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Navigating Environmental Security in the Anthropocene: The Potential for Cooperation and Conflict in International River Basins

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Abstract

The paper argues that from an analytical perspective, an international river basin (IRB) offers a particular geographic and structural context, as it represents an interrelated, connected, geographic space. Climate change impacts have not only direct consequences for the availability and quality of water resources - spanning from changing precipitation events, flood events, or a higher rate of evaporation - but even more fundamental, long-lasting impacts as the major source of comprehensive environment degradation associated with the Anthropocene approach. When considering the actual and further potential impact on the availability of water resources and the distribution challenge, the prospects for aggravating lingering political conflicts, or even generating new political conflicts between the countries sharing an IRB becomes an even greater possibility. However, it would be misleading to assume that all countries within an IRB are exposed to environmental degradation and climate change impacts to the same extent. It is worth recognising that structural inequality exists within an IRB, that between upstream and downstream countries, as up-stream countries may be in a better situation to address related challenges. Moreover, environmental and climate change impacts in an IRB go far beyond the water resource issue, representing a microcosm for applying the Anthropocene approach.

Keywords International River Basins, Environmental Security, Resource Distribution, Regional Cooperation

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1. Introduction

When we consider international river basins (IRB) as a focus for addressing environmental security, several related issues need to be addressed. Among them are issues of resource distribution and the level of existing amity or enmity between the countries located within an IRB. Such considerations will also have a fundamental impact on the extent to which the countries within an IRB are willing to cooperate to address environmental and climate change impacts. After all, a common structural inequality between upstream and downstream countries within an IRB exist, since upstream countries are in a stronger position to take advantage of water resource distribution and thus may be in a better situation to address climate change impacts. The potential and level for regional cooperation in addressing environmental and climate change impacts within an IRB are also influenced by the anarchic character of the International System (IS) and associated topics of national insecurity, or to be more precise, the perception of it. The extent to which bilateral threat perceptions can be overcome and cooperation can take place between the countries of an IRB will have a crucial impact on how they will address environmental security challenges. In this regard, a focus on IRB also could provide some further insight into the ability to generate trust and cooperation within the context of an anarchic IS.

Concerning environmental security, the original focus on the impact on humans and human societies has given way to a more comprehensive focus as identified by the Anthropocene approach which alerts us to the comprehensive negative impacts generated by and through human development such as environmental degradation, climate change, and biodiversity loss. As such, the Anthropocene approach provides an integrating view of distinctive, but specific fundamental challenges humanity and the globe are facing. Besides, focusing on IRBs as a potential source for regional cooperation, IRBs also offer a specific focal point for investigating the implications of the Anthropocene approach. While environmental security has now become an established concept in both academia and politics, it is still a rather new concept when compared with the traditional perception of security, with its focus on military means and the state. This is even more relevant with regard to the Anthropocene approach. Hence, the ongoing dominance of the traditional state and military focus on security, based on the amount of financial resources spent, needs to be taken into consideration considering IRBs as a focus for addressing environmental and offering a source for cooperation. After all, resources re-directed to traditional security sectors are seldom available for addressing the impacts of climate change and the related Anthropocene challenge. As such, the paper provides a rather novel approach to identifying the source and challenges for cooperation within IRBs.

Recognising IRBs as a structural space, based on geographic proximity and deepening relations, represents a suitable first step forward in identifying IRBs as a strategic setting for addressing climate change-environmental degradation nexus challenges as emphasised within the Anthropocene approach. Painter's (2010, 1,093) assertion that space can best be recognised as the consequence of networked relations supports such an assessment. Closely related characteristics can be differentiated into physical, functional, and ideational aspects, consequently supporting the perception of a particular linked space. From a physical perspective, IRBs constitute an interrelated ecosystem covering an extended geographical space connected by a river. From a functional perception, on the other hand, the prospects for economic cooperation and infrastructure connectivity also provide a strong argument. One added aspect, supporting the focus on IRBs, can be identified as social proximity, based on social, cultural, linguistic, or historical links. Therefore, various aspects of proximity do offer the opportunity for enhancing cooperation and reducing enmity between the countries within an IRB.

Even so, it should be pointed out that geographic proximity has a Janus-faced character, as it can be the source for conflicts, not least because of the anarchic character of the IS, which generates a perception of enmity between neighbouring countries. It is also crucial to remember that environmental degradation has the potential to generate comprehensive transnational impacts, since environmental and climate change impacts occur in the context of specific geographic settings, such as mountain ranges, coastal areas, or river basins, and are not restricted by national borders. In the case of IRBs the availability and distribution of water resources within an IRB reveals a clear conflict potential related to the climate change-environment degradation impact, associated with the Anthropocene approach. The existing structural inequality between upstream and downstream countries within an IRB further highlights this conflict potential between the different countries. Consequently, we can identify various aspects of interlinkages within an IRB that may either support or hamper efforts to address environmental security issues. It is worth remembering that climate-change-related risks are characterised as a combination of exposure and vulnerability to climate change impacts (UNEP, 2021).

