



APPLIED ISSUES IN INTERNATIONAL LAND BOUNDARY DELIMITATION/ DEMARICATION PRACTICES



Organization for Security and
Co-operation in Europe

APPLIED ISSUES IN INTERNATIONAL LAND BOUNDARY DELIMITATION/ DEMARCATIION PRACTICES

**A Seminar organized by the OSCE Borders Team in
co-operation with the Lithuanian OSCE Chairmanship.**

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“Upon what basis then can we divide the intrinsically complex and indivisible world? One thing is clear; we can distrust from the start any simple solution. We are not looking for the one true method of division since there can be none; we are looking for a more or less suitable method.”

Richard Hartshorne, 1949

Introduction

Since the adoption of the OSCE Border Security and Management Concept (MC.DOC/2/05), the OSCE Conflict Prevention Centre's Borders Team has supported a number of participating States and OSCE field operations in implementing this Concept, through policy, capacity-building, and networking initiatives. In doing so, the OSCE has encouraged dialogue and co-operation between participating States and promoted the political vision of open and secure borders in a free, democratic, and more integrated OSCE area. Participating States, through the Concept, also committed to co-operate following the principles of international law, mutual confidence, equal partnership, transparency and predictability, in a spirit that would facilitate friendly relations between States.

In this context, challenges related to international boundary definition and the lack of border demarcation/delimitation that a number of participating States are facing is an obstacle to border security and management in the OSCE area and a threat to the territorial integrity of a number of participating States. It also undermines OSCE efforts to build the capacity of border agencies to promote open and secure borders and facilitate the legal movement of persons and goods.

While bilateral negotiations on these politically sensitive issues are sovereign matters of participating States, the OSCE is able to provide a forum for discussion of best practices and obstacles related to border delimitation/demarcation processes that others have experienced and are willing to share. Such exposure to examples of peaceful settlements of border disputes and to best practices and lessons identified regarding the definition of international land boundaries can be particularly beneficial for those participating States that currently experience difficulties or which are at an impasse on border delimitation/demarcation issues, and thus promote stability in the wider OSCE area.

At the request of the Lithuanian OSCE Chairmanship, the Borders Team organized a Seminar on "Applied Issues in International Land Boundary Delimitation/Demarcation Practices", which gathered experts, border officials, lawyers and diplomats from over 20 participating States.

Session I – Defining International Boundaries: Concept, Aims and Approaches

This session provided participants with an introduction to the concept of international land boundary definition, its aim, the various approaches to it, as well as with a common understanding and terminology regarding to the process of border delimitation/demarcation. It also highlighted the challenges that countries may face when jointly undertaking border delimitation/demarcation initiatives.

Presentation by Professor Michel Foucher, Director of Studies and Research, Institute of Higher National Defence Studies, Paris, France

Mr. Michel Foucher (left) and Ambassador Andrew Tesoriere, Head of the OSCE Centre in Bishkek (right)



Opening the first formal session of the seminar, Professor Foucher gave a general overview of the recent evolution of international boundaries worldwide. He identified the new international boundaries created since 1989, following the independence of the former Soviet and Yugoslav republics. He also identified those existing boundaries that have been subject to new treaties or agreements. Focusing on the

borders of Central Asia, Professor Foucher outlined the many practical problems that have emerged as former internal / administrative limits have become international boundaries. In particular, he noted the sharp distinction in border regimes adopted by neighbouring States in the region. These include the often difficult difference between hard borders, those sealing off cross-border movement, and soft borders, which remain porous to cross-border movement. He highlighted the impact such disparity in border regimes can have in complex territorial situations such as those in the Ferghana Valley.



New international borders since 1990

He also examined the complex hydrological relationships across Central Asian boundaries in the Amu Darya and Syr Darya river basins. The variety of irrigation projects and reservoirs built along these rivers has created sensitive relationships between upstream and downstream users. Particularly affected are those downstream States with established cotton industries that are almost solely dependent on the water

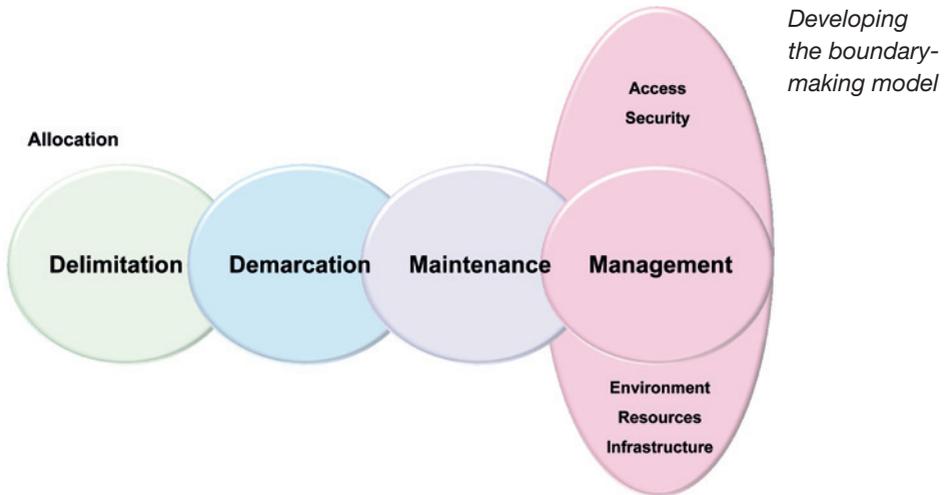
supply from these two rivers. Professor Foucher concluded by encouraging States to reach agreement on boundary delimitation and demarcation through peaceful means; and to improve border regimes that encourage co-operative economic initiatives, improve trade links and address the specific conditions of local border populations.

