percent in Alberta.[106] This achievement was the direct result of new regulations that were developed by a two-year, multiparty, mediated negotiation between all principle stakeholders, including government, industry, and nongovernmental organizations.

Conflict

Prior to 1996 approximately 8 percent of solution gas produced in Alberta was flared at oil-producing sites across the province.[107] Rural residents and livestock owners repeatedly raised concerns about the potential human and animal health impacts of the flares. In 1996 a scientific report, funded by government and industry, was released that seemed to validate these concerns and resulted in significant public controversy. Known as the Strosher report,[108] it concluded that combustion efficiencies were much lower than assumed in the flares tested, resulting in a higher release of unburned methane, hydrogen sulphide, and other hydrocarbons.[109] Public concerns began to mount, and there were widespread calls for the government to improve its regulatory framework in order to protect public health and the environment.

Mediation process highlights

To find a solution to reduce gas flaring and improve provincial regulations, the Canadian Association of Petroleum Producers proposed that a multi-stakeholder group be established, composed of petroleum producers, environmental organizations, agricultural associations, forest products associations, municipalities, the Albertan Ministries of Health and the Environment, the Alberta Department of Energy, the Alberta Energy and Utilities Board, and Environment Canada. A ministerial order led to the creation of the Clean Air Strategic Alliance (CASA), consisting of these principle stakeholders and supported by an impartial secretariat and mediator.

Using a consensus-seeking approach under the auspices of CASA, a mediated agreement came about thanks to several factors:

- The introduction of new scientific information in 1996 required a credible response from potentially affected interests. All parties agreed that the status quo was untenable.
- The provincial regulator increased the parties' motivation to reach an agreement by committing to implementation, provided that the outcome was consistent with the overall policy direction.
- There was a perceived risk that regulators would take unilateral action to mandate a reduction in flared gas, resulting in an outcome that would be less successful than an agreement among the principal stakeholders.
- The parties were required to identify representatives to work closely with an impartial third party to explore technical solutions and consider international good practice, with an understanding that there would be no agreement without their explicit consent. This increased the parties' sense of investment and control.
- The process used to build procedural agreements (for example, jointly developing detailed terms of reference), helped to increase trust and strengthen relationships between the parties.
- Knowledge creation was a shared activity. Furthermore, proposed solutions were developed and evaluated based on transparent and concise criteria informed by economic, environmental, and regulatory considerations.
- The parties' growing familiarity with interest-based negotiation, and more importantly, the specific techniques and behavior expected of both mediators and stakeholders, enabled them to address a very complex issue and change seemingly intractable positions.
- Provisions for implementation were embedded in the agreement, including specific reduction targets. It was also understood that implementation was a shared responsibility.

Agreement

In 1998 the CASA team produced a final report and a series of consensus recommendations for a new regulatory approach covering flaring and venting baselines, flaring reduction targets, and operational requirements for the upstream oil and gas industry.[110] The report recommended a mixed approach whereby voluntary reduction targets would be established, and be expressed as percentages of flared gas volume reduced compared with a baseline year. The targets did not state how the reductions had to be achieved, or in what locations. Rather, the targets were based on a provincial total flared gas volume. If the voluntary reduction targets were not achieved, the regulator would step in with a prescriptive approach that would mandate limits (a "regulatory backstop"). This approach provided flexibility to the industry while addressing concerns of the public and the regulator that targets would be met.

In 1999 the Alberta Energy Resources Conservation Board (ECRB) adopted Guide 60 (Upstream Petroleum Industry Flaring, Incinerating, and Venting),[111] which

established a regulatory framework for management of solution gas based on the recommendations of the CASA report. The guide set a 25 percent reduction of solution gas flaring by the end of 2001, compared to the 1996 baseline. It also mandated firm, short-term targets for reducing solution gas flaring, and set maximum limits on the total volume of solution gas that could be flared at individual sites if voluntary targets were not met.[112]

Implementation challenges

Industry utilized the flexibility of the voluntary targets to come up with their own most cost-effective means of producing results, and outperformed the targets. In 2012 the regulator reported that flaring in Alberta had been reduced by 59.1 percent compared to the 1996 baseline.[113] The management framework that was adopted to reduce flaring was ultimately recognized by the World Bank as a valuable model that could be applied in other locations to reduce gas flaring.[114]

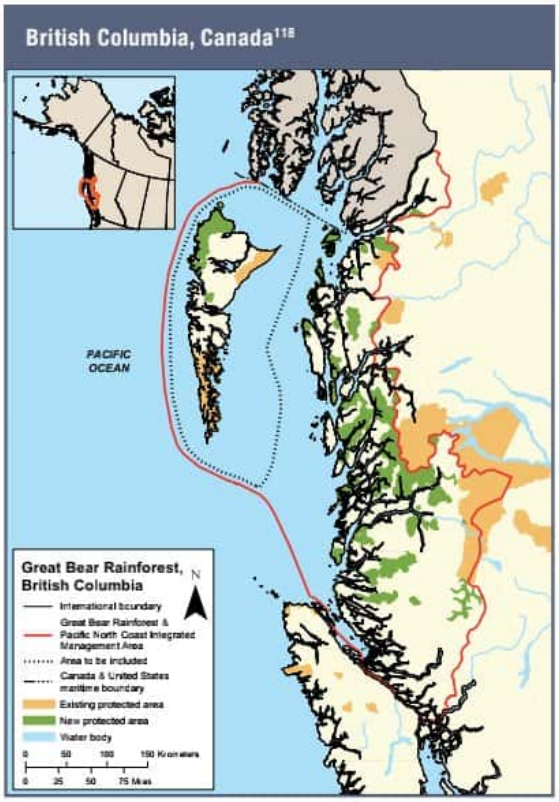
However, one of the key challenges is that Directive 60 did not establish venting reduction targets. While gas flaring decreased, gas venting increased from 459 million cubic meters in 1999 to 704 million cubic meters in 2000 (34 percent).[115] While a number of factors explain the increase, CASA needed to recommend new measures to ensure that companies would not be able to decrease their flare volumes by increasing their venting volumes. In 2002 a new report was released by CASA covering gas flaring, incinerating, and venting, which led to an update of Directive 60.[116]

4 British Columbia, Canada: The Great Bear Rainforest[117]

Key mediation themes and strategies:

- A broad multi-stakeholder process was adopted.
- Several negotiation processes in parallel formed a number of different agreements.
- Independent expertise provided impartial information to the various processes.
- A separate but linked mechanism was used for public engagement and consultation.