The paper is organised in the following way. The next section will evaluate the process of how the understanding of security is changing, thus offering an opportunity to identify environmental and climate-change-related issues as security topics. This is followed by a discussion about the Anthropocene approach and its implications. After all, if we accept the Anthropocene approach, then, we also have to acknowledge its comprehensive evaluation of the human impact generated, going beyond the traditional environmental security focus which mostly focuses on the impact on humans.

The next section puts IRBs in the spotlight of analysis for addressing environmental security challenges.

2. Environmental degradation as a security topic

When considering environmental degradation and climate change as security issues, it is crucial to recognise that environmental security belongs to the so-called non-traditional security topics. Non-traditional security issues focus on development, human security, and the environment which are often identified as secondary security issues, whereas security issues related to national security and military issues are typically described as traditional, primary, security issues. Another, and equally important, differentiation is that, while the traditional security focus is strongly associated with a state focus, non-traditional security issues focus on the impacts generated on humans and society.

2.1 The fragmentation and proliferation of the meaning of security

With the end of the Cold War era and a reduced possibility of a nuclear war, we witnessed a fragmentation and proliferation of what security meant; the traditional, military and state-focused security emphasis no longer seemed to be fit for fully addressing the emerging security challenges of the time. For that reason, there was a growing awareness that alternative security issues – human health, social welfare and social disadvantages, environmental degeneration, and political and social identity – were leading to a wider interpretation of the meaning of security. This is a position supported by Buzan, Waever, and de Wilde (1998), stating that the meaning of security should be broadened to include not only the military aspect of state security but also economic and ecological aspects. Walker (1997) emphasises that the differentiation between security and development (what he identifies as an artificial distinction) needs to be broken down. Likewise, in the view of Smith (2005), the conceptualising of security should begin with a focus on the real conditions of insecurity that people and collective entities are facing. Those developments, in turn, led to further critical inquiries into how we should re-interpret security, resulting in a number of processes, including the deepening of security, to overcome the abstraction of military issues from their broader contexts; broadening of security, moving away from a narrowly military focus; extending security, overcoming the strong state focus by incorporating other levels of analysis as social, ethnonational or religious identities, or individuals; and to consider security as emancipation, which means the freeing of people – as individuals and groups – from constraints (Jones, 1999), Interestingly enough, Katzenstein (1996, p. 10) argues that, with these alternative interpretations of the meaning of security, we are re-discovering an older, nineteenth-century interpretation of security, which included a social and economic dimension. Human Security Unit Office for the Coordination of Humanitarian Affairs (2009) concept offers yet

another example of redefining the meaning and focus of security, with a strong people-centred focus. It also highlights the complexity of insecurity by including seven elements: economic security; food security; health security; environmental security; personal security; community security; and political security. It therefore offers another indication that the link between development and security has gained prominence.

Even as it is now generally acknowledged that the conception of security underwent a critical re-evaluation process in the 1990s, as more subjects were added to the security discourse, it still represents an ongoing process of re-evaluation. After all, traditional security threat perceptions are still considered primary by many political decision makers and academic analysts. Yet it was within the Critical Security Studies approach that the increasing complexity of security challenges had been recognised early on. Still, Booth (2005) reminds us that a politic-free definition of security does not exist, as political and social actors interpret security differently. Smith (2005) similarly argues that the conceptualisation of security is based on diverging opinions of what politics is and should be about. This echoes Buzan et al. (1998) in their earlier position that it represents a political choice to securitise a particular issue, adding that securitisation implies that a specific issue is presented as an existential threat. Consequently, more resources to address this specific security issue will be made available.

Within this context, environmental security also rose in its relevance. This change in perception is not without justification, as recurrent extreme weather and climate events can be viewed as an indication of the increasing challenges we face in this respect, with the prospect that the character of climate change may change from a linear process to one characterised by abrupt changes, with all their expected devasting impacts, since we are on track of grossly missing the agreed 1.5-degree target with regard to global warming. Despite that, environmental security has still not replaced traditional national security in its relevance.

2.2 Environment security: An evolving concept

Despite the continuing strong support for a traditional interpretation of security, non-traditional security threats have become more significant in their impact, with environmental security representing a prominent example. As environmental degradation and the impacts of climate change increase in their force, challenging and undermining the development prospect for individuals and communities – and national development strategies and development gains already made – environmental security as a concept is increasing in its relevance. Indeed, with an ongoing intensification of the climate change impact and associated risks, environmental security issues have even begun posing a threat to political stability. As stated before, when considering the term ‘environmental

security', a crucial qualification needs to be made as it focusses on the social, political, and economic implications for humans. Buzan et al. (1998) alert us to another crucial feature of environmental security, as one can identify two different aspects when considering the application of environmental security: one focus is on the environment itself, and the other on the link between civilisation and the environment. While the first one dominates the focus of environmental security, the later aspect rises in prominence with the Anthropocene concept. However, even before the Anthropocene concept gained in status, questions about the sustainability of the extensive growth model underlining economic development became a focal point for environment security. Within the Anthropocene approach, this focus and its devasting impact on the environment is strongly re-emphasised and will be evaluated in more detail in one of the following sections.