Presentation by Professor Martin Pratt, Director of Research, International Boundaries Research Unit, Department of Geography, Durham University, UK

Professor Pratt explained some of the subtle, but important distinctions in the lexicon of border studies, distinguishing the English terms ‘boundary’ and ‘border.’ ‘Boundary’ is usually used in reference to the line which divides the territory or maritime space of two States, while a ‘border’ is what has to be crossed in order to enter a state. Sometimes they coincide exactly, but it is more common for the border to include infrastructure such as immigration checkpoints, customs facilities, fencing and patrol roads which extend beyond the boundary; and, in the case of international air- and seaports, the border may be located hundreds of kilometres from the boundary. A boundary is essentially a line of definition, while a border is usually a more complex entity comprising several lines and/or zones, whose primary function is the regulation of movement of people and goods.

Professor Pratt examined the historical evolution of the processes of delimitation and demarcation in the traditional model of international boundary-making. An international boundary needs to be defined in a treaty or other legally-binding instrument – a task referred to as delimitation. Ideally, delimitation should be as unambiguous as possible in order to avoid disagreement over where the boundary is located. Unfortunately, many of the world’s international boundaries were initially delimited in very general terms leaving scope for conflicting interpretations, and many remain poorly delimited today. The process of demarcation, by which a boundary is physically marked on the ground, can be used to improve an inadequate delimitation, with demarcation reports, which identify marker locations, being incorporated into the official boundary documentation. Most boundary experts agree that it is sensible for demarcation commissions to be given

a degree of freedom (in the words of one sensible boundary delimitation agreement) “to make such minor rectifications, and adjustments ... as are necessary to avoid the troubles which might arise from a literal interpretation of the treaty.” Demarcation does not have to be a one-off procedure: boundary markers can be ‘densified’ over time as human and financial resources permit.



Professor Pratt suggested that a second important aim of demarcation is to make the boundary visible to borderland populations. Unless local people know where the boundary is located, neighbouring States risk encroachment of settlement and/or land use across the boundary, disputes about land ownership/resource entitlement, and the development of ‘no-man’s land’ areas in which potentially valuable land remains unused and law enforcement uncertainty encourages criminal activity. Without a single model for demarcation, Professor Pratt reported that the nature and frequency of boundary marking will depend on the physical and human geography of the boundary landscape. Different approaches may be needed along different sections of a single boundary. When developing boundary-making strategies, he recommends that it is important not simply to ask “is the boundary delimited and demarcated?” but to evaluate whether the boundary is unambiguously delimited and appropriately demarcated given the particular geographical, political and cultural setting.

Presentation by Mr. Ray Milefsky, Senior Analyst, International Boundaries and Sovereignities Issues, Office of the Geographer and Global Issues, US Department of State

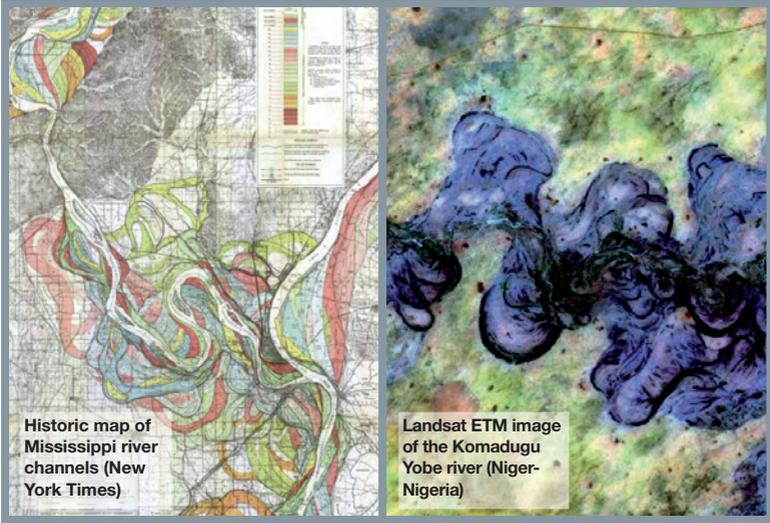
Mr. Al Arsenault (left) and Mr. Ray Milefsky (right)



Mr. Milefsky's presentation focused on the often delicate transition from the more general political decisions relating to the allocation or division of respective territories, to the more technical procedures of delimitation and demarcation, especially in post-conflict situations. He examined the problems that can arise from deficiencies in boundary mapping such as discrepancies with treaty texts, poor quality sourcing, incongruence of scales, feature displacement and other problems related to the symbols and toponymy on maps. Further challenges can arise when the demarcated boundary on the ground does not reflect the delimited line, or when historic delimitation sources conflict with present-day realities on the ground. This is particularly acute with river boundaries where the river may have shifted substantially from the initial delimitation.