The Great Bear Rainforest (GBR) is a temperate rainforest of 6.4 million hectares on the west coast of British Columbia, Canada.[115] In the mid-1990s concern over the harvesting of old-growth forests in the GBR escalated into a contentious issue that involved a multitude of stakeholders, including indigenous groups (First Nations), environmental groups, forest companies,



Clear-cut logging in the Great Bear Rainforest

and the provincial government.[120] A comprehensive mediation process between the parties consisting of multiple tracks over a number of years resulted in a series of agreements, culminating with the signature of the Great Bear Rainforest Agreement in 2006.[121]

Conflict

Environmental groups started a market campaign that targeted key U.S. and European purchasers of timber harvested in the GBR. Faced with pressure in the marketplace from this campaign, the forest companies sought a new approach to forest development on the coast. Meanwhile, First Nations on the coast became increasingly assertive about protecting their rights to their traditional territories, which cover the entire GBR area. A collaborative planning process to engage the full range of affected parties was established to resolve the dispute.[122]

Mediation process highlights

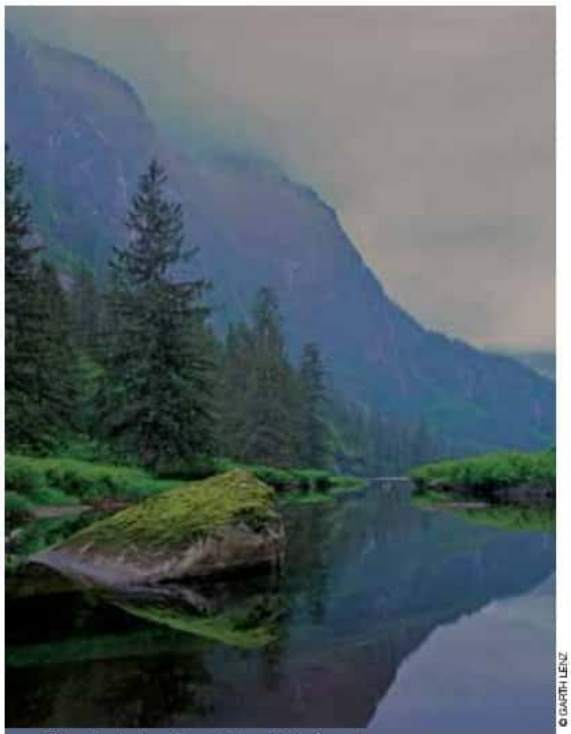
Between the late 1990s and 2009, several negotiation processes occurred in parallel involving the environmental groups, forest companies, First Nations groups, and the provincial government. Independent mediators retained by the companies, environmental groups, and the provincial government facilitated the majority of these negotiations.[123, 124] The parallel processes included:

- Direct negotiations between the environmental groups and the forest companies, known as the Joint Solutions Project. This process continued independently for more than a decade, and many of the elements of the broader agreements were initially developed at this negotiating table.[125]
- A First Nations-led collaborative planning group, known as the Protocol Implementation Team, that engaged the forest companies and the environmental groups in developing an ecosystem-based management (EBM) approach.[126]
- The establishment of several independent information bodies to inform the negotiations, for example the Coast Information Team and the EBM Working Group.[127] The EBM Working Group was itself a negotiation involving environmental groups, forest companies, First Nations, local communities, and the provincial government.[128]
- The Land and Resource Management Planning Process, which provided a multi-stakeholder forum for broad public involvement and consensus building.

Agreement

The various negotiations generated a number of different agreements:[129]

- An initial moratorium agreement in 1999 between the environmental groups and forest companies that provided interim protection to a large number of intact watersheds on the coast.[130]



Ellerslie Lake, Great Bear Rainforest

- An agreement in 2001 between the forest companies, the environmental groups, and all the stakeholders involved in the government-sponsored planning processes to: (1) Protect 830,000 hectares of old growth forest; (2) Develop an EBM approach to forest management; (3) Maintain an additional 1.5 million hectares in interim protection while the EBM approach was developed; (4) Establish an independent team of scientists to inform ongoing negotiations over the definition of EBM and establishment of additional protected areas.[131]
- An agreement between the First Nations groups and the provincial government to establish a process to oversee the ongoing planning and land-claim negotiations.[132]
- A multi-stakeholder agreement in 2006 recommending additional protected areas that brought the total amount of protected area to 2.1 million hectares.[133]
- The establishment of a $120 million trust fund to support diversification of the local economy, with contributions from the provincial and federal governments, the environmental groups, and the forest companies.[134]
- An agreement on full implementation of EBM in 2009.[135]

Implementation challenges

As reflected in the number of successive agreements, the GBR process has been a complex and drawn-out negotiation.[136] While full implementation of EBM was achieved on paper in 2009, there are still ongoing discussions regarding important technical details such as the translation of risk thresholds into the protection of old-growth forest within the area under EBM forestry development.[137]

One of the key challenges that the negotiation and implementation processes had to overcome was the perception by First Nations that the creation of protected areas would limit their economic opportunities and options for traditional use, while also affecting their claims to title. To resolve this, the Great Bear Rainforest Agreement created a conservancy designation that honors First Nations rights and title.[138] It also developed a structure that allowed for joint decision making by the provincial government and First Nations known as the Joint Land and Resource Forum. It was also crucial to prove the value of the EBM approach, namely to show that conservation could result in positive economic outcomes for First Nations and their communities.[139] For this reason, a new trust fund was established to provide funding for investments in sustainable businesses, while linking them to clear and long-lasting conservation commitments that would also increase the capacity of First Nations to manage conservancy. However, benefits from trust fund investments have been less than expected, due in part to the general economic slowdown over the past few years.[140]