Concerning the environmental security agenda, one could argue that it, at least partially, underwent a successful securitisation process, since related impacts and security challenges are increasingly recognised. Yet environmental security still has not gained the same recognition, or 'status,' as traditional, state-focused, security, even as the destructive impact of the excessive economic growth model on the environment is increasingly recognised. The year 2021, with its floods, wildfires, storms, and heat waves, was a compelling reminder of the impact climate change has recently been generating. Yet, based on previous years' experiences, the indications are that 2021 was not a so-called 'once-a-century' episode. Based on this experience, and the impacts climate change generated in previous years, a continuous interpretation of environmental security as a secondary security threat should no longer be accepted, as events indicate a new quality of risk which in turn should lead to a transformation of our awareness of security threats. Therefore, environmental security should be recognised as a particular risk category and integrated into any national risk assessment (Ploberger and Filho, 2016). After all, the purpose of a risk assessment is to address the uncertainty of future events. Consequently, the continued interpretation of environment security as a secondary security threat should no longer be accepted. The most recent edition of the Global Risk Report (2022) states that, short of a comprehensive response, our capacity for mitigating and adapting will shrink fast, consequently, the failure to act in addressing climate change has been identified as the risk category with the highest damage potential at the global level within the next decade.

Demands that we recognise the increasing relevance of environment security as a fundamental global security challenge are further supported not only by the actual climate change related impact we already can observe but also from a conceptual perspective, based on the Anthropocene approach.

3. A revolutionary, all-encompassing, approach to environmental security: The Anthropocene concept

While the Anthropocene concept has gained considerable weight, there are still unsettled issues linked to it. It is worth recognising that the Anthropocene – the period that supposedly represents the most recent period in Earth's geological history, during which humans started to generate a significant impact on the planet – has now been rejected as a description of a geological period. In early March 2024, The International Union of Geological Sciences confirmed the dismissal of recognition of the Anthropocene as a description of a new geological time. However, the Anthropocene concept has been recognised as an essential description of the impact humanity had and has on the Earth system. As such it has preserved its value as a focus for recognising humanity's impact, after all, as stated before, it provides an umbrella for the various impacts generated by humans and the climate change dynamic. Even the original statement made by Crutzen and Stoermer (2000) who argued that the Anthropocene represent a new geological epoch has now lost some of its value. While Maslin and Lewis (2015, p. 108) point out that a general scientific agreement has been reached that human activity has generated a profound influence on the Earth's system, with the above-mentioned decision, humans as the source of a new geological epoch have been rejected. Still, as emphasised by Dalby (2014, p. 442), applying the concept of the Anthropocene also highlights the challenges generated through human actions, as opposed to natural causes. This is a position shared by Delanty and Mota (2017, p. 12), describing the Anthropocene as the result of the fundamental transformation of the earth through human activity. A position which still can be upheld today. Harrington (2016, 481) states that the Anthropocene indicates the arrival of a new reality, characterised by complex and interwoven linkages between humans, non-human creatures, and things.

3.1 Ongoing discourse about the historical origins of the Anthropocene

While the Anthropocene concept has gained some acceptance, there are still a number of issues that have to be discussed. Harrington (2016, p. 483) points out that identifying a specific period as the beginning of the Anthropocene invites fundamental questions about its character and who can be held accountable for it. Similarly, Editorial Comment (2003, p. 251) points out that selecting a specific date for the start of the Anthropocene remains rather subjective. To assess the controversy we may consider Ruddiman et al. (2015) who refer to the 'Early Anthropocene' thesis, with a focus on the beginning of agricultural civilisation, when the first fundamental land-use changes occurred, such as comprehensive deforestation and the beginning of animal husbandry. An alternative and strongly supported historical period for identifying the origins of the Anthropocene favours the eighteenth-century Industrial Revolution and the

subsequent invention of the steam engine and associated massive industrial and agricultural expansion (Delanty and Mota, 2017, p. 14). When selecting the Industrial Revolution as the point of departure for the Anthropocene, the question arises about the actors, since the Industrial Revolution was not a universal human undertaking, consequently, the context of the origins of the Anthropocene changes. As Harrington (2016, p. 483) states, when positioning the Industrial Revolution as the beginning period of the Anthropocene, one can no longer accept humanity as a coherent group and the universal driver behind it. After all, it was a small group of wealthy, European economic modernisers who initiated the Industrial Revolution. For the same reason, Malm and Hornborg (2014, p. 64) also question to what extent this is consistent with a perception of humankind, in its totality, as a new geological agent. After all, those economic inventors and modernisers, the owners of the means of production, represent a tiny minority of humans, consequently pointing towards an intra-species focus within a specific geographic location. Based on such considerations, some researchers argue that the term Capitalocene would be more fitting since it would offer a more direct link between human motivation and behaviour in pursuing a continuous development strategy at all costs, generating climate change, environmental degeneration, biodiversity loss and an extinction dynamic on a global scale. Such a perspective may gain more recognition when considering the above-mentioned rejection of the Anthropocene as a new geological epoch. As Rowan (2014, p. 448) argues, it is the specific set of social relations governed by the capitalist model that drove and still drives humans in their pursuit of gains, while generating all the negative impacts on the environment and non-humans. Chakrabarty (2009) asserts that hardly a doubt exists that capitalism can be identified as a major driver of the Anthropocene. The argument is also supported by Chandler, Cudworth, and Hobden (2018, p. 203), who states that applying the term Capitalocene would provide a better link between the global ecological and climate crises we are facing and the driving force of capitalism.