Given the numerous discrepancies that often emerge, Mr. Milefsky recommended that negotiations even at the highest political levels during the allocation stage should recognize the likely problems that will emerge on the ground and address them accordingly. He recognized that some States have effectively agreed to disagree over

specific boundary discrepancies, such as the dispute between Brazil and Uruguay over Brasileira Island in the Uruguay River. Conversely, he noted that in some cases the discrepancies emerge and raise



The challenge of river boundaries

problems that stall boundary negotiations. He advised that political decisions made during the allocation phase should better address the problems that are likely to emerge in the later stages of delimitation and demarcation.

Presentation by Dr. John W. Donaldson, Senior Research Associate, International Boundaries Research Unit, Department of Geography, Durham University, UK

In his comments introducing the two sessions dedicated to the experiences of individual States, Dr. Donaldson gave a brief historical overview of joint boundary commissions which are the primary tools of delimitation and demarcation. Contrasting earlier boundary commissions with some more recent examples, he suggested that good practices often depend on a commission knowing and understanding the conditions of the local border landscape. More time in the field and a greater degree of flexibility has allowed many boundary commissions to address the ambiguities of boundary definition that were mentioned in previous presentations.

With a flexible and adequate mandate, boundary commissions have been able to resolve many disputes that could have sparked conflict. Dr. Donaldson recommended that such a flexible approach avoids the tendency to undertake boundary making processes as a contest where territory is won or lost, and instead approach them as co-operative responsibilities of neighbouring States. In addition, Dr. Donaldson emphasized the importance of long-term maintenance to prevent boundaries from falling into disrepair and raising questions about their position on the ground. He revealed that some permanent boundary commissions, having developed a good platform for co-operation during the delimitation and demarcation process, have been given additional responsibilities for other aspects of border management.

Session II – Co-operation and Confidence Building in Delimitation/Demarcation Issues

This session focused on the practical forms of co-operation between States on land border delimitation/demarcation issues. It also explored existing mechanisms and practices in this field, particularly on the ground. This session also attempted to identify lessons and best practices from a number of specific national experiences.

Presentation by H.E. Ambassador Andreja Metelko-Zgombić, Head of the Independent Service for International Law, European Integration Department, Ministry of Foreign Affairs of Croatia

Ambassador Metelko-Zgombić explained that, following the dissolution of the former Yugoslavia, boundary negotiations between the former republics were guided by Advisory Opinion 3 of the Badinter Commission. This opinion stated that the former administrative boundaries of the respective republics would become the new international boundaries protected under the international legal principle of *uti possidetis*. Likewise, at independence in 1991 Croatia inherited the former external land boundary of Yugoslavia with Hungary (under a 1983 demarcation and maintenance agreement) and the maritime

boundary with Italy, as well as the previous administrative boundaries with Bosnia and Herzegovina, Montenegro, Serbia and Slovenia.

In reviewing the status of Croatia's boundaries, Ambassador Metelko-Zgombić highlighted the experience with Bosnia and Herzegovina where the strong political will on both sides to define the boundary paved the way for signing of the border treaty in 1999. The treaty took just eight months of negotiation and outlined extensive preparatory work for delimitation that included the preparation of a 1:25,000 map series and the creation of a joint commission. Following joint identification and demarcation of the boundary in certain sectors, the commission prepared final documentation in 2005 to be attached to the 1999 Treaty. The 1999 Treaty has not been ratified by both States but is respected in practice. Croatia has also agreed on a protocol with Serbia that defines the agreed principles for boundary negotiations. The 2002 Protocol on the interim Regime along the Southern Border (area of "Prevlaka" peninsula), which is now being applied between Croatia and Montenegro, allows for a provisional determination of the land border and provisional delimitation at sea.

Ambassador Metelko-Zgombić also explained the complex boundary situation with Slovenia with whom negotiations began as early as 1991. While negotiations on the land boundary were largely productive, both sides maintained different interpretations of the maritime boundary and no agreement could be reached. Negotiations were also mediated through the good offices of former US Defence Secretary William Perry, but no progress was made and in 2005 Croatia proposed to send the dispute to international adjudication. After four additional years of negotiations, an agreement was signed on 4 November 2009 submitting the dispute to an arbitral tribunal that will define the land and maritime boundary. The 2009 agreement has gone through long and complex ratification processes in both States and entered into force on 29 November 2010. However, arbitration procedures will commence when Croatia signs the Treaty on Accession to the European Union. After a variety of attempts at settlement, Croatia's experience with Slovenia reveals that sometimes a boundary dispute cannot be resolved through non-binding means and must be decided by a binding third party decision, but this is not a quick or easy option.



