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## **Drawing the Line: Mapmakers and International Boundaries**

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# Drawing the Line: Mapmakers and International Boundaries

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## Abstract

For all the talk of the emergence of a 'borderless world', international boundaries are still highly significant in terms of state authority and national identity. Many boundaries continue to be a source of friction between the states which they separate, and even those which are relatively stable require careful management in order to ensure the development of peaceful and prosperous borderlands.

Geographers, surveyors and cartographers have long played an important role in boundary-making and management, although the value of their expertise is not always appreciated by politicians and their legal advisors. This paper highlights some of the main challenges that boundaries can present to governments and suggest ways in which national mapping agencies can contribute to an effective boundary regime.

## Introduction

While most states now recognise the desirability of open – or at least permeable – boundaries with their neighbours, there is not a state in the world that does not also wish to maintain control over its boundaries. Not only do boundaries continue to have considerable symbolic significance in terms of state legitimacy and national identity, secure borders are clearly crucial to a state's capacity to protect itself from illegal immigration, trans-national crime and other undesirable activities with an international dimension. Although 'Schengenland'<sup>1</sup> offers a model which many states would ultimately like to emulate, in the post-9/11 world the trend is very much towards greater boundary control rather than less.

A prerequisite for effective boundary control and management is for the states on either side of the boundary to agree on the location of the boundary. Since most boundaries are defined by treaties, in theory such agreement should be easily achieved. In practice, however, few boundary treaties are completely unambiguous and some boundary definitions are open to dramatically differing interpretations, as the Eritrea-Ethiopia Boundary Commission recently discovered when it was asked to interpret a series of boundary treaties between Ethiopia and Italy from the early 20<sup>th</sup> century. Maps figure prominently in almost every aspect of boundary-making and mapmakers have skills and resources which can contribute greatly to the successful creation and management of international boundaries, and to the resolution of any boundary-related disputes which may arise. While the main responsibility of national mapping agencies is clearly to depict their state's boundaries in a manner which is consistent with the views of the government of the day, the role of the agency in boundary-making need not – indeed should not – end there.

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1 Schengenland is a nickname for the territory of the fifteen European states which are now party to the 1985 Schengen Agreement (and subsequent related treaties) which abolished checks at their common borders. The agreement has been in practical effect since March 1995.

## The need for a multi-disciplinary approach

Historically, geographers, surveyors and cartographers played an important role in boundary-making, particularly in areas where the border region was poorly mapped. In the early stages of European territorial acquisition in Africa and Asia<sup>2</sup> boundary treaties often provided only an approximate delimitation of the boundary, allowing scope for refinement once a better understanding of the local geography was achieved by the surveyors who were sent out to demarcate the line. Until the middle of the 20<sup>th</sup> century, tribunals set up to arbitrate in boundary disputes also typically included a geographer and a surveyor in addition to a lawyer. However, in recent years lawyers have become increasingly dominant in boundary-making and dispute resolution and, while some lawyers and judges have acquired a reasonable grasp of geography and cartography, the absence of geographical experts from the mix has sometimes resulted in far from ideal outcomes. The surveyor Dennis Rushworth summarises the risks of having no in-house geographic expertise in arbitral bodies as follows:

In my view, the change to Courts manned entirely by lawyers has, at least in some cases, had an adverse influence on the efficiency of the Court's proceedings and the effectiveness of the resulting judgment. Because recent Courts do not have any inbuilt geographic expertise, the members find it difficult to understand the significance and meaning of geographic evidence, so that it is not always given its correct weight. The Courts are also unaware of the wide range of geographic techniques that can assist the work of the Court in understanding, evaluating and applying the geographic evidence. Judgments are usually addressed to lawyers (to justify the legal decisions taken) whereas the most important recipients of the judgment are the diplomats, surveyors and officials who will have to interpret, demarcate and administer the boundary. The latter need the clear, graphical delimitation of a good practical boundary, which does not seem to be the top priority of Courts (Rushworth, 1999: 172-3).

Regrettably, the situation does not appear to be improving. As recently as October 2002 the International Court of Justice defined the maritime boundary between Cameroon and Nigeria by a list of coordinates for which no datum was given. The April 2002 decision of the Eritrea-Ethiopia Boundary Commission (composed entirely of international lawyers) also contained several small geographic errors which, although subsequently corrected, nevertheless undermined the faith of at least one of the parties in the Commission's competence.