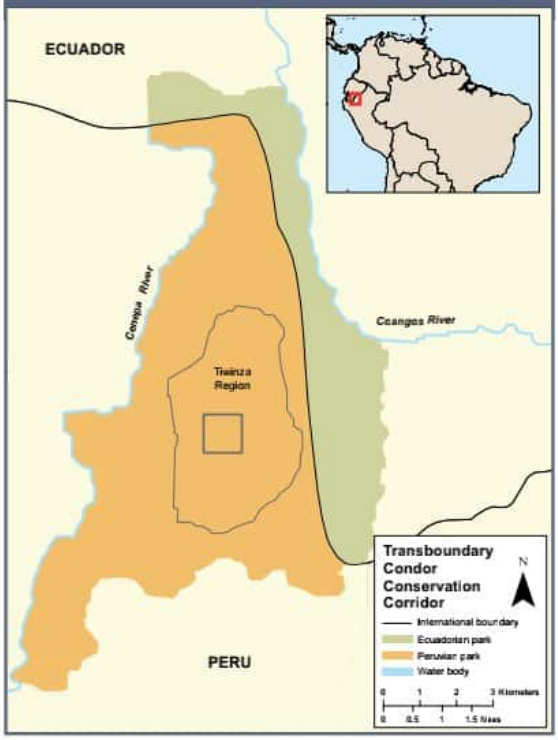
5 Ecuador and Peru: The transboundary Condor conservation corridor[141]

Key mediation themes and strategies:

- A border dispute lasting 150 years had left both countries with deeply entrenched positions.
- Key issues were divided into four negotiation subcommittees.
- Guarantors used external proposals to resolve the dispute.
- A conservation corridor was created.
- A common information system was established.

The Cordillera del Cóndor is a mountain range that stretches more than 160 kilometers above the Upper Marañon River, where the Amazon River begins. The remoteness and inaccessibility have allowed the region to maintain its pristine Amazonian biodiversity, with dense cloud forests and exceptionally rich biodiversity.

Condor conservation corridor[142]



The Cordillera del Condor mountain range, stretching over 160 kilometres, was an area of border conflict between Peru and Ecuador for over 150 years

The Cordillera del Cóndor has been an area of border conflict between Peru and Ecuador for over 150 years. Despite an attempt to clarify the border through the Rio de Janeiro Protocol of 1942, skirmishes erupted in 1995 and 1998. Following a request from both countries, a mediation process started in 1998, concluding with the signature of the Acta Presidencial de Brasilia that same year, putting a definitive end to the border dispute.[143]

Conflict

The border dispute is rooted in the diverging historical claims that Ecuador and Peru have made over their common border and is based on their respective interpretations of treaties over the last two centuries. Much of the disputed area's dividing line runs along the Condor range, where each country aims to gain military advantage by occupying the higher elevations. Over the years, the dispute has driven fervent nationalism in both countries, and territorial concessions by either leader would have been perceived as weakness.[144] In 1942, following a ten-day war, both countries signed the Rio de Janeiro Protocol (Rio Protocol), with Argentina, Brazil, Chile, and the United States acting as the guarantors.[145] However, despite the adoption of the Rio Protocol, skirmishes along the border area continued.

In 1995 a brief outbreak of armed conflict occurred before a truce led both countries to withdraw their troops. New rounds of comprehensive bilateral peace talks followed in 1996. When violence threatened to erupt again in 1998, the warring parties asked the four guarantor states from the Rio Protocol to mediate and to propose a solution to the dispute.

Mediation process highlights

When bilateral peace talks between Peru and Ecuador began in 1996, the four guarantor states were initially restricted to the role of facilitators. In this capacity they acted primarily as hosts of bilateral talks. In a major step forward in 1997, Ecuador and Peru agreed to sign the Declaration of Brasilia, in which they agreed to form subcommittees to address the four key points of contention in separate discussions. The committees were named Treaty of Trade and Navigation, Comprehensive Agreement on Border Integration, Fixing the Common Land Border, and the Binational Commission on Measures of Mutual Confidence and Security.[146]

During those talks, the four guarantor states provided support in three main ways. First, they helped to end the fighting and stabilize the situation on the border. Second, the guarantors assisted the parties in pursuing discussions on a ministerial level to articulate the most contentious issues. Third, the guarantors facilitated negotiations with a view to solving the dispute. Throughout this process, the guarantors built their mediation activities around five central principles: (1) maintain unity of purpose; (2) ensure military support for diplomacy; (3) keep Ecuador and Peru in the lead; (4) use the law; (5) maintain an ambitious perspective.[147]

While the bilateral negotiations led to a swift agreement on peripheral matters, little progress was made on the core issues, such as the treaty of trade and border demarcation. In October 1998, just as the prospects of armed conflict were increasing, Ecuador and Peru officially acknowledged that the bilateral talks had reached a dead end. The two parties subsequently met with U.S. President Bill Clinton and formally asked the four guarantor states to propose a permanent solution to the dispute.[148]

Acting on their increased responsibilities in the mediation process, the guarantors developed a proposal to end the conflict, which the warring parties eventually accepted. In short, they mapped the border territory, suggested a demarcation line together with a transboundary conservation corridor, and linked the overall dispute settlement to an economic development program for both parties. Highlights of this process are listed below.[149]

- The United States provided satellite technology to map the border area and establish a demarcation line.
- Brazil hosted the final stages of high-level negotiations between Ecuador, Peru, and the four guarantors, which lead to the signing of the Brasilia Agreement. The presidents of Argentina, Brazil, and Chile attended the talks, while the United States was represented by a special representative of President Clinton.
- A pledge was made to provide US$3 billion in grants, loans, and investments for infrastructure, trade facilitation, and economic development projects in both countries. The guarantor countries, the international donor community, and private enterprises would contribute the funds.