**Presentation by Dr. Zenonas Kumetaitis, Deputy Director,
Eastern Neighbourhood Policy Department, Ministry of Foreign
Affairs of the Republic of Lithuania**

Dr. Kumetaitis provided a general review of the status of Lithuania's boundaries with neighbouring Latvia, Poland, Belarus and Russia. Noting some of the historical background to these boundaries, Dr. Kumetaitis revealed that Lithuania's boundary with the Russian enclave of Kaliningrad dates back to German and Prussian agreements from 1422 and a marker established in 1545. At the centre of his presentation, Dr. Kumetaitis provided a most informative and inspirational account of Lithuania's boundary delimitation and demarcation procedures with neighbouring Belarus. The boundary was based on the ambiguous former administrative limits inherited from the Soviet period. After a joint commission was created, demarcation work began in 1996 and was completed in 2007, with documentation totalling some 50 volumes. This includes a topographic map series covering the boundary at 1:10,000 scale. The only outstanding issue is resolution of the tripoint with Poland.

The comprehensive fieldwork undertaken by the joint commission involved significant engagement in local border areas. The joint commission defined the boundary with sensitivity to the local conditions,

taking into account the situation of the physical and human geography on the ground. The co-chairmen were entrusted to make revisions to the line, providing that there was an equal transfer of total territory. In defining the boundary, the commission sought to respect the boundaries of existing land and property and retain the integrity of transport and communication infrastructure on either side. The demarcation procedures eliminated any possible ambiguities by clearly defining the line on the ground with adequate signs and marks. The commission also addressed the very specific conditions of individual boundary rivers and streams.



Markers on the border between Latvia, Lithuania and Belarus

The excellent relationship within the joint commission was clearly apparent as the commissioner from Belarus, Mr. Aleksandr Arkhipov, added a few comments at the end of Dr. Kumetaitis' presentation. While they admitted that there had been a few disagreements throughout their work, both commissioners agreed that they had built a strong degree of trust and likewise were able to overcome these differences within the commission. The Lithuania-Belarus experience was an ideal example of how two States that had inherited an unclear administrative boundary line were able to clarify that line with respect to local conditions and achieve a clear and definitive boundary that is unlikely to cause future disputes. The high level of trust that developed during the delimitation and demarcation practices may pave the way for future co-operation in other aspects of border management.

Presentation by H.E. Mr. Erik Asanaliev, Ambassador of the Kyrgyz Republic in Belarus

Mr. Salamat Alamanov (left) and Mr. Erik Asanaliev (right)



Ambassador Asanaliev outlined the three difficult but inter-related aspects of international boundaries, including: their legal significance in defining the territories of two neighbouring States, the subsequent security of the border and the role boundaries must play in fostering transboundary co-operation. He emphasized the different historical contexts of Kyrgyzstan's boundaries and how this has affected approaches to delimitation. Since the boundary with China was formerly an international boundary between the USSR and China, it has been the subject of much more documentation. With negotiations having started over 100 years ago, Kyrgyzstan participated with other former Soviet republics in delimitation work with China in the 1990s. Kyrgyzstan also began negotiations with other neighbouring States in the 1990s. Joint commissions were established and working groups have undertaken fieldwork.

The administrative limits of the former Soviet republics had been subject to changes that were often not based on geographical or defined ethnic criteria which left lingering questions for boundary definition. The boundaries in the Ferghana Valley present the greatest challenges

to Kyrgyzstan, given their long and complex history. However, Ambassador Asanaliev held that these difficult challenges can be addressed when supported by strong political will. He also explored how Kyrgyzstan, Tajikistan and Uzbekistan have undertaken bilateral and multi-lateral co-operation that has included the establishment of bilateral expert working groups, joint fieldwork that has liaised with local border populations and inter-agency co-operation that has engaged various ministries and agencies across the three governments.

Ambassador Asanaliev raised the important, but often overlooked, issue of the pressures that can build up on members of joint boundary commissions. While all boundary problems can be solved politically, he highlighted the heavy burden felt by commissioners who may be accused of treachery as a result of decisions that they make. Drawing on a recent sociological study of the Ferghana Valley, Ambassador Asanaliev suggests that parties attempting to resolve disputes should be prepared for often lengthy negotiations and avoid the unnecessary politicization of the subject of boundaries.

Presentation by Mr. Vladimir A. Glukhov, Expert, Federal Security Service, Russian Federation

With eighteen neighbouring States crossing a wide variety of landscapes across two continents, the challenges of defining Russia's international boundaries are truly vast. Mr. Glukhov emphasized the importance of boundaries as "the firm and inherent attribute of the state." In outlining the procedural aspects of boundary delimitation and demarcation, Mr. Glukhov explained that Russia approaches demarcation work in three stages. The preparatory stage includes geodetic, topographic and (for large rivers) hydrographic work for composing boundary maps. This is followed by the field stage, involving the construction of pillars and signs, clearing of tracks between marks and determining the position of marks by co-ordinates. Finally, the demarcation documents are assembled and organized during the document stage. These documents normally include: the boundary demarcation map, catalogue of pillar co-ordinates and heights, sketches and dimensions of boundary pillars, and the possible enumeration of specific islands allocated between the neighbouring States.