However, such shortcomings are by no means restricted to judges. The politicians and their legal advisors who usually take the lead in boundary negotiations and the preparation of submissions to arbitral bodies are also unlikely to be skilled in the interpretation of geographic information – yet almost every decision they make has a geographical dimension to it! Boundaries are complex entities and boundary-making requires a multi-disciplinary approach. In this context, it is surely the duty of a national mapping agency to ensure that its government is aware of the geographic and cartographic issues involved in any boundary-related project, and to make its resources available to help achieve the best possible outcome.

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2 European colonial powers, particularly France and Great Britain, were involved in the delimitation of more than half of the world's 309 international land boundaries.

## Areas in which mapping agencies can support boundary-making

Although boundaries can be defined without maps – some treaties rely on lists of coordinates and/or verbal descriptions of the course of the line – in many treaties a map showing the agreed line is an integral part of the legal definition of the boundary, and in some cases the map is the legal document. Even where this is not the case, most treaties include some form of illustrative map. Maps are also used extensively during boundary negotiations, both to help the negotiators visualise the border landscape and, where there is disagreement over the interpretation of previous treaties, to support a particular boundary claim.

The potential role of a national mapping agency in terms of map production in support of the boundary-making process is fairly obvious. However, it can also play an important advisory role in other aspects of the process.

## Maps as evidence

The value of maps as evidence in boundary disputes is a subject which has been debated at considerable length in many of the boundary cases submitted to the ICJ and other arbitral bodies. A full discussion of the subject is beyond the scope of this paper, but an extract from a speech by James Crawford, Counsel for Malaysia in the *Case Concerning Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia)* neatly summarises the extent to which different types of map have different evidentiary value:

As the Court will be aware, all maps are not equal. Shakespeare wrote that some men are born great, some achieve greatness and some have greatness thrust upon them. Now whether this is true for men, it is certainly true for maps. Some maps are born great – in particular, those annexed to treaties. These are the category 1 maps, legally the great maps. Then there are maps that achieve greatness, because they are endorsed and put forward by States in the context of international relations as reflecting a boundary, and maybe they are accepted by other States as well, as the Annex 1 map was in the *Temple* case. The Annex 1 map achieved greatness. These are the category 2 maps.

And then there are category 3 maps, the miscellaneous maps, the maps that are none of the above, the maps that have no international endorsement at all. These maps have no international status. They are more or less reliable or more or less unreliable depictions, on some scale or another, of something or another. They may be privately published; they may be internal maps which have never been published at all. Thus category 3 maps cover a very wide range. Indeed it is impossible to work much with maps in the context of international boundaries, with maps in this third category, without being impressed – and one might say depressed – at their variability, inconsistency and imprecision on points of detail. This is why, as you [the ICJ] have repeatedly said – most recently in the *Namibia/Botswana* case – such maps are never in themselves dispositive, unlike maps in the first two categories, which are or may be. In *Namibia/Botswana*, you quoted with approval a passage of the Chamber in *Burkina Faso/Mali*, where it said that these maps “merely constitute information which varies in accuracy from case to case; of themselves and by virtue solely of their existence, they cannot constitute a territorial title, that . . . a document endorsed by international law with intrinsic legal force for the purpose of establishing territorial rights [can do]...”. There speaks a Chamber with a lot of experience of looking at maps. The contrast is clear: category 3 maps consists of maps which are, at best, “only extrinsic evidence”. They are to be thrown into the pot “along with other evidence of a circumstantial kind”. They have no special status at all.<sup>3</sup>

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3 ICJ Comptes Rendus 2002/32 ([http://www.icj-cij.org/icjwww/idocket/iinma/iinmacrs/iinma\\_icr2002-32\\_20020607.pdf](http://www.icj-cij.org/icjwww/idocket/iinma/iinmacrs/iinma_icr2002-32_20020607.pdf))

Despite this distinction, when a boundary dispute arises most governments like to submit as many maps as possible that support their position, regardless of which of Crawford's categories they belong to, presumably on the basis that quantity is sometimes just as effective as quality. Mapping agencies are obviously in a good position to supply relevant official mapping, and they will often have access to – or at least knowledge of where to locate – other potentially relevant maps. Equally important, especially for Crawford's category 1 and 2 maps, mapping agencies may be able to supply survey reports and other source material that can help to explain why (for example) the boundary shown on a particular map differs from the line described in a treaty. Sometimes the explanation may be 'bad news' in terms of your country's case, but the legal team needs to know the bad news as well as the good, so that it can prepare a defence if (or, more likely, when) the other side discovers the same information. It may be embarrassing for a mapping agency to have to admit to its government that it once produced a map sheet showing the boundary as claimed by the neighbouring country, but it is far better to acknowledge any such mistake early on than to risk your negotiators or litigators being surprised by the opposition at a critical stage in the proceedings.