The proposal by the guarantors had several provisions:

- Establish a transboundary peace park and conservation corridor based on a participatory approach involving local communities in cooperation with the International Union for Conservation of Nature, the International Tropical Timber Organization, and the World Bank;
- Emphasize the biological connectivity and the management of transboundary conservation areas on both sides of the border as a single unit, thus providing an opportunity for collaboration between Ecuador and Peru;
- Call for the appointment of a binational steering committee to foster effective transboundary coordination and cooperation;
- Highlight the importance of building and strengthening institutional and technical capacities to sustainably manage resources;
- Require an agreement be signed by the national environmental agencies of Peru and Ecuador to foster bilateral cooperation in the fields of environmental management, nature conservation, and sustainable development.

Agreement

The mediation process eventually led to the signing of the Acta Presidencial de Brasilia in 1998, the success of which was based upon the compromises that both countries were willing to make. Key elements of the peace agreement are listed below.[150]

- A fundamental and creative aspect to the agreement was the commitment to establish protected and demilitarized ecological parks on the adjacent sides of the border. Although these parks remained under the respective states' sovereign authority, the agreement also established commitments to coordinate conservation and environmental management initiatives. In 1999, Ecuador established the El Cóndor Park, while Peru created an ecological protection zone and the Santiago-Comaina Reserved Zone.
- The largest area around the most fiercely contested site was given to Peru, while one square kilometer at the heart of this area (Tiwintza, an outpost occupied by Ecuador since 1945) was granted to Ecuador as a nonsovereign private property. This spot, on Peruvian territory, could be used by Ecuador to erect a monument and fly their flag, but there was no right to transfer the property.
- The ten-year Binational Master Plan for the Development of the Border Region provided a political umbrella for the design and implementation of basic infrastructure and social development projects, along with protection and sustainable use of natural resources, while preserving the identity and livelihoods of the indigenous peoples.
- An information system for the entire mountain range was established, incorporating the biological knowledge acquired by both countries, and a common geographic information system for joint use.
- The two governments agreed to coordinate the implementation of concerted conservation actions and to develop binational policies in the Condor Range.
- Members of the native communities in the border areas were granted the right of passage from one ecological zone to the other.

Implementation challenges

Since the 1998 agreement, relations between the two countries have grown strong. In particular, trade has increased by seven-fold between 1998 and 2008. A number of infrastructure, environmental, economic, and social projects are being conducted in the border zone under the Binational Development Plan. However, challenges remain in the region.[151] The expansion of logging, mining, and oil operations on both sides of the border has undermined the rights of indigenous communities in the region, and has threatened biodiversity and the integrity of the park itself. The decades of conflict also left a large number of landmines and other unexploded ordinance that continue to threaten the lives of local populations and delay development projects.

6 India and Pakistan: The Indus Waters Treaty[152]

Key mediation themes and strategies:

- Parties agreed to negotiate on a functional and technical, rather than political, basis without reference to past claims.
- The parties used a common information base on water resources and infrastructure development options, supported by a commitment to share data.
- A permanent commission was established to ensure continued communication and information sharing between the two countries.
- The World Bank provided financial, political, technical, and mediation support.

The Indus River originates in China (Tibet) and Afghanistan, and flows some 3,100 kilometers through India and Pakistan to the Arabian Sea. The Indus River

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Tarbela Dam, Pakistan's largest, on the River Indus

system comprises three western rivers (the Indus, the Jhelum, and Chenab) and three eastern rivers (the Sutlej, the Beas, and the Ravi). The Indus is one of the most developed rivers in the world from an agricultural perspective, with large irrigation schemes in both Pakistan and India.

The creation of the states of India and Pakistan in 1947 divided the water resources of the Indus basin, leading to disputes over water allocation between the two countries. After a mediation process that lasted almost a decade, the Indus Waters Treaty was signed in 1960. The treaty defined clear guidelines for water sharing, and established conflict resolution mechanisms that continue to be used to this day.

Conflict

The Indus River has long been a source of dispute between India and Pakistan, two countries whose relationship has historically been marked by mistrust and hostility.[154] During the 1940s, extensive irrigation developments were implemented in a part of the basin (Punjab) that was soon to be divided between the two countries. The 1947 partition established India as the upstream riparian and Pakistan as the downstream riparian on five of the six rivers of the Indus basin. Disputes over water allocation erupted immediately. A brief standstill agreement was established in December 1947, maintaining the status quo until March 1948. When the agreement expired, various water supplies from India to Pakistan were cut off in the spring of 1948. Immediate attempts at conflict resolution failed to develop a lasting solution.[155]

Mediation process highlights

In the 1950s an external expert, David E. Lilienthal, recommended a joint approach to water management aimed at increasing available water supply through infrastructure development and jointly managing the Indus basin as a single unit. He proposed a technical and cooperative approach to problem solving and management, combined with the creation of the Indus Engineering Corporation with investment and support from the World Bank. After reviewing the report, the president of the World Bank approached the prime ministers of Pakistan and India to assess their interest in participating in a new conflict resolution process mediated by the "good offices" of the bank. The prime ministers agreed, and the mediation process began. Key highlights of the mediation process are outlined below.