The boundary agreements with many of Russia's neighbouring States date back decades, with re-demarcation efforts having been undertaken periodically on a number of land sections. Recent agreements have also delimited several of Russia's maritime boundaries, including the recent agreement with Norway. In a comprehensive review of Russia's land and maritime boundaries, Mr. Glukhov explained that Russia has completed land and maritime boundary definition with six neighbouring States – Norway, Finland, Poland, Mongolia, China and North Korea. Work has not been completed with six States including Latvia, Lithuania, Ukraine, Azerbaijan, Kazakhstan and the United States of America, while major unresolved issues have prevented the conclusion of boundary definition with Estonia, Belarus, Georgia, Abkhazia, South Ossetia and Japan. Russia has established commissions to deal individually with each neighbouring state, all of which are co-ordinated and organized within the Ministry of Foreign Affairs.

*Plenary
session
discussions*



Presentation by Mr. Nurlan Sakenov, Head of the Division of International Law, Ministry of Foreign Affairs of the Republic of Kazakhstan

Kazakhstan's general approach to the processes of boundary definition with neighbouring States has involved three phases or strategies: harmonization of material, topographic mapping and legal registration. Mr. Sakenov highlighted the long and successful boundary relations with China. Based on an initial 19th century treaty, five agreements have

been concluded since that time. After three years of work, demarcation of the China-Kazakh boundary was completed in 2002. A separate commission has been established to work with all other neighbouring States that are former members of the USSR. Work with these neighbours is based on the principle of keeping the territorial status quo at the moment of independence (in accordance with the *uti possidetis juris* principle of international public law) until further negotiations can take place.

Mr. Sakenov explained that in Kazakhstan's experience of conducting joint fieldwork, one important aspect was communication with local border residents, also known as 'sensitization.' Although this issue was touched upon by other participants during the seminar, Mr. Sakenov noted the importance for local border residents to understand delimitation and demarcation processes. Experience around the world reveals that this not only helps to prevent conflict between residents and the joint commission during their work in the field, but it also helps erase any myths that may arise among local border people about the boundary itself (such as the value of pillars) and fears about how it will affect their lives.

Presentation by Mr. Gennadiy Breskalenko, Head of Legal State Border Management Section, Directorate General for Treaties and Legal Affairs, Ministry of Foreign Affairs of Ukraine

Since independence in 1991, Ukraine has undertaken a four stage approach to defining its boundaries. First, it has signed bilateral or multilateral agreements with all of its neighbours that recognize sovereignty over their respective territories and the inviolability of the boundaries that defined them at independence. The second stage is the preparation and signing of delimitation documents, which has been completed with all neighbours except Belarus, followed by the third stage – demarcation. The final stage will be to establish a permanent joint commission to maintain the boundary through periodic review and possible revisions through mutual agreement.

Ukraine has completed the first three stages with neighbouring Poland, Slovakia, Hungary and Romania. Joint commissions set up with Poland,

Slovakia and Hungary have verified the boundaries on the ground and are producing new demarcation material. A similar procedure is ongoing with Romania. There is a single national commission that deals with both Russia and Belarus. While Ukraine has signed an agreement with Russia to begin demarcation of their long international land boundary, fieldwork is still awaiting verification of all relevant documents and a third party may be assisting both States with demarcation work in the field. The boundary within the Sea of Azov and Kerch Strait remains undefined but is considered by Ukraine to be part of the 'maritime' section of the boundary (under the purview of a separate maritime commission). Procedures with Belarus which began with delimitation work from 1992 to 1997 are currently at a stand-still. The delimitation agreement has not yet been ratified by the two States largely due to financial problems on both sides. There is the possibility that boundary disputes may flare up if an agreement cannot be achieved.

Ukraine has undertaken significant work with Moldova, dating back to 1995. A joint commission began activities in 2002 with the fieldwork complicated by the Transdnestrian conflict in the central section of the boundary. Initially only transitional marks were made in this sensitive central section but demarcation has been completed with support from European Union Border Assistance Mission to Moldova and Ukraine (EUBAM). A major problem faced by the commission was discrepancies between the information gathered at the delimitation stage and the situation on the ground. However, minor disputes were settled within the commission. It was emphasized that the main lesson learned through Ukraine's experiences in boundary definition was that the quality of demarcation depends heavily on the quality of delimitation data.

Presentation by Mr. Al Arseneault, (Retired) Deputy Canadian Commissioner, Canada/United States of America International Boundary Commission (IBC)

As the former deputy commissioner of the Canadian section of the Canada-USA International Boundary Commission (IBC), Mr. Arseneault shared his wealth of experience and provided a window into the inner-workings of one of the world's oldest permanent boundary

commissions. Rather than having been delimited in a single instrument, Mr. Arseneault emphasized that the Canada-USA boundary has been defined by more than 20 treaties and conventions agreed over the past two centuries. Following a 1908 demarcation treaty, the IBC was made a permanent commission in 1925. Mr. Arseneault outlined the structure of the IBC which is led by a Canadian commissioner who is appointed by Order in Council and an American commissioner who is appointed by the US President.