## Map interpretation

The mapping agency is also well-placed to assist in the interpretation of maps. Many lawyers find maps rather alien, and when confronted with a wide range of maps from different periods with different scales and different coordinate systems (as they often are in boundary disputes) they can easily become confused and miss important information contained within those maps. Identification of geographical features commonly used to define boundaries, such as watersheds or ridge-lines, may be a particularly daunting challenge. Even when the lawyers on the team are familiar with their own state's maps, they may encounter difficulties when trying to compare them to maps of the same area produced by the mapping agencies of the neighbouring state. Good lawyers will recognise their limitations in terms of map interpretation and will seek expert technical advice; however, the national mapping agency may wish to be proactive in this area and offer its assistance in advance. Ideally, all boundary teams should have a geographic expert on hand at all times, and heads of mapping agencies may wish to promote this idea in relevant circles well in advance of any boundary negotiations.

## Boundary depiction and mapping of disputed areas

Just as cartographers can assist lawyers in understanding boundary issues, lawyers can assist cartographers in their depiction of boundaries. Although boundary disputes are rarely caused or resolved by maps alone, careless depiction of boundaries on official maps can lead to problems in relations with your neighbours. More than one serious border conflict has been triggered by the publication of a map depicting what appears to be a claim to the territory of a neighbouring state, and the mapping agency needs to be sure both that its maps reflect the views of its government and that the government is aware of the potential consequences of publishing certain maps. In this context, it is advisable for mapping agencies to develop policies for reviewing and approving all maps depicting international boundaries in consultation with the legal advisor to the ministry of foreign affairs. A policy on the use of disclaimers relating to international boundaries should also be agreed.

If a state has a claim to a disputed territory which it does not control, it needs to consider the extent to which it maps that territory. While it may be difficult to produce accurate maps of the area, not producing any maps may seriously undermine the strength of the state's claim. A cartographic expert working for one of the parties in a recent boundary case certainly felt that this was a factor in the court's decision to award the disputed territory to the other side: "politically we were in XXXX but cartographically we were never in XXXX". Such issues are far from easy to resolve but they do need to be borne in mind when developing policies relating to territorial claims, and mapping agencies need to be aware of the implications.

## Boundary maintenance and management

It is important to remember that delimitation and demarcation of an international boundary is not (or certainly should not be) the last word in the story of that boundary. In order for a boundary to be effective, it also requires regular maintenance and thoughtful management. Mapping agencies can have an important role in these activities as well. Where a boundary follows a physical feature of the landscape such as a river and the mapping agency notices changes in the course of that river, it should alert the ministry of foreign affairs so that appropriate diplomatic action can be taken if required. If an old boundary marker is removed as a result of natural or human action, the mapping agency can often assist in recovering the position of the boundary marker using its old survey records. The agency should also attempt to ensure that its large scale maps depict any recent maintenance or management activity, such as the addition of new markers, the erection of fences or ditches, the clearing of the boundary vista, or the opening or closing of boundary crossing-points.

## Maritime boundaries

Maritime boundaries have traditionally been delimited using nautical charts rather than land mapping, because land maps generally stop at the high-water line rather than the low-water line from which maritime zones are measured. Thus, unless the national mapping agency is responsible for the production of nautical charts as well as land mapping, it generally does not get involved in maritime boundary issues. However, there are at least two circumstances in which it might play a role:

Firstly, in some parts of the world there have been no detailed hydrographic surveys for decades and the accuracy of the nautical charts of these areas is often highly questionable. In such areas, recent large-scale land mapping of the relevant coastal areas may offer a more accurate baseline from which to construct maritime limits and boundaries than nautical charts, especially where there is a low tidal range and little horizontal difference between the high- and low-water lines.

Secondly, a surprising number of land maps of coastal areas show lines indicating some kind of jurisdictional division offshore. Sometimes these lines turn out to have little or no factual basis, but occasionally they can be evidence of state practice which may turn out to be highly relevant to a maritime boundary dispute. Thus, even when the national mapping agency has no formal responsibility for maritime boundaries, its archives may still be of use in maritime delimitation.

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