- Agreement was reached on a mediation process design, including underlying principles and an approach for representation to guide the negotiations. Both countries committed to a cooperative approach to water management; to negotiate on a functional rather than political basis without reference to past claims; and to appoint engineers from their respective countries to engage in the negotiations with the support of an engineer from the World Bank.
- It was agreed that a common information base would be developed on water resources and infrastructure development options, supported by a commitment to share data.
- At the request of the World Bank, both India and Pakistan presented a series of proposals and counter proposals for water use and allocation plans. While the respective plans had common supply assumptions, they diverged significantly on water allocation. The two parties could not agree on a joint approach to developing the waters of the Indus basin, leaving the only feasible option as a quantitative division of the waters between the two countries.
- As the idea of joint development was abandoned, the World Bank presented a proposal that allocated the vast majority of the water supply from eastern tributaries to India and from western tributaries to Pakistan.[156]
- India accepted the World Bank's proposal as the basis for an agreement. However, Pakistan considered the flow of western rivers to be insufficient to replace their existing supplies from the eastern rivers given the limited storage facilities.[157] As a result, Pakistan gave only qualified acceptance.
- The World Bank responded by suggesting that India build more storage facilities, which was rejected by India on financial grounds.[158] Resolving this impasse focused on how much India would contribute to the construction of additional storage and where the remaining construction financing would come from.
- The Bank president undertook separate discussions with India and Pakistan and raised funds from the international community. India agreed to provide $174 million, and the international community contributed a further $900 million. Both Pakistan and India agreed to the package, which was then formally drafted as the Indus Treaty and was ratified in January 1961.

Agreement

Key elements of the Indus Treaty, signed on September 19, 1960, were:

- Pakistan would receive unrestricted use of the waters flowing in the western tributaries (Indus, Jhelum, Chenab), and India would have unrestricted use of the water in the eastern tributaries (Ravi, Beas, and Sutlej).[159]
- Three dams, eight link canals, three barrages, and 2,500 tube wells would be built in Pakistan to facilitate the separation and use of the waters from the western tributaries.[160] There would be a ten-year transition period giving Pakistan time to build the required infrastructure.

- The parties would notify each other of any engineering work that would affect water flow and would provide relevant data upon request.[161]
- The permanent Indus Commission would be established to ensure continued communication and information sharing between the two countries. Commissioners would meet annually and would be responsible for promoting cooperation on transboundary water in the Indus water basin, ensuring treaty implementation, and submitting annual reports.[162]
- The parties would commit to seek the advice of a neutral expert in the event of a dispute. If that failed, negotiators would be appointed by each side to meet with a mutually agreed upon mediator. If that failed, a court of arbitration would be convened to resolve the issue in question.[163]

Implementation challenges

The Indus Treaty and Commission have been highly resilient, maintaining their role of coordinating technical water management issues despite three major conflicts between the countries. Nevertheless, the implementation of the Indus Treaty has faced a number of challenges.[164] In particular, the Indus Treaty allowed for India to establish river-run hydropower projects with limited reservoir capacity and flow control needed for feasible power generation. In 1992, India proposed to develop the Baglihar Dam, a river-run facility on the Chenab River (one of the rivers allocated to Pakistan under the Indus Treaty). Pakistan opposed the construction of the Baglihar Dam, claiming it violated the parameters of the treaty by allowing India significant control over the river flow regime for power generation.

After five years of negotiations, India and Pakistan could not reach agreement on the dispute. The Baglihar issue was resolved by the appointment of a third party, in accordance with the dispute resolution procedures in the treaty.[165] Raymond Lafitte, a Swiss civil engineer, examined the issue and ruled that the poundage capacity of the dam be reduced by 13.5 percent, the height of the dam structure be reduced by 1.5 meters, and power intake tunnels be raised by 3 meters, all of which would limit some of India's flow-control capabilities. While Pakistan maintained technical objections to the proposal, it did not challenge the verdict.

Similarly, tensions mounted over the construction of the Kishanganga Dam, another river-run hydroelectric project initiated by India in 2007. Pakistan has raised objections that the diversion of the waters of the Neelum/Kishanganga River will affect the flow of the Jhelum River (allocated to Pakistan under the Indus Treaty). This would reduce power generation at the Neelum–Jhelum Hydropower Plant, operated by Pakistan.

In 2010, Pakistan appealed to the Hague's Permanent Court of Arbitration, arguing that the Kishanganga Hydroelectric Plant violates the Indus River Treaty by increasing the catchment of the Jhelum River and depriving Pakistan of its water rights.[166] On February 18, 2013, the court issued a partial award in which it unanimously decided that the Kishanganga is a river-run hydro plant within the meaning of the Indus Waters Treaty and that India may accordingly divert water from the Neelum/Kishanganga River for power generation. However, the court also decided that India is under an obligation to construct and operate the dam in such a way as to maintain a minimum flow of water in the Neelum/Kishanganga River, at a rate to be determined subsequently. On December 21, 2013, the court issued a final award in the case, whereby the minimum flow rate was set. However, the court also decided that either India or Pakistan may seek reconsideration of the decision through the Permanent Indus Commission and the mechanisms of the Indus Waters Treaty after a period of seven years from the first diversion of water from the Kishanganga/Neelum River.

Disputes have continued over the design of the Kishanganga Dam despite efforts by the Indus Water Commission to solve them, with Pakistan threatening to request the intervention of the International Court of Justice if no resolution is achieved.

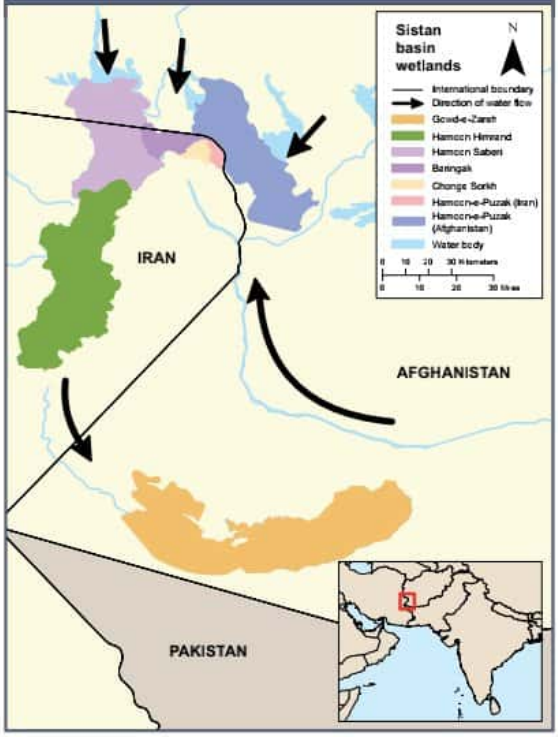
7 Iran and Afghanistan: The Sistan basin[167]

Key mediation themes and strategies:

- Independent technical experts provided scientific information to the parties.
- Remote sensing was used to collect current and historical water data.
- The watershed boundaries were adopted as the unit of focus for the assessment in order to understand historical patterns of environmental change.
- Technical exchanges and site visits served as a platform for building confidence.
- Training and case studies from other contexts helped to start discussions.