There is little doubt that capitalism constitutes the underlying, driving force for much of human behaviour. Yet accepting Capitalocene as a replacement for Anthropocene, or even as the more fitting description of the current ecological period, does carry considerable implications for the date when the human impact generated was strong enough to begin causing a strong geological impact on the globe. With this in mind, there exists yet another approach to identifying a different starting point for the Anthropocene, which is linked to the 'Great Acceleration' thesis (Steffen et al., 2015), based on the argument that planetary change needs to generate a recognizable impact on the Earth's system. The first detonation of an atomic bomb (on 16 July 1945) would constitute such an impact. Harrington (2016, p. 483) adds that the expansion of

the human population, the creation of long-lasting materials such as plastics, and extensive organic pollution further support the 'Great Acceleration' approach.

3.2 The Anthropocene concept as a comprehensive threat identifier

While there exist various options for identifying the beginning of the Anthropocene, there also exists a discussion about the implications and potential responses to it. Such considerations are based on our experiences of human impact, such as climate change and related disasters, environmental destruction, biodiversity loss, ocean acidification, and deforestation. Simangan (2019, p. 564), for example, points out that the impacts generated by humans threaten the biosphere, with severe implications for life on earth, as it threatens the survival of all species, including humans themselves. Harrington (2016) takes the same position, stating that the Anthropocene highlights the prospect of an existential threat the world is facing, pointing towards a possibility of an ecosystem collapse, leading to a failure to maintain life; Harrington adds that we may have already entered the 'sixth mass extinction' event. Delanty and Mota (2017, p. 19) clarify that mass extinction should not be treated as 'death write large', since it represents a qualitatively distinct event, characterised by erasing a particular life form and reducing diversity within the global biosphere. In the same vein, Mitchell (2017, p. 12) argues that one should not simplify the notion of mass extinction to mean large-scale death, as this would lead to a category error. Delanty and Mota (2017, p. 11) state that the Anthropocene approach appeals to our urge to re-consider the meaning of global connectivity since it highlights the co-existence of natural and social worlds and the deep intertwining of human and planetary life. Burke et al. (2016, p. 2) concur with such an assessment, as they recognise an urgency to acknowledge the deep interrelationship between humans, animals, ecologies, and the biosphere. While one may argue that the issue of environmental security has already identified some aspects that are amplified by the Anthropocene approach, it does not acknowledge the same extent of the interrelationship between human activities and their impacts on the globe, for example, as the possible sources for generating another mass extinction event. This adds further value to the Anthropocene concept. There is considerable value in the Anthropocene approach to increase our awareness of the fundamental risks we are facing and consequently, the demands to react to those risks. Therefore, the Anthropocene concept endures in its relevance as an analytical concept, even if it was rejected to identify a new geological epoch.

Burke and Fishel (2016) raise the spectre of the implications of the Anthropocene, by arguing for the establishment of an 'Earth System Council', something akin to an ecological security council, to protect, preserve, and repair global ecosystems. They add that it should consist of 25 voting seats, 13 allocated to states for a fixed period, with the rest held by so-called eco-regions, such as the Arctic, Antarctic, the Pacific and Indian oceans, the Amazon Basin,