Maintenance of the Canada-US border

Along the longest land boundary in the world between two adjoining countries, the IBC is responsible for maintaining all pillars/monuments, and adding densifying monuments where necessary to clearly indicate the boundary on the ground. It also clears vegetation from the 20 foot vista (10 feet on each side of the boundary). Mr. Arseneault explained that over 8600 markers (monuments) define the Canada-USA border across a variety of physical landscapes. He noted that different types of monuments were used in different terrain. For example, lighter, bronze/aluminium monuments have been used in mountainous areas because they are much lighter to transport. In addition to demarcation and maintenance work, the IBC is also responsible for

updating boundary mapping when appropriate. It is also responsible for all survey data along the line, and the IBC retains comprehensive data for each boundary pillar / monument.

The mandate and trust within the IBC is so well developed that either side is permitted to replace or repair pillars unilaterally and communicate the results to the other side. Annual field operations are usually led by the two deputy commissioners who maintain close contact throughout the year. While Mr. Arseneault admitted that the two sides of the IBC have not always agreed, they have been able to resolve any problems within the commission in all but a handful of situations when issues were relayed to their respective governments. Mr. Arseneault indicated that the organization of the IBC in a permanent status laid the foundation for on-going co-operation and the good relationship that has kept the longest land boundary in the world between two countries free from conflict for over a century.

Session III – International Assistance in Land Boundary Delimitation / Demarcation: Multilateral and Bilateral Experiences

This session looked into the various forms of technical assistance that can be offered by the donor community in support of international land boundary definition, at the request of interested participating States. Within this session, national and international organizations elaborated on available tools and gave examples of past and ongoing initiatives in this field.

Presentation by Mr. Kyoung-Soo Eom, Chief, Cartographic Section, Department of Field Support, United Nations, New York

In reviewing the principal duties of the UN Cartographic Section, Mr. Eom explained that it provides geographic information to several

branches of the United Nations including the Security Council and Secretariat, and supports Peacekeeping Operations. The UN Cartographic Section also provides technical assistance on international boundary issues. It has assisted in demarcation of the Iraq-Kuwait boundary, the determination of the Line of Withdrawal (Blue Line) between Israel and Lebanon and the Green Line in Cyprus. It has also supported all phases of the Eritrea-Ethiopia Boundary Commission. Currently, the UN is helping to facilitate demarcation of the Cameroon-Nigeria boundary following the 2002 decision of the International Court of Justice (ICJ), continuing maintenance along the Blue Line and the Iraq-Kuwait boundary, and providing technical assistance to the North-South Sudan Border Committee and the African Union.



Mr. Kyoung-Soo Eom presenting the UN experience

Mr. Eom noted that boundary-making efforts require a wide range of expertise, which many States around the world do not have access to. This situation can delay boundary-making efforts which can then increase the risk of possible disputes. The UN can provide impartial expertise that supports States in all phases of boundary making, including preparation, delimitation and demarcation. In the preparation stage, the UN Cartographic Section can assist in setting-up institutions, in facilitating dialogue between the parties and in the collection of cartographic material. In the delimitation phase, the UN Cartographic Section may be able to serve as a facilitator within a boundary commission and as the commission's documentary secretariat. Base

mapping can be prepared from satellite or aerial imagery to help analyze documentary material, aid decision making and prepare for implementation. In demarcation, the UN Cartographic Section can support field operations by assisting in survey procedures and pillar emplacement, as well as by assisting the parties in technical issues of terrain analysis and composition of demarcation maps.

Mr. Eom urged that negotiation, either with or without a third party, is the best method of boundary making, but recommended that States involve third parties as mediators or technical advisers. He also suggested that in his experience, a base map is fundamental for all phases of boundary-making and that States should take advantage of the geospatial technologies available to avoid and resolve boundary disputes.

Presentation by Mr. Gerard Cosquer, (Retired) State Senior Survey Engineer, Institut Géographique National-(IGN) France

Mr. Cosquer emphasized that, during delimitation, it is important for technical experts and advisers to “bring the terrain” to the negotiating table, allowing decisions to be made with the best possible geographical knowledge of the border. Any agreement reached in delimitation should anticipate the demarcation stage and be phrased to reflect the likely issues that may arise in implementing the agreement on the ground. Drawing on his experience, Mr. Cosquer stated that building boundary pillars is the most expensive part of boundary operations as they must be durable, and adapted to specific soil conditions and the characteristics of the line (density, visibility and durability). He holds that this phase is usually subcontracted to civil engineering firms that are managed by surveyors. Similarly, Mr. Cosquer advised that the scale of final boundary demarcation mapping should be adapted to the terrain and density of the population.