The transboundary Sistan basin wetlands (also known as the Hamoons) is located in an arid part of Baluchistan near the Afghan and Iranian border. This closed inland

Sistan basin wetlands[168]



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A UN investigation in 2001 found drought to be the main cause of land desiccation, with the Helmand River flowing at only 2 per cent of its annual average

delta is nourished by the Helmand River, which originates in the mountains northwest of Kabul and flows for some 1,300 kilometers through Afghanistan before reaching Iran at the Sistan wetlands. It is comprised of three geographical sub-units: the upper terraces of the inland delta of the Helmand river, which is mostly drained and used for irrigated agriculture; the wetlands (Hamoons) covering the lower delta depression; and a hypersaline lake (Gowd-e-Zareh) in the lowest part of the basin, which collects the overspill from the wetlands and, in case of extreme floods, from the Helmand River. There is no outflow from this terminal lake; water is lost from Gowd-e-Zareh only by evaporation. The political boundary between the Islamic Republic of Iran and Afghanistan splits the Hamoon system, complicating management possibilities in the area. Ninety percent of the watershed is located in Afghanistan and practically all of the wetlands' water sources originate there.[169]

Tensions between Iran and Afghanistan over the transboundary Sistan basin have existed since the late 1800s. In 2001 tensions began escalating over the increasing water scarcity in the basin and the perceived underlying drivers. In 2002, UNEP started providing both governments with environmental diplomacy support, which resulted in increased dialogue, information sharing, and technical cooperation.

Conflict

Since the late nineteenth century, Iran and Afghanistan have striven to agree on a mutually acceptable allocation of the waters of the Helmand River. Their relationship has, at times, been strained, particularly during periods of drought-induced water shortages or announcements of major water infrastructure development projects. In 1973 an agreement was reached between Iran and Afghanistan to allow 22 m^3/sec to flow into Iran from the Sistan branch of the Helmand River, located just south of Zaranj. In addition, Iran was to purchase an additional 4 m^3/sec from Afghanistan, bringing the total allocation to 26 m^3/sec.[170] While the agreement was not formally ratified by Afghanistan due to government instability, Helmand River commissioners have been assigned by both countries who since 2004 have met on a regular basis to review water allocations in accordance with the 1973 treaty. On this basis, in 1981 Iran constructed three Chanimeh reservoirs (I, II, III) with a capacity of 0.63 billion m^3 for drinking water purposes. Iran's water storage capacity was further increased to approximately 1.5 billion m^3 with the construction of Chanimeh IV in 2008.

In 2001 tensions between the two countries escalated when Iran wrote to UN Secretary-General Kofi Annan, charging that the Taliban had blocked the Helmand River, causing some 140,000 hectares of land in the neighboring regions of Iran to dry up. However, a UN investigation found drought to be the main cause, as the Helmand River was flowing at only 2 per cent of its annual average.[171] The wetlands have remained almost completely dry for most of the period between 2001 and early 2014. People lost their livelihoods as agriculture and fisheries failed, resulting in large-scale population displacements, including the migration of Afghan refugees into Iran.

In 2002 the region was designated as a humanitarian disaster zone and became a recipient of relief aid. The environmental collapse resulted in emigration, unemployment, and smuggling, destabilizing this sensitive border region and further straining relations between Afghanistan and Iran. Following a medium-sized flood in March and April 2005, a substantial part of the wetlands refilled with water. However, this proved short-lived as the wetlands dried out again, and the drought has continued until today.

Process highlights

In 2002, UNEP undertook a field mission to assess the Helmand River basin, including the Sistan wetlands, as part of its post-conflict environmental assessment study of Afghanistan. The need for better transboundary cooperation between Afghanistan and Iran over these water resources was a prominent recommendation of UNEP's 2003 assessment report.

As a follow-up to the report, both governments welcomed further technical studies by UNEP that would generate additional scientific information on the status of the wetlands and on the historical processes of environmental change affecting the ecosystem. This information was to be used as a basis for technical meetings between the parties on cooperation opportunities.

UNEP began by commissioning a satellite survey of environmental change in the basin from 1976 to 2005.[172] The study helped identify the key phases of environmental change in the wetlands over those 30 years together with the key drivers (both natural and human-induced). UNEP, in collaboration with the relevant government authorities, sent rapid assessment missions to the Iranian part of the Sistan basin in May 2005 and to the Afghan part in July 2005 to collect additional field data and meet with affected communities.

In December 2005, UNEP was asked to provide environmental diplomacy support to the parties by hosting a technical meeting in Geneva, Switzerland, on the Sistan Basin wetlands. Participants were restricted to senior ministerial delegations that included representatives from key government entities (foreign affairs, environment, water, agriculture, and local government).

The meeting was held in a positive atmosphere, contributing to confidence building between the two countries. The results from the satellite analysis were shared with both parties, together with case studies on successful transboundary water management from other countries. The meeting helped to initiate a constructive dialogue on restoration and sustainable development strategies for the Sistan region. The two countries agreed to establish national advisory committees and to develop joint proposals for international funding to restore the wetlands.

Marking significant rapprochement on this issue, Iran invited Afghan officials to its national celebration of the 2006 World Wetlands Day, which was held in Zabol, the capital of the Sistan region. The event included a field visit, exhibition, and seminars on the Sistan wetlands. Most importantly, it provided an opportunity for the Afghan delegation to appreciate the conditions on the Iranian side and to foster links with scientific and technical institutions in Iran.