or major river systems such as the Mekong and the Congo. Here, the relevance of IRBs as a focus for evaluating environmental security is again recognised. For Chandler, Cudworth, and Hobden (2018, p. 195), the time has come to envisage a new category of harmful activity, that of 'crimes against biodiversity'. They reason, that it is time to expand international human rights law to cover precious species and ecosystems and criminalise any harm towards them. In addition, critical voices are pointing out that the discipline of International Relations in its current form, as an academic discipline, fails to address the implications of the Anthropocene, such as mass extinction, and consequently needs to be reformed if it wants to stay relevant in the Anthropocene period. In this regard, Mitchell (2017) stresses the necessity for the discipline of International Relations to engage with the non-human in addressing the threat of mass extinction. Burke et al. (2016) remind us that International Relations as a discipline has traditionally focused on insecurity and incorporated major conflict scenarios and transforming political conditions in its analyses, consequently adjusting, or even changing, its focus to an extent – adding that, with the Anthropocene representing a fundamental, maybe even the gravest, crisis for life on earth, it is rather astonishing that the underlying dynamics of the Anthropocene have not already been integrated into the discipline. We do not need to go very far back in history, as argued by Harrington (2016, p. 494), to identify another doomsday scenario which had a considerable influence on the discipline of International Relations, that of a nuclear apocalypse. Mitchell (2017, p. 9), too, points out how the concept of a 'nuclear winter' became associated with the possibility of global extinction during the Cold War period. For the older generation among us, the author of this paper is one, the concept of a nuclear winter was not just one abstract concept coming out of Hollywood, but rather one linked to a real-world threat scenario, with the possibility that the superpowers at the time, the USSR and the United States, may miscalculate their nuclear threat postures, leading to the outbreak of nuclear war, destroying the basis of life on earth. What is more, whoever had an interest in security policy during the Cold War could not escape recognising and debating the nuclear threat scenario either, for a considerable number of strategies to deal with this threat had to be developed; they even count today as primary literature to read if one is interested in military and strategic security. When considering the world's recent history, one can seriously question why the Anthropocene and associated threats, which identify equally devastating security threats have not generated a similarly strong response and focus within the discipline of the International Relations Theory and in security policy decision-making. While environmental security has risen in its relevance, it offers only a partial recognition of the threat scenario we are confronted with identified within the Anthropocene approach.

For this reason, when compared with the environmental security concept, the Anthropocene offers an extension, one may even say a 'totality', of the scope of threat evaluation, by highlighting the impact of environmental degradation beyond a focus on humanity. At the same time, it further highlights the challenges humanity is facing and raises serious questions about how to respond to them. While a cooperative response seems the only logical one, based on the wide-ranging threat scenario presented, it cannot be denied that there may only be national, specific responses, based on misperceptions of national interests. When considering one of the most fundamental challenges that humanity has just experienced, a global pandemic, and seeing that the responses to it were dominated by national responses, the outlook for global cooperation in addressing other fundamental challenges, like environmental degradation and the impact of climate change, let alone the doomsday scenario associated with the Anthropocene view, seems rather slim. Even so, it is still of value to consider the various aspects of regional cooperation within different strategic settings, for instance, within an IRB, which is dealt with in the next section.

4. International river basins as a structural context for cooperation

Yet, to begin with, we can identify IRBs as a focal point for cooperation, based on the recognition that an IRB represents a particular space, a structural context based on geography and proximity. Adding to such a perception, one can identify physical (interrelated ecosystems), functional (infrastructure connectivity), and ideational (social proximity among the people) features supporting a focus on IRB as a potential location for cooperation. However, as a major river forms the nucleus of any IRB, and in considering the implications of environmental degradation and climate change for humanity, or the more encompassing Anthropocene approach, the potential for serious negative impacts within IRBs can be identified. Having the potential of generating a region-wide but not necessarily equal impact within the geographic setting of an IRB can generate serious implications for cooperation within an IRB. To assess the potential for cooperation and the ability to address shared environmental security issues, let's take a closer look at the implications of geography, proximity, and the prospects for shared development

4.1 IRB as a focus for regional cooperation: the supportive arguments

There are three fundamental arguments in support of identifying the potential for cooperation within IRBs, geographic proximity, shared development challenges and coherent environment space. One can add another specific aspect, shared infrastructure challenge, as another critical aspect related to the shared development challenge. Togher those aspects generate a particular structural context of IRBs as a particular interrelated, and connected space. Scherrer (2023), for example, refers to proximity trade, based on geographic

proximity, in describing one potential for regional economic cooperation and shared infrastructure development within IRBs. It is this potential for supporting local development through regional cooperation and shared infrastructure development, even when separated by national borders, which could enhance cooperation within an IRB. This prospect of shared development in turn could also give credence to a cooperative approach in addressing climate change and environmental degradation challenges as amplified in the Anthropocene approach. As such, the positive image of geographic proximity is given credit for enhancing the potential for cooperation within an IRB. The cooperation along the Lancang-Mekong region and within the Danube River in Europe indicates this potential for cooperation. In both cases, The Greater Mekong Regions and the European Strategy for the Danube River, local cooperation generated a river basin-wide cooperation dynamic based on different levels of cooperation, including, city-to-city cooperation, province-to-province cooperation or state-to-state cooperation. In some cases, as within the Danube River basin, there also exists a shared form of cultural and historical identity among the people as the 'people of the river'. While different interests continue to exist among the various actors and participants they also recognise that it is in their best interests to work together. They also recognise that have to work together to address climate change and environment degradation within each IRB. Extreme changes to rainfall and related flood events offer another potential source for cooperation within an IRB, as the people and countries can escape the impact of such events.