IGN is a State Company employing 1600 people. In 1986 it created a private branch called IGN France International (IGN FI) that works in over 120 countries worldwide, utilizing experts from the parent Company IGN. The company undertakes map production and land assessments for a variety of applications, including boundary definition. With its expertise in geodesy and mapping, Mr. Cosquer stated

that IGN FI can assist in the delimitation phase of boundary making by analyzing older maps, converting older co-ordinates and comparing old cartography with modern imagery. In addition, IGN holds over 500,000 historic and modern maps from around the world that can be consulted.

Mr. Cosquer highlighted some of IGN FI's recent experiences in international boundary making, including demarcation work. In 2003, IGN FI assisted Benin and Niger in defining their boundary in the Niger River by superimposing 1:50,000 mapping from the 1960s onto recent satellite imagery. From 1996 to 1999, IGN FI, with the support of IGN experts, was closely involved in the demarcation of the Qatar-Saudi Arabia boundary which included the densification of the geodetic network with a new datum system, and reconnaissance of pillar sites in the preliminary phase. IGN FI also established the boundary pillars, determined their final positions and completed final documentation including maps at scales from 1:10,000 to 1:250,000 and a final catalogue of pillar co-ordinates.

Presentation by Mr. Ray Milefsky, Senior Analyst, International Boundaries and Sovereignities Issues, Office of the Geographer and Global Issues, US Department of State

In assessing the role of technical assistance in boundary delimitation and demarcation, Mr. Milefsky first outlined the different ways a third party may be brought into boundary negotiations. From the informal non-binding engagement, a third party may serve as a mediator to 'back channel' negotiations, contract experts to consult on any contentious issues and organize seminars/workshops for the negotiating parties. Within formal, 'front channel' negotiations, a third party can also offer good offices, mediation and conciliation in order to facilitate dialogue. Binding third party involvement includes the involvement of guarantor States mandated to aid and support the disputant States, principled mediation where dialogue is conducted without the risk of violence, as well as the more traditional legal mechanisms of arbitration and adjudication. Mr. Milefsky indicated that costs can rise as procedures become more formalized and that adjudicated settlements may still leave loose ends that must be resolved by the parties.

Various forms of technical support



Based on his experience, Mr. Milefsky explained how the Office of the Geographer, together with US Government mapping agencies, has provided technical assistance in informal and formal boundary negotiations, particularly in post-conflict situations. The Defence Mapping Agency, for example, first effectively used restricted three-dimensional (imagery/elevation layer) fly-through technology in the 1995 Dayton Peace talks. It was later used in the 1998 OAS led negotiations between Ecuador and Peru. Geographic Information systems (GIS) applications were used in 1998 for negotiations concerning Cyprus and in the 2003 Key West negotiations between Armenia and Azerbaijan to bring many details of the local border geography directly to the negotiating table. Comprehensive imagery and terrain modelling were also used by the Eritrea-Ethiopia Boundary Commission in its so-called 'virtual demarcation' exercise. Today, the ready availability of publicly-accessible technology, such as Google Earth, places terrain visualization and analysis right into the negotiator's hands.

Mr. Milefsky recounted his recent experience in the negotiations between Kosovo and Macedonia, again using imagery and terrain modelling that allowed the negotiators to understand the boundary landscape in more detail. He also noted the documentation support that can be offered from archives and repositories in the US. In reviewing the current situation of the North-South Sudan boundary, Mr. Milefsky revealed how good technical assistance can identify potential discrepancies and problems at an early stage of negotiations so political decisions can be made to address them before they can provoke dispute.

Summary of Discussions

The discussions which followed the various presentations focussed on a broad variety of issues. In reaction to questions from the floor on the influence of geological and meteorological change on borders, experts explained that phenomena such as tectonic shifts, sea rising, melting ice caps and the drying up / changing course of rivers could cause changes in topographic and hydrographical maps. They also added that shifts of land in some cases required the re-equilibration of GPS reading. In some rather exceptional cases, countries have fixed their borders rigidly to make border monuments insensible to such phenomena, but borders cannot be fixed by the millimetre. Possible problems connected with river boundaries were also raised by a number of participants, with the discussion focussing on the evolving nature of rivers and the impact this has on the delimitation / demarcation of river boundaries. While a number of participants stressed that border lines should not be influenced by the changing course of a river, others claimed that such changes should lead to modifications in topographic and hydrographical maps, as well as in the relevant legal documents referring to such border lines. A number of participants stressed that legal documents referring to border lines should be formulated in a way to avoid border lines having to be redefined in reaction to the shifting course of a river.