At the request of the parties, a second round of environmental diplomacy talks on the Sistan wetlands were hosted by UNEP in Geneva in May 2006. Ministerial delegations led by the environmental authorities of both countries participated in the meeting, and both countries agreed to set up the Joint Committee on the Sistan Basin Wetlands.[173] This was to promote further systematic information sharing and to add specific topics for technical cooperation. In May 2007 technical delegations from both countries met in Tehran and agreed to submit the draft terms of reference of the Joint Committee for formal approval by their respective governments.

Parallel to the technical meetings, UNDP and UNEP helped the parties to develop a joint project proposal entitled "Restoration, Protection and Sustainable Use of the Sistan Basin," which was submitted to the Global Environmental Facility (GEF) in late 2006. The basic idea was that an initial GEF allocation of US$678,000 would enable the two countries to develop an environmental investment program that could eventually be supported by the GEF for up to US$4 million. This could provide funding that would enable joint activities and investments in the region while also building further confidence between the parties.[174]

Although good progress was made from 2005 to 2006, talks between Iran and Afghanistan came to a standstill following the Tehran meeting in May 2007 due to unforeseen political developments. In particular, the Afghan government decided to freeze all discussions on its transboundary waters until it acquired adequate technical capacity to engage on an equal footing with its technically competent neighboring states. Tensions were also created by Iran's decision to deport a number of Afghan refugees from the Sistan and Baluchestan provinces.

Further contributing to the standstill, the government of Afghanistan created the Higher Water Council, a new inter-ministerial body to coordinate all transboundary water initiatives. With the creation of the council, line ministries in Afghanistan were no longer able to engage other states or international organizations on transboundary water issues without the express approval of the council. This meant water-related negotiations had to be elevated to the highest political level in the country.

The unprecedented water crisis affecting Iran—not only in the Hamoons but nationwide—has alarmed the country's leadership, creating a sense of urgency to engage with Afghanistan on transboundary water cooperation. The delicate political situation in Afghanistan means that tackling this complex issue will need to be done with caution and patience. For its part, the UN system has signaled its readiness to provide technical assistance to help resolve some of the misunderstandings between the two countries and create a space for a resumption of technical discussions and further environmental diplomacy.

Lessons learned in providing environmental diplomacy support

1. Good technical understanding of the specific environmental problem and its historical evolution was vital to the process. This required consultations with knowledgeable experts, the participation of key stakeholders, and the collection of rigorous scientific data using remote sensing and field samples.

2. Technical training and the sharing of case studies from other regions helped to kick-start the dialogue and provided the necessary space and time to establish a positive and constructive environment. This approach was nonthreatening, helped to dispel tensions, and avoided pitting the two countries against each other on sensitive issues from the start.

3. In addition to knowing the specific technical matters in detail, it was important to understand the political, cultural, and religious background of the participants and prepare the program and protocol accordingly. In this regard, it is important to understand that the language and manner in which a problem is defined and labeled often determines which actors will participate in its solution. Selecting a way to frame the key issues in an appropriate manner that takes into account the historical and cultural context can affect the overall chance of early success.

4. Leadership was a key ingredient for collaborative governance and cross-boundary environmental diplomacy. Environmental mediation initiatives work best when they facilitate cooperation among credible leaders from government authorities and the various stakeholder interests, factions, communities, or tribes. Engaging a high-level environmental diplomat as an impartial third party also provided political weight to the facilitation process and helped build confidence in the process based on his personal reputation, commitment, and individual leadership.

5. Knowing when to offer mediation support to parties is important. Support offered prematurely—before the parties are ready to talk—may do more harm than good. Choosing the correct moment must be considered on a case-by-case basis and requires sensitivity, knowledge of local circumstances, and diplomatic skill. Actors seeking to support a mediated process need to be flexible and nimble enough to take advantage of opportunities that may

arise at short notice, while recognizing that setbacks are almost inevitable in such drawn-out processes.

6. Environmental diplomacy initiatives can be time-consuming, staff-intensive, and expensive. They are highly context-bound and case-specific. A model cannot be copied wholesale from one situation to another. To succeed, environmental diplomacy initiatives require sustained and flexible funding as well as investments in building the negotiation and technical capacities of the parties.

7. Although environmental diplomacy support may use technical approaches as entry points, it is equally essential to design the process to engage politically with the highest levels of government so that they are fully aware of and buy into the process. Discussions between the heads of technical departments need to have support from top political leadership to ensure agreements are supported and implemented. Informal follow-up needs to be conducted to avert the risk of a gap between the technical and political levels.

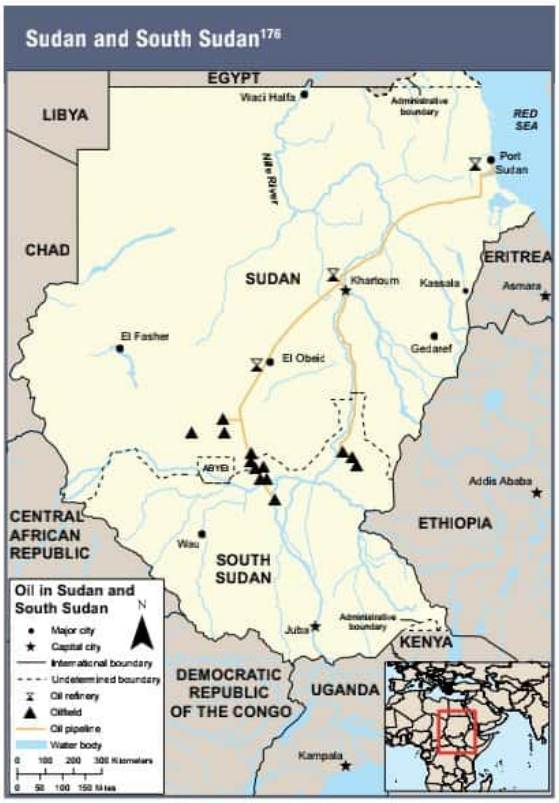
8. Further research is needed to understand the conditions and processes that can help extend successful technical cooperation on environmental issues into other realms, as well as into more sustained political cooperation and broader political outcomes.