Another fitting, but unsettling, scenario provides the prospected climate change impact on the Indus River Basin. The Indus River Basin is mostly sustained by the glaciers in its upper section. Climate change can generate a double impact. First by generating extensive and repeated serious flood events, by melting the glaciers, and second, through water scarcity once the glaciers have been melted away. Such a double scenario of catastrophic impacts would offer a solid base for cooperation as the whole river basin will be affected. Still, based on the history of Pakistan-Indian relations strong regional cooperation seems rather unlikely, but should not be completely ruled out as a single country response to those threat scenarios will not offer a solution. Yet, if Pakistan and India could agree to address those looming threats together, it may even help to overcome the existing trust deficit between them. Even this may be a rather remote possibility.

As affirmed by UN Secretary-General António Guterres, 'Water, peace, and security are inextricably linked' (UN News Centre, 2022). The same argument is put forth by Tortajada and Fernandez (2018), stating that water scarcity should be characterised as multidimensional, as it generates an impact on all social and economic sectors, while UNESCO (2016) emphasises that water resources are crucial for development; without it, sustainable development

cannot be achieved. However, while equally sharing the available water resources within an IRB does generate a strong dynamic for regional cooperation, the failure of equally water-sharing arrangements within an IRB has the potential to undermine the potential for regional cooperation. This one aspect of the Janus face characteristics of cooperation within an IRB, geographic proximity represents another one, especially concerning national security.

4.2 IRB as a focus for regional cooperation: identifying the challenges

While geographic proximity from an economic perspective is often interpreted as an asset (like assess to markets) it is also linked to the traditional understanding of national insecurity within the anarchic character of the IS. Insecurity is local. Jervis (1978) points out that the inherent uncertainty about neighbours' intentions leads states to interpret any changes in the security outlook of other states as a potential or actual security challenge. Related concepts such as the security dilemma – emphasising that the increase of security of one country increases the insecurity of its neighbour – highlight the underlying threat perception associated with geographic proximity. Alike argues Buzan and Waever (2003) for most countries, threats to their own security stream from their neighbours. Roach et al. (2002, pp. 267-268) emphasise, with reference to Carr and Morgenthau, that, from a realist perspective, it is foolish to believe in the natural harmony of interests among states, or that the power competition between states can be restrained; indeed, realists take the view that conflicts and war are normative elements of international relations. Obviously, within such an interpretation, geographic proximity does lose its positive image. Consequently, as the IS represents a structural setting of insecurity, enmity, instead of amity, seems to be the norm between states, which in turn undermines the readiness for cooperation within an IRB. Aside from security considerations based on the character of the IS, we can identify another potential challenge to cooperation within an IRB, one that is linked to the structural inequality existing within an IRB, that between upstream and downstream countries. Upstream countries are in a better position to exploit the available resources at the cost of downstream countries and thus have an advantageous position in cases of resource conflicts. An emerging situation of resource conflicts can be linked either to development strategies of the countries within an IRB, or to a situation of environmental degradation and climate change impact. A resource conflict based on dwindling water resources has the potential to develop into a serious political conflict between the countries within an IRB. After all, utilising and sharing available resources within an IRB constitutes a vital aspect for considering regional cooperation in the first place. Likewise, a loss of biodiversity and an increase in associated environmental and agricultural challenges may also generate some political conflicts between the countries located within an IRB, especially if this impact is linked to national development

strategies. When the development strategy of one country may undermine the development prospect of another country within an IRB.

Take for example the national development strategies of Laos and Thailand as both countries plan to even further utilise the water resources of the Mekong for their national development strategies. In the case of Lao, this is linked to the continuous extension of hydropower development, in the case of Thailand to planned extensive increase of agricultural irrigation projects. In addition to the impact already generated from the further upstream dams, China has built. While one can argue that from their national perspective, it may make sense to implement such development strategies, from an IRB perspective it may further enhance water distribution and environmental degradation impact on two down-stream countries, Cambodia and Vietnam, as both rely on the Mekong to supply them with water and sediments to support their agriculture sector which is related to food security. In the case of Vietnam, water and sediments from the Mekong counterbalance saltwater intrusion into the delta which will increase because of seawater level rise. The Mekong Delta is often described as the 'rice bowl' of Vietnam, hence any serious degradation of it as an agricultural space would generate serious food shortage within Vietnam. What the Mekong Delta is for Vietnam is the Tonle Sap, the huge inland water space supported by the seasonal Mekong floods, for Cambodia. The question arises, will other riparian countries be willing to offer support for protecting the Mekong Delta and the Tonle Sap by changing their own development strategies? Indeed, would Laos be willing to change core aspects of its national development strategy (becoming the 'Battery of Southeast Asia') and halt further hydropower development, or Thailand is willing to change its massive planned extension of agricultural irrigation to save the Mekong Delta and the Tonle Sap? However, the outlook is most likely not. This in turn could undermine regional cooperation within the Mekong River Basin, even so far there are no indications yet that this will happen. Still considering the critical relevance of both, the Mekong Delta and Tonle Sap, for national food security, one should not ignore the potential conflict potential. Yet, the situation grows even more complex, since Vietnam is involved in some hydropower projects which will further contribute to the challenges the Mekong Delta is already facing, as it needs the energy for domestic development. The situation within the Lancang-Mekong River Basin also offers a good example of the structural inequality within IRBs, associated with the location of a country within an IRB.

