

The Role of Morphological Changes Hirmand Border River in Political Relations of Iran and Afghanistan

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Extended Abstract

Introduction

One of the central issues in studies of political geography returns in to governments and their boundaries. Shaping how borders, borders type, borders issues and disputes arising from them are interesting debates in political geography. One of the notable points in the following discussion is the role of phenomenon of colonialism in border drawing. Essentially colonial boundaries combined and separated some societies. Hence imposed and colonial boundaries often involve the problems within their borders to the countries that are parties. The Boundaries River including the natural boundaries is considered that can disrupt economy due to natural areas or because of a shift, makes border problems for surrounding countries. Countries including Iran, which its borders on the one hand by colonialists has been drawn and the other hand is faced with several neighbors. What the studies related to political relations of countries based on river borders (like Hirmand river) is important, the pattern and form of the rivers that regard to the importance of surface water resources, plays important role in relations between countries. For example Hirmand border River as a natural and colonial- imposed border is a critical role in half of eastern of Iran. This article seeks to respond to the question is whether disputes emerged on border of Iran and Afghanistan essentially caused on morphology characteristics and natural form of Hirmand river or merely a result of political relations between two countries? Results show that “the use of the highest variability section in the bed of

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Hirmand in downstream of river as the common border, causing border disputes between Iran and Afghanistan since the beginning has been and “ probably the ground for numerous problems for both especially would be for the Iranian section.

Methodology

In this study using of TM-5satellite images to analyze morphological changes of river boundary, which can be downloaded Hirmand River changing river bed maximum geographical location. $61^{\circ} 50' 43.08''$ E & $31^{\circ} 01' 54.21''$ N which occurred the amount equal to 249.7 m in the 20-year period from 1989 to 2009. In other words, the annual average, 12.485 meters shift and shift in the geographic location in the Hirmand River occurred. The spatial variability of the river bed or pattern of behavior in borderline range, the TM-5 satellite images with pixel sizes (resolution) 30 m in figure of 10 is obvious. Like this can be said that the changes in parts of the river route is very intense and in parts it is extremely low. Other hand, for the changes in some parts of the inside Afghanistan and also in some parts of Iran are drawn toward. In this situation, during the past two decades, a place for these changes has been mainly to the territory of Afghanistan. This point means that Iran shares borders the eastern blue route downturn will rule because it is the path variability in short term and unstable features result primarily in the arterial morphology River region.

Results and Discussion

According to studies done, can be Hirmand river downstream be interpreted from the type of active channels with lateral movement. The river downstream of the establishment because in a plain with low gradients and wide bed admission, arterial pattern is primarily a function of evidence and in the images used in this pattern is visible. Most important of geomorphologic evidence of arterial pattern in the river are: alluvial plains being, multiple branching sub-river drainages, and the presence of islands or barriers to flow longitudinally in the river bed.

Conclusion

As a result we can say that redirects Hirmand River in the coming years, causing more tensions between Iran and Afghanistan over the water share would be. The morphology features creates many complex issues in the legal system of rivers that political relations between the countries under its influence are supported. Historical reviews show that the forming of Hirmand River border from the beginning has been according of the colonial interest's of Great Britain. So that by arbitration in accordance McMahon & Goldsmith, the river borders of two countries deliberately on one of the most variability of river sections where the river is multiple branching and arterial, is located (input and plug the dam Kahak). While, Morphology of the rivers like Hirmand river are having the highest variability than the other models. Hirmand issue is the most basic cases that relations between Iran and Afghanistan at the neighborhood level is affected so that 12 diplomatic crisis and 27 bilateral negotiated to resolve it is due. To summarize, the main outcomes from changes of the bed morphology of this river that have been causing stress include: the two countries disputes over the precise determination of the border of

river, the differences between the two countries in the distribution of water right, changes in the border area and territory.

Keywords: Morphology of River, Boundary Rivers, Common Border of Hirmand, Political Relation of Iran & Afghanistan.