8 Sudan: Oil as a peace incentive during the Sudanese peace process[175]

Key mediation themes and strategies:

- Wealth sharing was used to advance a peace process while postponing the irreconcilable question of ownership.
- Independent experts were used.
- The process used capacity-building training on oil management.

Sharing of oil revenues was a key component of the north-South Sudan peace mediation because the dividing line between the north and south goes through existing and prospective oil fields. Wealth-sharing provisions therefore made up one of the six individual agreements of the 2005 comprehensive peace agreement. The Agreement on Wealth Sharing covered the allocation of oil and non-oil revenues, the management of the oil sector, monetary authority, and



Police stand guard as Sudan's Vice President Ali Osman Mohamed Taha, unseen, inaugurates an oil field, South Kordofan, Sudan

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the reconstruction of the south and other war-affected areas.

Conflict

Conflict between northern and southern Sudan occurred in two wars (from 1956 to 1972, and from 1983 to 2004). High levels of armed violence in oil-producing regions prevented the Sudanese government from fully benefiting from the revenue potential of the oil wealth because it was too unstable for foreign investment. For the parties to reap the benefits from oil production, significant investments as well as a certain level of collaboration between northern and southern Sudan was needed. Stability thus became an issue that affected the parties' economic interests,[177] and the subsequent peace process that took place from 2003 to 2005 sought to address oil resources and the sharing of oil revenues as a key component of the negotiations.[178]

Mediation Process Highlights

Through informal talks, the case was made that "oil represented an incentive for peace in so far as oil activities could not be pursued in a war context",[179] and the belligerents were urged to "relocate the fighting from the battlefield to the negotiation table."[180]

One of the most contentious issues, going right to the heart of the dispute over the government's sovereignty and self-determination of the south, was the ownership of land and natural resources. The Sudan People's Liberation Movement/Army (SPLM/A), the political movement in southern Sudan, claimed that land there (both the surface and the natural resources lying underneath) was owned by the community living on it, while the government of Sudan, on the other hand, argued that the state ownership of surface and subsurface land was the prerequisite for an equitable and legitimate redistribution of natural resources.[181]

Fearing that the two positions were irreconcilable, the mediators of the talks proposed that the ownership of subterranean natural resources remain unresolved in the peace agreement. The parties agreed to defer decisions on the ownership of natural resources and land until after the 2011 referendum on the independence of southern Sudan. The issue of ownership was effectively "parked" while the parties continued to negotiate the issue of revenue sharing and the management of the oil sector. In this way, a fundamental disagreement did not prevent progress on wealth sharing, which was central to both parties' economic interests.[182]

Agreement

Ultimately, the 2004 Agreement on Wealth Sharing (AWS) became an important step toward the Comprehensive Peace Agreement that was signed one year later. The AWS:

- Gave 50 percent of net oil revenues to the Government of Southern Sudan and the remaining 50 percent to the Government of National Unity, after 2 percent of oil revenue has been allocated to the producing states or region, in proportion to their production;[183]
- Created new economic institutions, such as the National Land Commission, the National Petroleum Commission, the Bank of Southern Sudan, as well as reconstruction funds for both northern and southern Sudan.[184]

From 2007 to 2009 the Government of Southern Sudan received payments based on the AWS amounting to US$5.4 billion.[185] As a result of this revenue-sharing agreement, both parties had less incentive to fight over the control of oil resources because they had significant economic guarantees that rendered a return to violence unattractive by increasing the opportunity costs.[186]

Implementation Challenges

This case shows that the presence of capital-intensive natural resources such as oil can provide an incentive for peace, as their exploitation requires a certain level of stability and can provide a source of financing for the post-conflict recovery. Moreover, resource management and wealth sharing can be negotiated without specifically agreeing on resource ownership.[187] Indeed, decoupling resource ownership from revenue sharing and management in the negotiation on wealth sharing avoided an early failure of the negotiations in Sudan and paved the way for the Comprehensive Peace Agreement of 2005. Nevertheless, the revenue-sharing agreement eventually gave rise to a number of implementation challenges.

First, under the AWS, the newly created National Petroleum Commission (NPC) was in charge of the management of the oil sector. The NPC was intended to represent both the north and the south, and to facilitate full sharing of information and joint decision making. Nevertheless, in practice the NPC did not function well, and at the time of independence in 2011, South Sudan had a limited knowledge of the oil industry, its geology, the companies involved, and the details of concession contracts.[188]

Second, independent monitoring and verification of Sudanese oil contracts with international firms, levels of oil exports, and price arrangements were not possible.[189] As a result, there was little transparency to expose undeclared production, kickbacks, and corruption. This was a constant source of grievance for the Government of Southern Sudan. It also accused the Government of National Unity of failing to withdraw over 15,000 troops from southern oilfields and failing to implement the 2004 Protocol on Abyei. These issues created a constant source of tension between the parties and eventually led to a withdrawal of Government of Southern Sudan from the Unity Government from October 11 to December 13, 2007.

Third, at the same time, the government of Southern Sudan lacked the capacity to effectively manage and

allocate oil revenues. Other problems—a lack of security guarantees, persistent distrust between former enemies, sporadic armed confrontations between the north and the south, and the conflict in Darfur—undermined the positive contribution of the agreement on economic recovery for the two sides. Clearly in this case, money alone was not enough to create an optimal post-conflict recovery.[190]

Finally, following the independence of South Sudan in 2011, border demarcation, in particular in Abyei, was contested (Abyei made its own revenue-sharing protocol in 2004). The two countries remained mutually dependent on production, transportation, and export. These challenges manifested themselves in early 2012 when South Sudan shut down its entire oil production after Sudan started seizing southern oil to compensate for what it called unpaid transit fees. While a new agreement on transit fees was reached in April 2013, internal armed conflict broke out in South Sudan in December 2013, leading to further instability and decreased oil production.