From the perspective of an IRB as a potential source for regional cooperation, the question arises: Will the impact generated by environmental degeneration and climate change be a factor for cooperation, in coming together to address a shared challenge or a factor for conflict? Once again, we are reminded of the Janus faces of geographic proximity, as proximity may be a source either for cooperation or for conflict. There is another crucial aspect that

will contribute to how either cooperation or confrontation will prevail within the structural setting of an IRB, and that is the extent and intensity of environmental degeneration and climate change impacts we will observe in the years to come. If one takes the Anthropocene approach as a guideline, then we are 'all together in one boat', which may allow cooperation to occur. However, when considering the recent experience during the COVID-19 global pandemic, such an optimistic perception of working together to address a regional and global challenge may not be appropriate.

5. Conclusion

In considering IRBs as a potential focus for regional cooperation we have to take into consideration that IRBs offer a particular structural context based on geographic proximity. Geographic proximity and a major river at the centre of each IRB increase an IRB's exposure to climate change and environment degradation impacts, amplified in the Anthropocene approach. After all, an IRB also represents an integrated ecosystem. In assessing an IRB's characteristics for supporting regional cooperation among the countries we have to recognise the Janus face of geographic proximity. On the one hand, geographic proximity supports economic cooperation, shared infrastructure development and thus can offer to address shared development challenges the countries within an IRB are facing. Geographic proximity may also help to recognise that climate change and environment degradation represent fundamental transnational challenges to be addressed together. In this way, geographic proximity can be interpreted as a source of cooperation, in building trust. On the other hand, national insecurity is local, as countries can never be sure about the intentions of neighbouring states within the context of an anarchic International System. Neighbouring countries may also have contractionary interests and follow development strategies not considering their wider river basin impacts. The existing structural inequality between upstream and downstream countries within an IRB may also contribute to a more conflictual relationship between the different countries. Not least as upstream countries may be able and willing to take advantage of their privileged position at the costs of downstream countries.

The critical question is to what extent the positive aspect of geographic proximity can become a source for regional cooperation by counterbalancing the controversial aspects of geographic proximity. Will the prospect of economic and development gains based on cooperation overcome the existing distrust between states, based on the character of the anarchic International Syst3em? Alternatively, will a fundamental common threat scenario, like that based on the Anthropocene concept, generate enough support for cooperation within an IRB? It may even have an advert effect on cooperation if countries within an IRB decide to face the challenge on their own, especially upstream countries as they

are in a more advanced position regarding access to IRB's resources, especially water resources. Considering the IRBs also represent integrated ecosystems, may contribute to more cooperative relationships. Of course, historical animosities between individual countries also generate their own dynamic of cooperation or conflict. Nevertheless, the structural character of IRBs, as a potential side for cooperation should not be discounted, not least because facing doomsday scenarios like the amplified impact of climate change and environmental degradation as presented in the Anthropocene concept, will require cooperation. Still, recalling our most recent experience with a fundamental global threat, COVID-19, the prospect for cooperation even at the regional level cannot be taken for granted. However, focusing on IRB as a potential source of cooperation may offer critical insight into our ability and willingness to cooperate when facing fundamental, or even, existentially challenges.

References

Booth, K. (2005). Introduction to part I. In Booth, K. (Ed.). *Critical Security Studies and World Politics* (pp. 1-20). Boulder, United States: Lynne Rienner Publishers.

Burke, A., & Fishel, S. (2016). *Politics for the Planet: Why Nature and Wildlife Need their Own Seats at The UN.* Retrieved January 20, 2023, from https://theconversation.com/politics-for-the-planet-why-nature-and-wildlife-need- their-own-seats-at-the-un-59892

Burke, A., Fishel, S., Mitchell, A., Dalby, S., & Levine, D. J. (2016). Planet Politics: A Manifesto form the End of IR. *Millenium Journal of International Studies, 44*(3), 1-25.

Buzan, B., & Wæver, O. (2003). *Regions and Powers: The Structure of International Security.* Cambridge, United Kingdom: Cambridge University Press.

Buzan, B., Waever, O, & de Wilde, J. (1998). *Security: A New Framework for Analysis.* Boulder, United States Lynne Rienner Publishers.

Chakrabarty, D. (2009). The Climate of History: Four Theses. *Critical Inquiry, 35*(2), 197-222.

Chandler, D., Cudworth, E., & Hobden, S. (2018). Anthropocene, Capitalocene and Liberal Cosmopolitan IR: A Response to Burke et al.'s 'Planet Politics'. *Millennium: Journal of International Studies, 46*(2), 190-208.

Crutzen, P., Stoermer, E. (2000). The Anthropocene. *IGBP Newsletter, 41*, 17-18.

Dalby, S. (2014). After the Anthropocene: Politics and Geographic Inquiry for A New Epoch Progress. *Human Geography, 38*(3), 442-444.