Participants also touched upon bilateral negotiation formats regarding border delimitation / demarcation and looked into the advantages and disadvantages of good offices, international arbitration or court. It appeared from the subsequent discussions that border-related disputes

should ideally be addressed through direct bilateral negotiations, or possibly through good offices. However, when the positions of the negotiating States are very much opposed and do not leave room for compromise, other options such as international arbitration or courts would need to be envisaged. Regarding the bilateral negotiation process itself, participants highlighted that delimitation/demarcation processes should be compromise-oriented and reflect a strong political will to reach an agreement. If this is not the case, delimitation will be a protracted and cumbersome process. A number of participants highlighted that during the first phases of negotiations, problematic areas should be put aside by members of parity commissions and, when possible, they should focus on those portions of the border that are not subject to major disagreements. Pragmatic solutions found for less problematic cases might then create momentum for the solution of more challenging areas by building confidence between the commissions. Regarding sensitive and strongly disputed areas, some participants recommended that a number of practical steps be made to reach an agreement. The modality of “land exchanges” was put forward as one of those possible steps. The use of the land in consideration for exchange, as well as its infrastructure and modalities for passage are important elements to be considered when negotiating land exchanges to facilitate delimitation/demarcation.

Other practical and “human” aspects were also put forward as key elements to be taken into consideration such as the opinion of local authorities and the situation of near border residents, their needs and interests, which according to a number of participants should influence and legitimize the work of parity commissions. One participant gave the example of a border which runs through a road and separates local residents. Legal and acceptable changes should be made to accommodate the concerned residents, in consultation with the neighbouring country.

Still related to the work of border delimitation/demarcation commissions, a number of participants stressed that the political will of a given country to reach an agreement with its neighbours should be reflected in the mandate, role and responsibilities that are given to its commissions. The commission should be empowered, under the supervision

of relevant ministries and in consultation with parliaments, with the full competences to represent the interest of its country and negotiate on its behalf. A number of participants even suggested that such commissions should be independent bodies, within their mandates, which they felt to be a prerequisite to successful negotiations. Others also highlighted the importance of having commissions of neighbouring countries working jointly as much as possible. The “ad hoc” character of commissions was also discussed, with participants confirming that a commission was set up to deal with a specific border with a given country. Having several neighbours would require the establishment of several commissions, with the Ministry of Foreign Affairs being in a co-ordinating position with regard to the negotiations within each commission.

Further discussions focussed on the type and nature of documents to be used as a basis for delimitation/demarcation-related negotiations. A particular emphasis was put on the need for alternatives to maps, as the latter were not always accurate and as maps used in some cases do not match each other. A number of participants elaborated on the need, even if accurate maps exist and match each other, to rely on complementary sources of information such as land registers, forest maps, plans and schemes of infrastructure, property rights, etc. Other participants stressed that when maps are out-dated and do not properly reflect the area concerned, a written description could be helpful. While some participants stressed that written descriptions had become irrelevant with the development of new technologies that allow for very precise mapping, others underlined the importance of such descriptions, both for delimitation and demarcation, which in court could take precedent over maps because they describe the intention of the commission. Regarding the type and scale of maps that should ideally be used in this process, participants referred to ortho-photo maps and compared them with the more traditional form of topographic maps, weighing the advantages and disadvantages of each as a basis for delimitation/demarcation work. While there seems to be a trend to increasingly rely on ortho-photo maps, which can be more precise and are cheaper to produce, a number of participants stressed that traditional topographic maps were better suited for delimitation/demarcation purposes. Others stressed that ortho-photo maps were a

good basis but needed to be converted into topographic ones. The map scale was also subject to significant discussions, some participants being more comfortable with a scale of 1:100,000, others sharing some of their experience using a scale of 1:50,000. Finally, one participant stated that, while the imagery was a significant element, agreeing on the format and type of materials used for border delimitation / demarcation-related negotiations was even more important for the building of trust between the countries concerned.

Participants engaged in a practical delimitation exercise



Participants also raised the issue of border monuments, and discussed the material from which they were made and how far from each other they should be established. Depending on the environment and on whether borders are to be “fixed” or could be subject to natural changes, the chosen intervals could vary from 100 metres to 2 kilometres. Participants also acknowledged that border maintenance was of key importance and should ideally be undertaken jointly with the neighbouring country, through specific structures and arrangements.

Conclusion

The Seminar provided a good opportunity for representatives of over 20 OSCE participating States to share experiences and views on the complex process of international land boundary delimitation/demarcation. The presentations of national officials and experts allowed the participants to become familiar with the status of border delimitation/demarcation in several countries and to exchange lessons and best practices in this field. It also allowed for the exposure of participants to recent and successful completions of border delimitation/demarcation processes. Furthermore, this encounter was an opportunity for neighbouring countries to informally interact and engage in dialogue on this subject.

The discussions showed that the process of delimitation and demarcation is comprehensive, multi-phased and continues beyond the stage of demarcation per se, with border maintenance being crucial. It also highlighted that the most important element for successful delimitation/demarcation was the strong political will of countries to reach an agreement, through practical and compromise-oriented steps.

The role and activities of boundary commissions was also very much discussed with significant exchanges of ideas and experiences regarding the mandates and activities of commissions and with some guidelines on the work of commissions shared with all participants.

Finally, the event highlighted the complexity of the delimitation/demarcation process regarding natural borders (for example, river borders) which are not fixed and evolve over time. Various forms of technical assistance offered in this field by multilateral and bilateral organizations were examined and a number of best practices could be drawn from the Seminar.