Delanty, G., Mota, A. (2017). Governing the Anthropocene: Agency, Governance, Knowledge. *European Journal of Social Theory, 20*(1), 9-38.

Editorial Comment. (2003). How Long Have We Been In The Anthropocene Era?. *Climatic Change, 61*(3), 251-257.

Harrington, C. (2016). The Ends of the World: International Relations and the Anthropocene" *Millennium: Journal of International Studies, 44*(3), 478-498.

Human Security Unit Office for the Coordination of Humanitarian Affairs. (2009). *Human Security in Theory and Practice: Application of the Human Security Concept and the United Nations Trust Fund for Human Security.* New York: United Nations. Retrieved June 28, 2021, from https://procurement-notices.undp.org/view_file.cfm?doc_id=11983

Jervis, R. (1978). Cooperation Under the Security Dilemma. *World Politic, 30*(2), 167-214.

Jones, R. W. (1999). *Security, Strategy, and Critical Theory.* Boulder, United States: Lynne Rienner Publisher.

Katzenstein, P. (1996). Introduction: Alternative Perspectives on National Security. In Katzenstein, P. (Ed.). *The Culture of National Security: Norms and Identity in World Politics* (pp. 1-27). New York, United States: Columbia University Press.

Malm, A., & Hornborg, A. (2014). The Geology of Mankind? A Critique of the Anthropocene Narrative. *The Anthropocene Review, 1*(1), 62-69.

Maslin, M. A., & Lewis, S. L. (2015). Anthropocene: Earth System, Geological, Philosophical and Political Paradigm Shifts. *The Anthropocene Review, 2*(2), 108-116.

Mitchell, A (2017). Is IR Going Extinct?. *European Journal of International Relations, 23*(1), 3-25.

Painter, J. (2010). Rethinking Territory. *Antipode 42*(5), 1093.

Ploberger, C., & Filho, W. L. (2016). Towards Long-Term Resilience: The Challenge of Integrating Climate Change Related Risks into a Risk Analysis Framework. In Filho, W. L., Musa, H., Cavan, G., O'Hare, P., & Seixas J. (Eds.). *Climate Change Adaptation, Resilience and Hazards* (pp. 369-380). Cham, Switzerland: Springer.

Roach, S. C., Griths, M., & O'Callaghan, T. (2002). *International Relations: The Key Concepts.* London, United Kingdom: Routledge.

Rowan, R. (2014). After the Anthropocene: Politics and Geographic Inquiry for a New Epoch Progress. *Human Geography, 38*(3), 477-450.

Ruddiman, W. F., Ellis, E. C., Kaplan, J. O., Dorian Q., & Fuller, D. O. (2015). Defining the Epoch We Live In. *Science, 348*(6230), 348-389.

Scherrer, W. (2023). Economic Perspective of Cooperation in International River Basins. In Ploberger, C. (Ed.). *River Basins and International*

Relations: Cooperation, Conflict and Sub-Regional Approaches (pp. 51-66). Abingdon, United Kingdome: Routledge.

Simangan, D. (2019). Situating the Asia Pacific in the Age of the Anthropocene. *Australian Journal of International Affairs, 73*(6), 564-584.

Smith, S. (2005). The Contested Concept of Security. In K. Booth (Ed.) *Critical Security Studies and World Politics* (pp. 27-62). Boulder, United States: Lynne Rienner Publisher.

Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O., Ludwig, C. (2015). The trajectory of the Anthropocene: The Great Acceleration. *The Anthropocene Review, 2*(1), 81-98.

Tortajada, C., Fernandez, V. (2018). Towards Global Water Security: A Departure From the Status Quo?. In Gaymard, E. (Ed.). *Global Water Security Lessons Learnt and Long-Term Implications* (pp. 1-20). Cham, Switzerland: Springer.

UN News Centre. (2022). Water is 'catalyst' for Cooperation, Not Conflict, UN Chief Tells Security Council. Retrieved March 23, 2022, from https://www.unwater.org/news/water-%E2%80%98catalyst%E2%80%99-cooperation-not-conflict-un-chief-tells-security-ouncil#:~:text=Stressing%20the%20importance%20of%20diplomacy%20to%20prevent%20and,even%20those%0that%20are%20not%20on%20good%20terms

UNEP. (2021). *Adaptation Gap Report 2021*. Retrieved November 19, 2021, from https://www.unep.org/resources/adaptation-gap-report-2021

UNESCO. (2016). *Transboundary Water Cooperation and the Sustainable Development Goals.* Retrieved February 9, 2023, from https://unesdoc.unesco.org/ark:/48223/pf0000244045?posInSet=7&queryId=N-2ba4c09a-e290-4e3d-9035-53ef4e705004

Walker, R. B. J. (1997). The Subject of Security. In K. Kraus, M. C. Willams (Eds.). *Critical Security Studies* (pp. 61-82). London, United Kingdom: UCL Press.

World Economic Forum. (2022). *Global Risk Report 2022.* Geneva: World Economic Forum. Retrieved January 10, 2022, from https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2022.pdf